The Saint-Servatius complex in Maastricht The Vrijthof excavations (1969-1970)

F. Theuws
M. Kars



Habelt-Verlag | Bonn

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Roman infrastructure – Merovingian cemetery
Carolingian cemetery – early town development

F. Theuws
M. Kars
editors

with contributions by
Chr. Brandenburgh
L. van Wersch
R. Panhuysen
T. Panhuysen
M. Dijkstra
F. Theuws
L. Smits
M. Kars
D. Smal

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Bregt Balk

Find drawings
Bob Donker

Find photography
Anneke Dekker

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Preface and acknowledgements

This is the first volume on the archaeology of the Saint-Servatius complex in Maastricht in the Netherlands. It is a product of the Saint-Servatius project, which was supported by the National Science Foundation (NWO), the University of Amsterdam, the Town of Maastricht and the University of Leiden. The goals of this project are: (a) to publish the archaeological remains found during excavations by the State Archaeological Service and the Town of Maastricht, which took place, on and off, over a period of more than 50 years in and around the *basilica* of Saint-Servatius, and (b) to analyse the chronological and topographical development of the complex from the fourth to the eleventh centuries. The results provide a solid basis for more far-reaching analyses of aspects of the process of the transformation of the Roman world.

In the Netherlands the Saint-Servatius complex is unique since it is the only early Christian site in the country. This alone justifies the attention we gave it over the last 15 years, but the importance of the complex also transcends our national borders. The complex was subject to a whole series of excavations since the late 1940s. The excavations produced an extremely rich archaeological record, which enables an indept reconstruction of the development of the complex. The excavations inside the *basilica* and in the cloisters revealed a complicated series of architectural remains of various predecessors of the present eleventh century building. Other elements of the religious complex and more than 2000 early medieval graves were also recorded, and in the immediate environs excavations revealed the 'urban' context in which this complex developed from the sixth century onwards. The archaeology of the Saint-Servatius complex has thus the potential to contribute significantly to our knowledge of the development of early Christian complexes in northern Gaul. Its archaeological record is of great importance to the study of the process of Christianisation, to the understanding of the development of aristocratic groups and the rhetoric of the articulation of power positions, to gain insights into economic development and into the nature of exchange relations and, last but not least, to the definition of the nature of 'urban' forms in post-Roman northern Gaul. Maastricht seems to be an ideal case because it was small and not particularly top of the bill in comparison with other episcopal centres like Cologne or Trier, but important enough for its power brokers to play a major role in early Pippinid politics. Moreover, it is located in a river valley that plays a major role in the post-Roman economic recovery in northern Gaul. Meuse valley towns were in Merovingian times at the forefront of economic development.

Unfortunately, nothing of this high quality archaeological record was available to the scholarly world and the public for a long time. There were various reasons for this condition. Apart from the lack of funds and time, this archaeological dataset was above all way too big to handle. The archaeological record of the Servatius complex is of such magnitude and importance that an encompassing and proper way of publishing it should be the aim; a trivial publication would be a wast of money. So nothing happened until we decided to apply for a large amount of money to employ a team of archaeologists, osteologists, student assistants, a photographer, a draughtsman and IT specialists to cope with this record which appeared to be a 'monster'. The application was granted, but along with the funcing came also our share of trouble.

We started optimistic in may 2002, but soon discovered that the amount of evidence was overwhelmingly larger than was estimated on the basis of preliminary publications and notes by the excavators. It was for example estimated that on the Vrijthof Square some 150 graves were found, but it turned out that there were more than 300. We also wanted to integrate the analysis of the human skeletal remains in the overal study of the cemeteries. In spite of positive answers to the questions of the whereabouts of this material before we started it was, after some time, claimed that it was lost. However, after two years the nearly complete set of skeletal remains was - after some efforts of our team members - found. The set appeared to be in a fairly excellent condition and was larger than reported. Dealing with the entire set would mean the risk of a shortage of time, but we decided to accept the pressure. We asked the National Science Foundation for an additional € 25.000 euros to study the large amount of skeletal evidence, which were granted. The Pandhof cemetery numbered not the estimated 722 burials, but more than 1200. Add to these numbers the graves excavated in the church and one can imagine that we really had to take some decisions about what to do. We decided to skip the graves in the church and apply for a new project to study these once we had finished the work on the Vrijthof and Cloisters excavations (known as the 'Cloister' or 'Pandhof' excavations).

Another element we underestimated is the time it takes to creep into the minds of the excavators and understand their ways of working and thinking, which also implies the understanding of practices, intellectual context and societal setting of doing archaeology in those days. We carried out some 'historical' research into those aspects of which chapter 3 is the result. Getting hold of all the finds was another adventure and some of the objects were still in such a terrible condition that it was hardly possible to study them. A juridical fight over the ownership of the finds after the excavation of the cloisters, as over their conservation and restoration started some decennia ago and had its repurcussions on the project when we started it. Understanding the excavation drawings was another major task. Especially the comprehension and analysis of the drawings of the sections costed more painstaking work than anticipated. Moreover, the creation of a coherent digital database for such complicated excavations turned out to be a difficult task, even for the specialists we hired. Alltogether, it is clear that we pioneered. It was the first time a project group working in the early medieval archaeology of the Netherlands took up the huge task to evaluate and publish large and complicated old excavations as those produced by the campaigns investigating the Servatius complex. In chapter 4 we explain in detail how we tackled the problems and the data.

This first volume on the excavations of the Saint-Servatius complex concerns several aspects of the archaeology of the Vrijthof Square, located immediately east of the *basilica* of Saint-Servatius. In 1969-1970 excavations by the State Archaeological Service (Rijksdienst voor het Oudheidkundig Bodemonderzoek) under the direction of J. H. F. Bloemers took place on the square before the subsoil was dug away to create an underground car park. The excavation was another archaeological venture in a long sequence of archaeological activities and accidental finds around the Vrijthof square. In chapter 1 the historical context of the Vrijthof square and a number of research problems are discussed and chapter 2 and 3 provide the complete history of all the archaeological interventions. Chapters 1 to 3 were written a long time ago and have been aging since then. They were not rewritten to bring them up to 2016 standards since that would have delayed the publication of this volume even more. Especially the ideas on burial analyses have evolved further than described in chapter 1.

In this volume a lot of attention is paid to the stratigraphy of the more than five metres of archaeological deposits on the square and to the general history of the square (chapter 5). Next, the early medieval burials found during the 1969-1970 excavations are dealt with in great detail (chapters 6 to 13). In chapter 14 we explain to what extent the Vrijthof excavations contributed to a better understanding of the development of Maastricht as an early town and cult centre. Finally an extensive catalogue of (mainly) burials is provided.

We chose to spend time and money to present a book with catalogue in this form for several reasons. First of all because the burial grounds around the *basilica* of Saint-Servatius are of a special and complicated nature. Secondly, because the study of the material culture of the Merovingian period in the Meuse valley is still in its infancy. Several cemeteries, such as Hamoir, Rosmeer, and others have been published on the basis of typo-chronological systems from outside the region, but no detailed typo-chronological overview of the material culture of the Merovingian period in the Meuse region has been created yet. Moreover, these publications lack the detail necessary for much of modern research into early medieval burial practices. More detailed research is necessary in order to be able to characterise the material culture of the Meuse valley, of which it can be expected that an important part of it was produced in the region, and to distinguish it from that of the Rhine valley and northern France. For these regions typo-chronological systems have been developed. We were convinced that a detailed publication of Merovingian material culture can contribute substantially to such an undertaking. For this purpose, and also others, we created a new series *Merovingian Archaeology in the Low Countries*, published by Habelt Verlag in Bonn, with a, according to our opinion, high standard of publication of Merovingian cemeteries and material culture, of which this volume on the Vrijthof square is number 4 in the series. Other monographs deal with the cemeteries at Bergeijk-Fazantlaan (nr. 1), Posterholt-Voorste Voort (nr. 2), and the cemeteries of Sittard-Kemperkoul, Obbicht-Oude Molen and Stein-Groote Bongerd (nr 3). Other volumes are being prepared such as one on farmyard burials in the southern Netherlands, one on the cemetery of Gennep-Touwslagersgroes, one on the cemetery of Oud-Leusden and one on the cemetery of Uden. Traditional publications often hide important aspects of grave goods such as colour and quality of objects, and many object drawings give images of objects, such as incomplete pots, which are too fancy and disguise their actual condition. Many pots appear to consist more of modern plaster than of old clay. Fragmentation, however, is an important topic for understanding aspects the burial ritual as Van Haperen showed in her analyses of grave reopenings. Old publications often mystify this fragmentation because scholars wanted to refer back to the original state of the object departing from a false authenticity concept. Colour photographs of all objects, as published in this volume, allow to grasp the quality differences between objects of the same type and their condition. Publishing these photographs

is more expensive but necessary. In the near future the publication of cemetery catalogues on Internet may be an attractive alternative. And finally, we also chose this way of publishing because we wanted to create a publication form congenial to both scolars and an interested public. We found it worthwhile to show what beautiful finds the subsoil of the tarmac of the square once contained. Reading traditional archaeological publications of Merovingian cemeteries can even for specialists be a form of torture.

Acknowledgements

The Saint-Servatius project benefitted from the generosity of many institutions and persons. First we would like to thank those who made the project possible in financial terms. They are the University of Amsterdam (UvA), the National Science Foundation (NWO), the town of Maastricht and the University of Leiden. At the University of Amsterdam, Faculty of Humanities, drs. Kees Ostendorf supported us in obtaining university financial means. He also piloted us through the narrow channels of financial research management. The Mayor and Aldermen of the Town of Maastricht took an unusual decision by allowing two of their archaeologists (Drs. Wim Dijkman and Dr. Titus Panhuysen) to spend time on the Saint-Servatius project. In the last years of the project Dr. Panhuysen was given the opportunity to spend all his time on the project.

The State Archaeological Service (ROB, now Rijksdienst voor het Cultureel erfgoed, the State Heritage Agency) gave permission to study their excavations and, temporarily, handed over all field drawings, which was unusual in those (pre-scan) days. Later all the field drawings were scanned by them which speeded up the process of digitising the drawings. Especially the work on the sections was greatly enhanced by that. The photographs of the fieldwork published in this book were made available by the same State Heritage Agency. We thank the late Prof. dr. Willem Willems and Prof. dr. Jos Bazelmans for their generosity. Field drawings and finds were also handed over by the archaeologists of the town of Maastricht, at first by Dr. Titus Panhuysen and Drs. Wim Dijkman and later by Drs. Eric Wetzels. The council of the *basilica* of Saint-Servatius gave permission to study the finds of the excavations in the cloister garden and the *basilica* itself, which were kept in the Bonnefantenmuseum, and allowed the finds of the cloister garden to be brought over to Amsterdam. We thank the church council and the dean mgr. M. Hanneman for their cooperation at the start of the project. However, when we, early in the project, voiced a scholarly relativism in relation to the 'official' history of Servatius, which is based on the myths created by Gregory of Tours (see chapter 1), we received a letter in which the church council of Saint-Servatius ended all communication with us. We had no contact ever since, which we regret very much. The director of the Bonnefantenmuseum, Drs. Alexander van Grevenstein, the curator for archaeology, Dr. Marjorie de Grooth and her assistent Caroline Zijlstra cooperated generously in the organisation of transporting the finds to Amsterdam. The finds of the Vrijthof excavations were stored in the provincial depot for archaeological finds of the Province of Limburg in Maastricht. The provincial archaeologist Dr. Gemma Jansen and Fons Horbach, the depot manager in those days, allowed these finds to be brought over to Amsterdam.

The first design in which all the databases for finds, graves, contexts and human remains were placed and connected was created by Michiel Kappers en Willem Schnitger (In Terris/QLC). This design was evaluated by the project group later on and on the basis of the resulting comments re-designed by Jitte Wagen of the University of Amsterdam.

The editors thank all those who contributed to the production of this book. First of all the authors of texts in the book whose names can be found on the title page. Some of them had to be very patient since they already provided us with their contributions some time ago. Other collaborators contributed to the project. Drs. Wim Dijkman studied a part of the pottery colllection of which the results were included in the study of Dr. Menno Dijkstra on the pottery and the stratigraphy of the square. Mieke Tolboom MA studied the glass vessels of the Servatius complex in the context of her MA archaeology supervised by Dr. Sophie van Lith at the University of Amsterdam. Rutger Terluin MA analysed a part of the pottery collection in the context of his MA archaeology. Dieuwertje Smal MA studied the grave structures in the context of her MA archaeology. Drs. Joep Hendriks (Nijmegen) studied the Roman pottery vessels.

Important were a number of student assistents who helped to unravel the stratigraphy of the graves and manage the project: Dieuwertje Smal (IT support and analysis of grave structures Vrijfhof, almost 4 years); Nina Jaspers (IT-support and analysis of grave structures cloister garden, 3 years), Marlous van Domburg (documentation and office management, 2 years), Sophieke van de Velde (documentation and office management 1 year), Laura van der Haar (IT-support, almost a year).

All the finds were photographed by drs. Anneke Dekker of the University of Amsterdam, and they were all drawn by Bob Donker, also of the University of Amsterdam. The maps and schematic representations were drawn by the editors.

Bregt Balk made the design of the complete book series in which this publication appears and was responsable for the design and lay out of this volume.

We also thank 'UvA vertalers' (Amsterdam) for translating chapters 1 to 3 and Annete Visser (Wellington, New Zealand) for translating chapter 7. The rest of the book is written in our uncorrected English. We simply do not have the money for correcting the rest of the book. We apologise for the errors that are still there, but are confident that most readers will understand what is written.

Finally we thank Dr. Susanne Biegert of Habelt Verlag for her patience given that this book was promised a long time ago. We found in Habelt Verlag the right publisher for our projects on Merovingian Archaeology in the Netherlands.

Imprimi potest, nihil obstat et imprimatur!!

PART 1

DATA & INTERPRETATIONS

1 The archaeology and history of the Saint-Servatius complex in Maastricht (up to c. 1050): contexts, questions, perspectives and problems

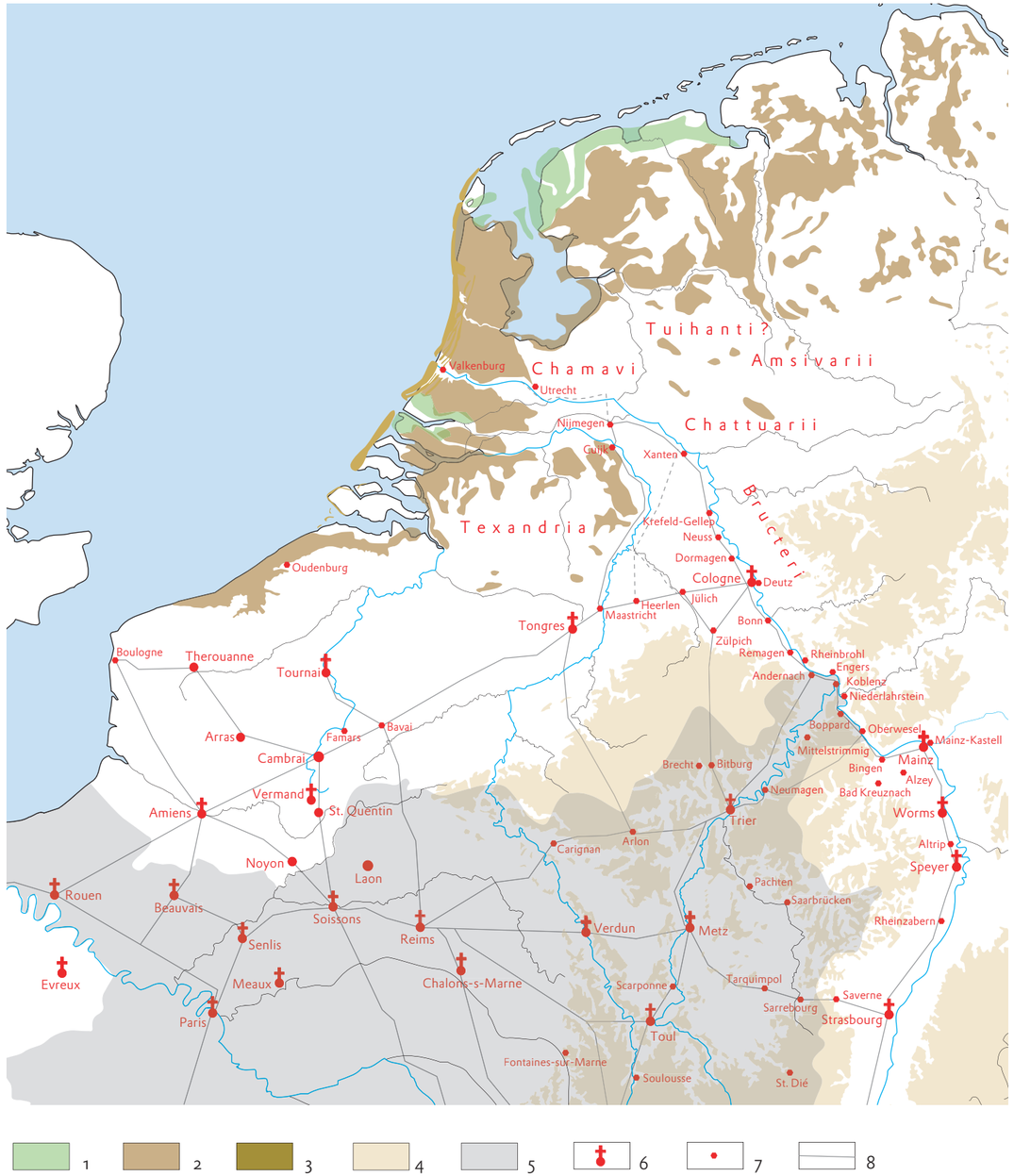
Introduction[1]

Maastricht was situated on the northern frontier of late classical civilization (fig. 1.1). North of Maastricht, the late Roman state faded away into a 'Germanic' world that itself might have been a product of late Roman politics and cultural contacts. It is not very useful for twenty-first-century scholars to make clear distinctions between what was 'Roman' and what was 'Germanic' in this frontier zone, in a way a Roman senator might have done. It is a region in which according to historiography, the decline of the Roman world was notoriously visible: villas disappeared, towns shrunk to minimal proportions, 'Germanic' peoples settled.[2] It is also a region where worlds met and civilizations mingled; the region in which the Francs, who would dominate the Western Roman Empire within several generations, are supposed to have originated. It is a region in which, as a result of the fermentation processes taking place, essential aspects of medieval society came into being. This resulted in the rise of an aristocratic group that determined the fate of Europe to a large degree: the Carolingians.[3]

Three Roman towns – Tournai, Tongres and Cologne – survived in this northern frontier zone, mainly because they were the seats of bishops.[4] Surviving late Roman towns were more common in the provinces of Belgica Prima and Secunda (capitals Reims and Trier, respectively) than in Germania Secunda, where in fact only its capital – Cologne – survived to such an extent that it could still be called a town. The fate of Tongres, from which no bishops of the fifth century are known, is enigmatic, as is that of Xanten and Nijmegen, both of which were flourishing towns in the Roman period, but relatively insignificant settlements in the fifth and sixth centuries.[5] Continuous bishops lists are known for none of the bishop's towns in the north.[6] This does not mean that Christian life came to a complete halt. Christian gravestones testify to the presence of Christian communities, which must have been relatively small, in some of the secondary centres of the fifth and sixth centuries.[7] Such a community may have survived in Maastricht.[8] It was not a town, but a small, late Roman fortress on the river Meuse, where the important road connecting the northern part of Belgica Secunda with Cologne and the Rhine valley crossed it.[9] In the sixth or seventh century, this *castrum* developed into the seat of the bishop of the *civitas* of the Tungri instead of Tongres.[10] This indicates that the *castrum* must have retained some of its importance. The north–south route along the Meuse must have gained in importance in comparison to the east–west land route (the old Roman road). Maastricht received a boost as a regional centre when, in the sixth century, Bishop Monulphus built a *magnum templum* and transferred the remains of Bishop Servatius to it. This -Servatius church stood outside the *castrum*. It is supposed that in the *castrum* a bishop's church existed at the site of the present-day church of Our Lady. Servatius holds the honour of being considered the mythical founder of the town. His church

(1) It is important to know that this chapter was written more than six years ago. We had hoped to publish this volume much sooner (see preface). The chapter was kept in its original form. Developments for instance in burial archaeology since then are thus not discussed. (2) Ward-Perkins 20062; Halsall 2007. (3) Werner 1980; Fouracre 2000; McKitterick 2008. (4) Wightman 1985; Brulet 1990; Brulet 2012; Gauthier et al., 2002. (5) Tongres: Vanvinckenroye 1985; Vanderhoeven 2011; Vanderhoeven 2012. Nijmegen: Bloemers/Thijssen 1990; Thijssen 2002; Steures 2013. Xanten: Otten 2003, 199-238. (6) Weidemann 1990. (7) Boppert 1986. (8) The oldest surviving gravestones date from the fifth century (Boppert 1986). There are no indications for the presence of a Christian community in Maastricht in the fourth century. Just north of Maastricht, at the site of the late Roman settlement of Neerharen-Rekem, a round bronze fitting ornamented with a Chi-ro was found in pit 7 (De Boe 1983, fig. 37, 13; De Boe 1986a, fig. 5, 13). This may be an indication for the presence of Christian people in the countryside around Maastricht in the late fourth century. What the presence of Argonnen ware, ornamented with Christian motives, means in terms of continuity of Christian life in Maastricht is a matter of debate (Dijkman 1992). (9) Panhuysen 1996, 21-28. (10) Panhuysen/Leupen 1990; Dierkens 2000; Theuws 2001a; Panhuysen/De La Haye/Gauthier 2002.

Fig. 1.1
Late Roman northern Gaul. 1. coastal plain, 2. peat, 3. coastal barriers, 4. middle range mountains, 5. bishoprics with continuous bishops lists, 6. seats of bishops, 7. Late Roman fortresses important in later times, 8. Roman roads.



attracted large crowds of pilgrims, and it still does, along with numerous historians, art historians and archaeologists. Major excavations were carried out in and outside the *basilica*, but the archaeologists lagged considerably behind in publishing and analysing the data on the excavations. The Saint Servatius project, of which this volume is a product, aims to reverse this situation.

This chapter is a general introduction to this project. Its structure is like the experience of a parachutist who jumps from a great height. At first, he grasps the crude structures of a large area, a river, a motorway. As he floats down, he can perceive increasingly more details until finally he can almost count the blades of grass around the landing place. Our parachutist is dropped somewhere over northern Gaul and will land on the Vrijthof square next to the *basilica* of Saint-Servatius. After he has landed, he will ponder the features he observed and try to make sense of them. We will sail down with him and ponder what we saw and formulate a way of looking at these phenomena.

Charlemagne's home: Maastricht and the middle Meuse valley

Maastricht in northern Gaul and the Meuse valley

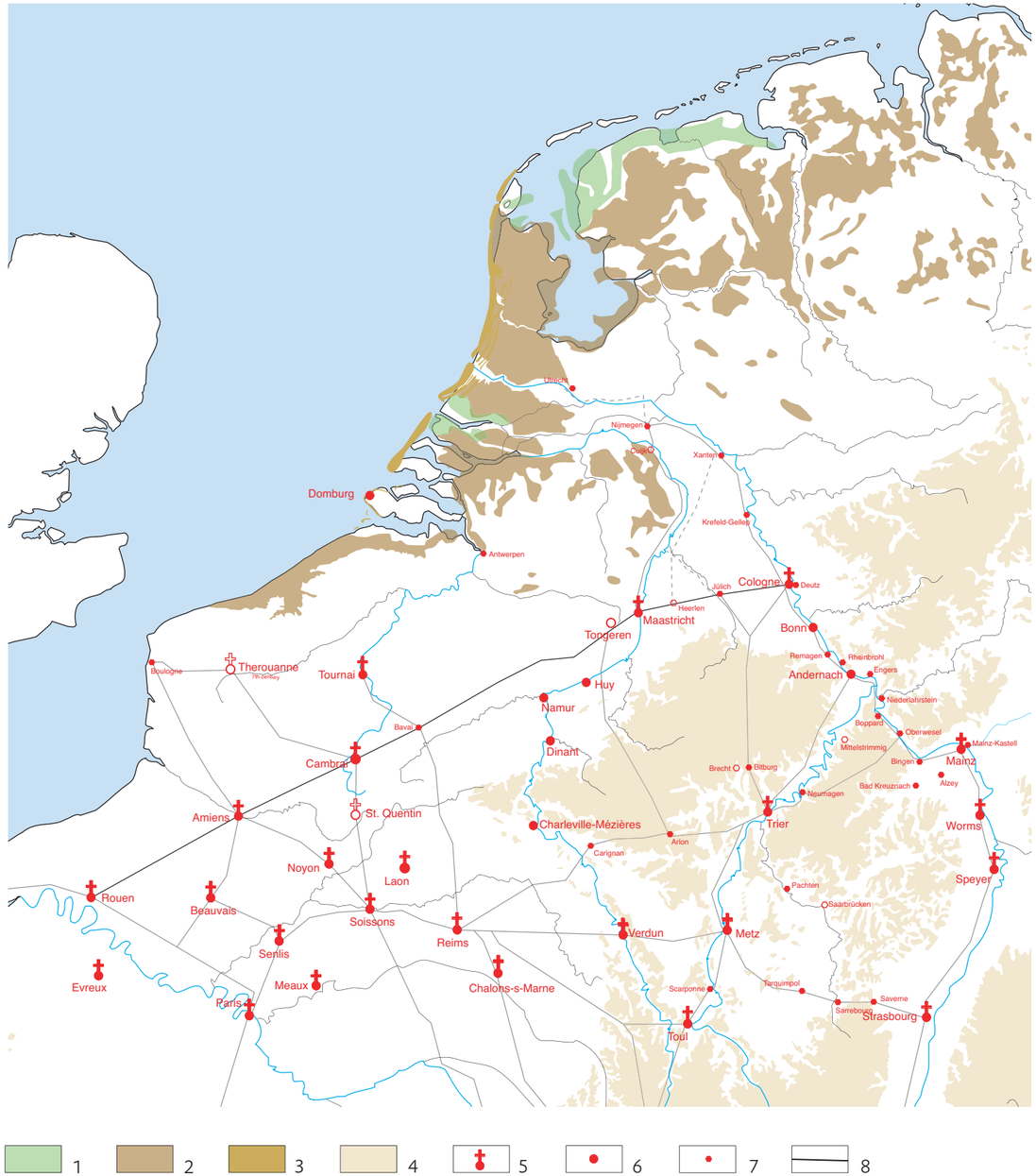
Merovingian Gaul consisted of a series of historical–geographical regions that do not necessarily coincide with political divisions. Bruand attempted to describe some of them in his book *Voyageurs et Marchandises aux Temps Carolingiens*. He identified four regions relevant to his research: a northern region (mainly Picardie), the Seine basin, the Loire basin and Bourgogne.[11] Regions such as these, which show a certain amount of coherence in development, form well-defined research frameworks. Bruand could have identified a number of other regions in north-eastern Gaul. His northern region has to be redefined. North of the Seine basin there was the Scheldt/Somme region, and north of the Ardennes forest the middle Meuse region. Further to the east was the Moselle/upper Meuse region, the upper Rhine region and the lower Rhine region (fig. 1.2). The middle Meuse region forms the context of our research. In Merovingian times the region occupied a somewhat enigmatic position between two centres of gravity. One was along the Rhine river, the other was in north-western France. They were connected by a northern lifeline (the old Roman road from Rouen to Cologne) and a southern one (the route from the Rhine valley along the Moselle river to Trier and Metz and further to the west in the direction of Reims) (fig. 1.3). The centres along the Meuse itself flourished from the beginning of the sixth century, but the development of the surrounding countryside lagged behind until the middle and the second half of the sixth century, when its colonization seems to have gained momentum.

As we float down and focus on this region, we discover that it consisted of a number of smaller subregions. As a whole, the region was surrounded by relatively sparsely inhabited areas such as the Ardennes forest to the south, the Silva Carbonaria to the west, a sparsely inhabited area between the Rhine and Meuse valleys, and a band of marshes to the north. The central axis of the region is the Meuse river and the adjacent valley. From the point where it leaves the Ardennes forest until it reaches Liège, its valley is narrow and often flanked by relatively steep, forested slopes.[12] This is the middle Meuse valley. North of Maastricht the valley widens. Here, the course of the river has changed many times as a result of its meandering and interweaving with the lower courses of tributaries, even in historical times.[13] This is the lower Meuse valley. The valley between Liège and Maastricht forms an intermediate zone between the middle and the lower Meuse. In places it is still lined with steep, forested slopes, for instance south of Visé (Argentau-Wandre) on the right bank and south of Maastricht on the left bank (Sint Pietersberg–Eben–Emael). The valley widens opposite Sint Pietersberg.[14] In Maastricht the river wandered in an easterly direction, and to the north of it in both an easterly and a westerly direction. It is not easy to determine in detail which course it followed in the Early Middle Ages.[15] The present image of the river is in no way comparable to that in the early Middle Ages due to intensive canalization and water management since the 1850s to improve its navigability and reduce the frequent, and in some places annual flooding of the valley.

Fig. 1.2
Regions in Merovingian northern Gaul.



Fig. 1.3
Merovingian northern Gaul. 1. coastal plain, 2. peat, 3. coastal barriers, 4. middle range mountains, 5. seats of bishops, 6. Merovingian *vici*, 7. late Roman fortresses important in Merovingian times, 8. Roman roads more specifically the road from Cologne to Rouen



(11) Bruand 2002, 89-109. (12) Suttor 1986. (13) Paulissen 1973; Quadflieg 2006. (14) See also the maps in Hartman 1986. (15) Quadflieg 2006.

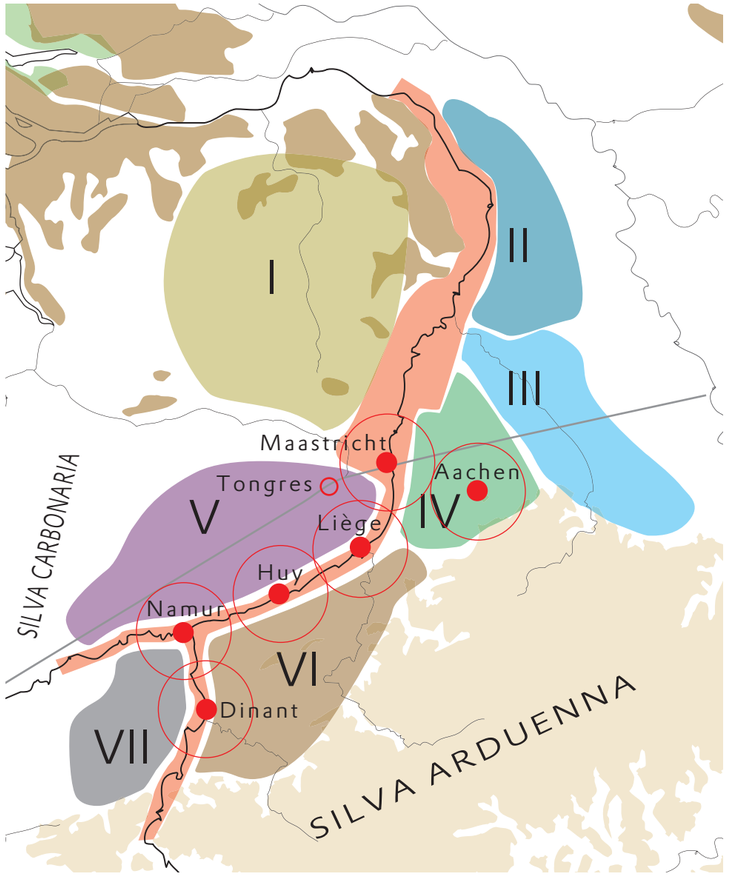


Fig. 1.4
The Meuse valley, its adjacent regions and its major centres in Merovingian and Carolingian times.

The river valley was flanked by seven regions, each of which had its own characteristics (fig. 1.4).[16] These regions are defined on the basis of archaeological criteria and the landscape rather than historical criteria, such as territories of different kinds (*pagi*, *comitates*, deaneries, etc.). Here, we consider the regions as research areas, as heuristic devices, rather than suggesting that they are relevant to early medieval politics. However, how do we know what is relevant to early medieval politics? The geographical image provided by the written texts is just one image (an aristo-Christian one); peasants and traders might have had other conceptions of the spatial organization in the Meuse valley. These regions might thus be as relevant as the political 'territories' and divisions known from the written sources.

The first region (I) mainly coincides with the old *pagus* Texandria, a sandy area fragmented by numerous small brooklets; the region is not very suitable for arable farming, but is well suited for animal husbandry.[17] It was depopulated in the years between c. 270-370 and c. 470-525/530. The post-Roman colonization of this region started around or after the middle of the sixth century. Texandria was sparsely inhabited in the early Middle Ages. In Merovingian times local communities were generally small (up to 5-10 households). Nevertheless, several royal abbeys were interested in the area and had large estates there, for example Echternach, Saint-Trond, Lorsch, Corbie and Crespin.[18] Royal property was also present, probably on a larger scale than written sources indicate.[19]

On the opposite side of the valley is a sandy region (no. II) between the valleys of the Meuse and Rhine. This region was even less inhabited than the *pagus* Texandria. It is difficult to relate the region to any one of the old *pagus* names.[20] To the south of this region lies the Roer valley. It forms part of a larger region, the Roer–Erft region (no. III). The relatively large cemeteries at Posterholt and Vlodrop (and the rich graves at Vlodrop), which were located at quite a distance from the Meuse, seem to be part of a group of cemeteries along the Roer in neighbouring Germany, rather than part of a Meuse valley group.[21] To the south of the Roer valley, relatively few indications for habitation are found until we meet those in the valley of the Geleenbeek–Rodebach. The habitation west of Sittard and finds in Tüddern in Germany seem to be located in an isolated position.[22] Their presence is perhaps related to a Roman road that crossed the small rivers.[23]

To the south of the Roer valley is the fourth region (IV), east of the Meuse valley in which Aachen is situated. It is characterized by hills covered with loess. The virtual absence of Merovingian cemeteries indicates that it was sparsely inhabited up till the end of the seventh century.[24] Pockets of habitation along the tributaries of the Meuse may have been present, such as the one west of Sittard. An important cemetery was present in Aachen.[25] Written evidence indicates that in Carolingian times the southern part of it was dotted with royal estates, of which Aachen is the most famous.[26] The impression is given that this region was developed by the Carolingians from the eighth century on and that it was a truly 'royal region'.

To the west of the middle Meuse valley lies the fifth region – the Hesbaye, a fertile loess area that was densely occupied in Roman times. The Roman road from Cologne to Bavai ran through this area, where numerous Roman villas produced grain for the Rhine army and the towns in northern Gaul.[27] In the fifth century, most villas were derelict although some villa locations showed remains of habitation.[28] There is a debate on the nature of the late Roman villa system and habitation in the north of Gaul.[29] Whatever is the case, the architecture of villas had dramatically changed and the type of villa life as it was in the second and third centuries had disappeared. In the fourth and fifth centuries, no bathhouses or hypocausts were built on villa sites in this region. Reoccupation started in the sixth century, although scattered settlement from the fifth century may have been present. Occupation in this region was determined by the presence of small rivers. It is yet to be established whether there was occupation in Merovingian times on the higher plateau-like parts of the region, which have fewer river courses.

South of the middle Meuse valley is the sixth region – the Condroz, a densely occupied region in Merovingian times, where local continuity of habitation since Roman times may have been a regular phenomenon. This region was of special importance, for its inhabitants could profit from both the presence of the Meuse valley to the west and from the rich agricultural and non-agricultural resources of the Ardennes forest to the east.[30] The analysis of the exploitation of this forest from this region and its organization should be high on the research agenda. Villagers, aristocrats, abbeys and the king all had a stake in profiting from the wood, stone, silver, lead, gold, game, food, etc. that was to be found in this rich forest, which in Roman times was probably an imperial estate. The seventh region is the Entre-Sambre-et-Meuse, again a densely occupied region since Merovingian times and probably an important part of the home country of the Pippinids.[31] And last but not least, there is the Meuse valley itself with its *vici* and religious institutions.

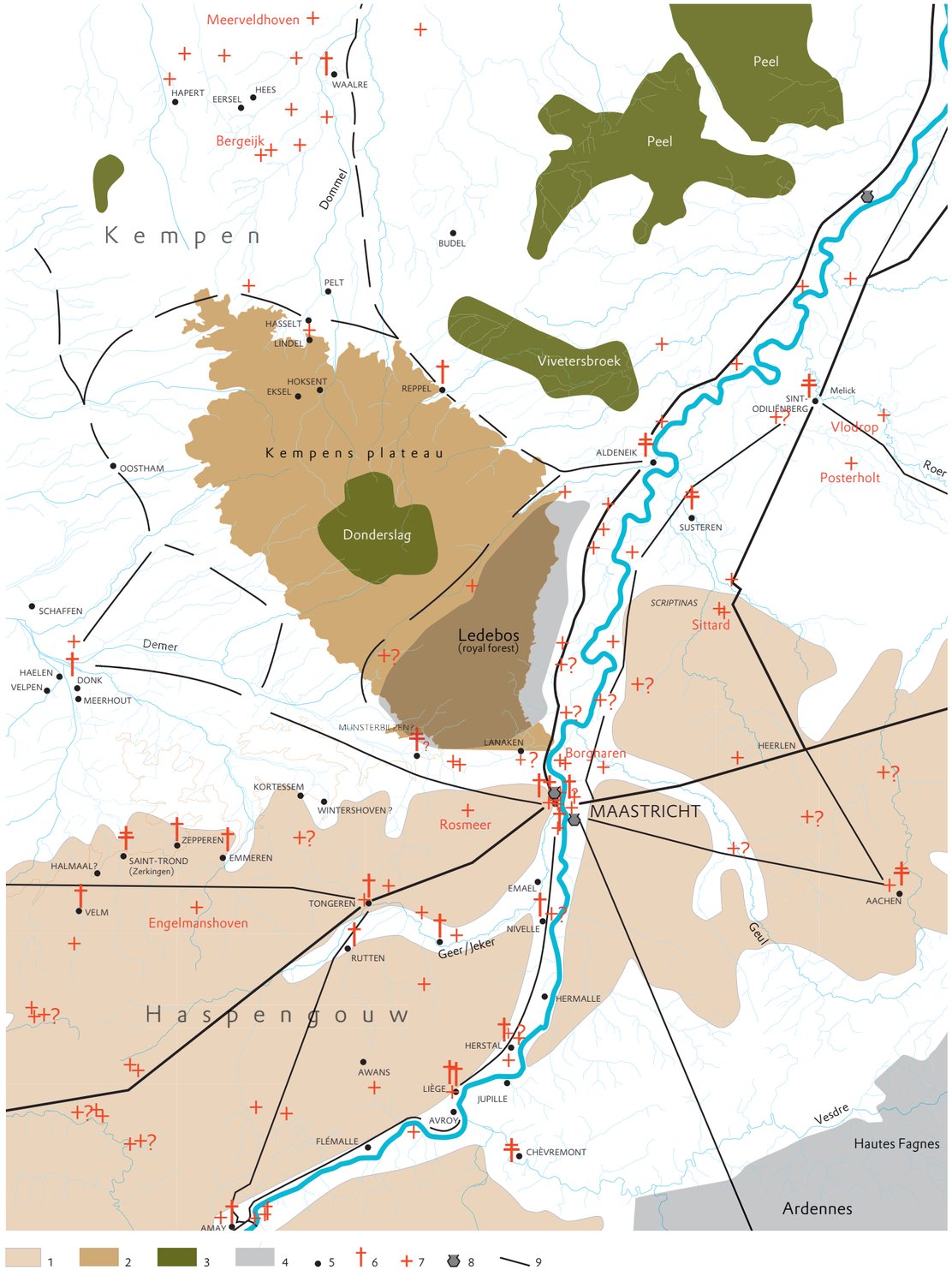
In the course of time, these regions will have formed an integrated whole not the least because of the distribution of the property of various religious institutions over several of them. Moreover, these regions depended on each other for the provision of agricultural and non-agricultural products. This exchange and integration was stimulated by the rise of centres already in the sixth century. They were all situated in the middle Meuse valley. The major Merovingian centres were Dinant, Namur, Huy and Maastricht. The role in Merovingian times of the former Roman town of Tongres is highly enigmatic. Recent discoveries of a Merovingian and Carolingian church at the site of the present *basilica* came more or less as a surprise, for until then hardly any archaeological evidence had been found pointing to some form of permanent habitation in the former town after the beginning of the fifth century.[32] Later, two important Carolingian centres emerged to complete the network of central places in the middle Meuse valley: Liège and Aachen. However, they differed to some extent from the older ones, which can be characterized as multifunctional centres. Liège was above all a cult centre. It emerged where Lambertus, the late seventh-century bishop of Tongres–Maastricht, was slaughtered and later buried by his successor Hubertus.[33] Liège eventually eclipsed Maastricht when the bishop moved his seat to this town some time in the late eighth century. Lambertus became a serious rival of Servatius in the contest for saintly primacy in the bishopric. By the end of the tenth century, Liège – under the aegis of Bishop Notker – was one of the major centres of Lower Lotharingia.[34] Aachen on the other hand was a *palatium*, a royal residence that had been most important under Charlemagne and Louis the Pious.[35] It lost some of its grandeur in the course of the ninth and tenth centuries, to be raised again to prime status under Otto III in the last decade of the 10th century.[36] In the Carolingian and Ottonian period, the Liège–Aachen–Maastricht combination must have given the region a strong sense of centrality. None of the centres of the middle Meuse valley can be studied on its own. In each period the importance of a centre was determined by its position in the regional network of centres.[37] The composition and character of these networks changed over the centuries.

(16) The river valley itself is number eight. (17) Theuws 1988, 1991, 2010. (18) Theuws/Bijsterveld 1991. (19) Theuws/Bijsterveld 1991. (20) Theuws 2015. (21) Siegmund 1998, Beilage 1 and catalogue; De Haas/Theuws 2013. (22) Sittard: burials in two locations and a settlement; Tüddern: burials in two locations. (23) Siegmund 1998, 430; De Haas/Theuws 2013. (24) Plum 2003. (25) Plum 2003; Schaub 2011. (26) Rotthoff 1953. See also fig. 1.8. (27) See various contributions in: Roymans/Derks 2011. (28) Van Ossel 1992. (29) Van Ossel/Ouzoulias 2001. (30) Wickham 1989 [1994]; Müller-Kehlen 1973; Noël 1997. (31) Dierkens 1985, 318-327. (32) Baillien 1979, 8-14; Van den Hove/Vanderhoeven/Vynckier 2002; Vanderhoeven et al. 2002. See also various copies of the *Nieuwsbrief O.L.V.-Geboorte Basiliek Tongeren*. Vanderhoeven 2011. (33) Kupper 1990; Werner 1980, 280-319, 410-441; Theuws 2001a, 174-175, 190-193. (34) Kupper 1982, 1984a, 1984b, 1990, 2000; Den Hartog 1992, 33-55. On 'Lotharingia' and what it means: Bauer 1997; Parisse 1999. (35) Flach 1976; Untermann 1999, Schaub 2011. On the relative importance of Aachen in Charlemagne's and Louis the Pious' time see McKitterick 2008, 157-171. (36) Falkenstein 1998. (37) See below.

All the centres, except Aachen and Tongres, were connected by the Meuse. It was to some extent a navigable river.[38] Because it is a rain river, travel by boat depended greatly on seasonal variations in water flow. Drought and excess rainfall and melting ice often prevented river traffic in summer and late winter. Late spring and autumn were the best periods for river traffic. Moreover, the interweaving and meandering river, combined with the presence of changing gravel banks, underwater gravel banks, underwater rocks, narrow passages and fords, demanded great skills from the boatmen. The middle Meuse consisted of a series of flat stretches (basins) with a regular flow of water of some depth, separated from each other by often narrow channels with a relatively high fall, a rapid water flow and shallow water. The barges of the Meuse were therefore narrow and flat-bottomed, with a minimum draught. The larger ones had a capacity of up to 170 tons, although in late medieval and early modern times the average tonnage was between 70 and 110 tons.[39] Downstream of Maastricht it was possible to use larger boats because the river had a much lesser fall and a more calm flow of water. A towpath to enable horses to tow boats upstream existed along several stretches of the river in late medieval and modern times. North of Maastricht the towpath was in the hands of the counts of Loon as a royal fief in the high Middle Ages. It is unknown whether it already existed in early medieval times.[40] In general not much is known about the boats or the river traffic on the Meuse in the early Middle Ages. Future research should concentrate on identifying the early medieval channels, the excavation of boats and the nature of the infrastructure needed for river traffic.[41] Waterfront archaeology of the Meuse has hardly developed.[42]

Several elements would have determined the exact location of the early medieval centres on the river. The presence of a late Roman *castrum* is one, of a tributary another, or of possibilities to create a good river crossing or landing place for boats. Other aspects might be an appropriate distance from each other, regional property relations and aristocratic interests. Yet another will have been a good location in relation to an optimal diversity in hinterlands. Maastricht is well located in this last respect. It had easy access to four of the seven regions identified earlier (i.e. regions I, IV, V and the Meuse valley itself) and is close to two of them. It had the greatest diversity of hinterlands of all the centres in the Meuse valley, although Namur is also well situated. We will now float down further in order to get a more detailed view of Maastricht's hinterland.

Fig. 1.5
The hinterland of Maastricht with its sandy regions to the northwest, the fertile löss regions to the east and west, the Ardennes forest to the southeast and the Meuse valley. Part of the infrastructure was inherited from the Roman period and centred on Maastricht because of the presence of a Roman bridge there. 1. löss, 2. the Kempens Plateau (contour line is 50 m above sea level), 3. moors, 4. large forests, 5. places mentioned in the eighth century, 6. early medieval churches (provisional), 7. Merovingian cemeteries (provisional), 8. Merovingian pottery production, 9. roads and routes.



Maastricht's hinterland: geography and habitation

Maastricht was truly a node in a web of routes (fig. 1.5). First, it profited from the traffic on the river. Second, the important Roman road from northern France to Cologne crossed the river at Maastricht. The bridge, which was built by the Romans, is supposed to have lasted until the thirteenth century.[43] It attracted more or less all routes to this point. One such important north–south land route was that along the Meuse. Possibly the one on the west bank north of Maastricht was more important than that on the east bank.[44] Another route to the west probably ran along the south bank of the river Demer. Later, in the Carolingian period, a new land route known as the Via Mansuerisca came into being.[45] It ran in a south-easterly direction. Its wooden pavement has been found in several locations in the Hautes Fagnes. Another route must have connected Maastricht with Aachen in Carolingian times. This star-like configuration of routes, older and new ones, is proof that Maastricht profited from the ecological diversity of its hinterland. Between the sandy soils of the north-west and the forests and moors of the south-east is a band of fertile loess soils through which the old Roman road ran like an artery. It is an undulating, hilly landscape. However, a large part of the hills east of the Meuse came under cultivation only from the high Middle Ages.[46] To the north-west are the sandy soils of the *pagus* Texandria. As can be seen on the map in fig. 1.5, this area is divided into small cells by numerous brooklets. The sandy soils were hardly suitable for arable farming; only a small percentage of the total area was used as arable land even in the nineteenth century. Vast stretches of woods and heather fields made this region suitable for animal husbandry. The inhabitants of this region will have practised a form of mixed farming. Finally, the Meuse valley itself constituted a third ecological zone. Fertile meadows were found there. Due to the risk of inundation, the Holocene part of the valley was not suitable for habitation. However, the inundations helped to maintain the fertility.

(38) Suttor 1986. (39) Suttor 1986. (40) Baerten 1969, 22. (41) First promising results are to be expected from the Grognon excavations in Namur. See also Stoepker 2006. (42) Important results have, however, been obtained in analysing the Roman bridges at Cuijk and Maastricht (Goudswaard/Kroes/van der Beek 2001; Vos 2004). (43) Roman bridge: Panhuysen 1996, 22-25; Vos 2004. It is supposed that the bridge which collapsed in 1275 (Van Nispen tot Sevenaer 1926b, 93) was the ancient Roman bridge. However, the history of collapsing bridges (it happened more than once as a result of hostilities between the bishop of Liège and the duke of Brabant) in the thirteenth century is a complicated one (De La Haye 1984, 16-20). Gregory of Tours, writing in the later sixth century, mentions a bridge in the context of the story about Servatius. It is generally thought that it is the Roman bridge at Maastricht; although he does not explicitly say so, the context of the story implies this (Liber in Gloria Confessorum c. 71). No remains younger than the fourth century have been found at the site of the Roman bridge in the Meuse at Maastricht (Vos 2004). This means that, strictly speaking, we do not have physical evidence for a Roman bridge between the fourth and the thirteenth centuries. All kinds of scenarios are possible (the Roman bridge is still intact; Gregory mentions a bridge, but it no longer existed in his days; the bridge was at a location different from that of the Roman one; etc.). We will have to wait for new research. (44) Willems 1987; Van Enckevort/Hendriks 2015, 116; Theuws 2015, 172. (45) Corbiau 1981. (46) Hartmann 1986.

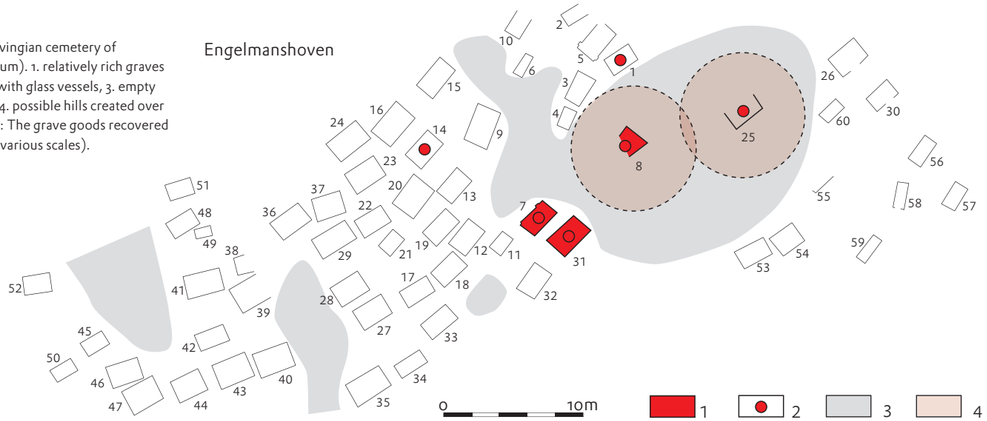
A few other ecological features characterize Maastricht's hinterland. First of all a large plateau – the Kempens Plateau – stretches from Maastricht in a north-westerly direction.[47] It forms the watershed between the Meuse river basin and that of the Scheldt river. The plateau is still covered to a considerable extent with woods and heather fields. One of these woods is the Ledebos, which used to occupy the southern part of the plateau and its eastern slopes.[48] The extent as indicated on the map is a reconstruction based on written sources from the modern period. It was a royal forest, and had probably been so since the early Middle Ages.[49] On top of the plateau, where drainage was minimal, a large swamp developed named Donderslag.[50] The Kempens Plateau, the Ledebos and the Donderslag swamp determined the possibilities for travelling in this area. Only indirect connections were possible between Maastricht and the core of the *pagus* Texandria, which is shown in the northern part of the map. The Donderslag swamp was the southernmost of a series of swamps that defined the Meuse valley to the west. Further to the north were the Vivetersbroek and the Peel – swamps that formed a natural border between the lower Meuse valley and the sandy soils to the west. Only a few routes were possible between the two areas; the one that departs from Aldeneik is probably the most important one. Vast swamps and forests were also found to the south-east of Aachen and Liège; these are the Hautes Fagnes ('high moors'). Today, south of the river Vesdre begin the forests of the Ardennes plateau.[51]

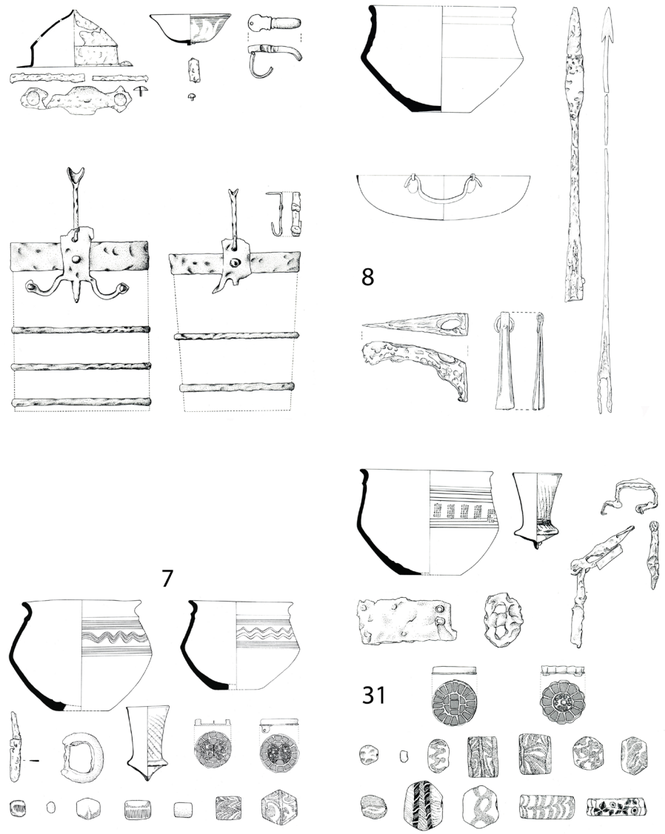
This is the landscape the early medieval colonists encountered. Important parts of it must have been covered with forest. Permanent colonization of this hinterland began in the middle and the second half of the sixth century. Continuity of habitation since Roman times in one form or another existed along the Meuse, in centres like Maastricht, as well as in rural areas. The colonization of the hinterland seems to have been a gradual process rather than a massive event. Colonists may have come from the Meuse valley, and from other regions, and after a certain time also from within the region itself. We discover the graves of these colonists in the cemeteries they created. At Engelmanshoven (south-east of Saint-Trond) a household buried its first dead with lavish grave goods and reserved a special place for them in the cemetery that developed around their graves by keeping a respectful distance when burying the next dead (fig. 1.6).[52] Men buried with weaponry and containers for food and drink, and women buried with fine jewellery symbolized the colonist's claims to the soil they occupied. Their lavish burial seems to indicate that they were considered the founding ancestors of the local community.[53] They may have been perceived as essential to the community's future well-being. It is customary in archaeology to interpret these graves exclusively in terms of vertical social organization. Graves like these used to be considered those of members of leading regional elites.[54] Although this may be correct, the meaning of the burial ritual seems to go beyond such simple equations between vertical social status and ritual.[55] Colonists such as those of Engelmanshoven may well have been buried in this way for their role on the local level after death, as ancestors that give protection (men with weapons) and fertility (richly ornamented women). Graves like those at Engelmanshoven can be expected in many local communities and may not be as exceptional as it seems on the basis of a limited database.

Another example of how colonists buried their dead can be found in Meerveldhoven (fig. 1.5).[56] Here, three household groups seem to have formed the initial colonizing group (fig. 1.7). They buried their first dead in the years around AD 600, thus somewhat later than the earliest burials in Engelmanshoven. Again, men were buried with important sets of weaponry. In grave 53, one of the earliest in the cemetery, a sword (and sword belt), a lance, a shield, a sax and an axe were found, as were the remains of a belt and a pot. In another grave that has an exceptionally large wooden chamber in which the coffin was placed, the remains of a bronze basin, horse gear, a lance and a belt were found, along with a glass cup. The grave may have been reopened later in the Merovingian period. In the graves of the women of the early colonists, however, no rich jewellery or grave goods were found comparable to those found in Engelmanshoven. A pot, a string of beads and metal belt fittings characterized the find inventories of their graves.[57] In Meerveldhoven, the accent was clearly on men and weapons rather than on women and jewellery. The difference in the treatment of women in the burial ritual between the two places seems to be the result of different choices made by local groups, rather than of differences in social status on a supra-regional level, because the families in both cemeteries seem to me to have been of comparable social status.

Another example of the burial rites of colonists comes from Rosmeer, which is just west of Maastricht.[58] There seem to have been two or three households or two families that buried their dead on the site of the ruins of an ancient Roman villa in the last decennia of the sixth century. Was this choice of location symbolic of their claim to the soil by referring to the former owners of the area? The dead men of the early burials seem to have been relatively young. What, then, was the demographic structure of this colonizing group? And if it was a group of relatively young people, how did such a group survive the early deaths of some of its members?[59] The colonizing group of Rosmeer thus was also small (only two or three households).

Fig. 1.6
Top: a plan of the Merovingian cemetery of Engelmanshoven (Belgium). 1. relatively rich graves sixth century, 2. graves with glass vessels, 3. empty spaces in the cemetery, 4. possible hills created over graves 8 and 25. Bottom: The grave goods recovered from graves 7, 8 and 31 (various scales).





(47) I used the 50-metre contour line to indicate its extent. (48) Gorissen 1956. (49) Baerten 1969, 22. (50) Its name is sometimes explained as Donars-lo, that is, 'the forest of Donar'. (51 This is not to say that they were devoid of human activity: Müller-Kehlen 1973, Wickham 1989 [1994]. (52) Vanderhoeven 1977. (53) See also Theuws 2000a on this interpretation. (54) See e.g. Christlein 1973 (1975). (55) I will deal with our perspectives on burial rituals in a more detailed way in a later section. (56) Verwers 1978. (57) The excavator sometimes indicates that graves may have been plundered, as they were in Engelmanshoven. (58) Roosens/De Boe/De Meulemeester 1976; Roosens 1978. What follows below is to some extent based on the dates provided by the excavators. However a quick scan of the grave finds (especially the belt fittings) indicates that the chronological development of the cemetery presented by the excavators needs revision. The oldest finds seem to be dated too early (from the middle of the sixth century on) and the beginning of the western part with the large graves too late. The eastern and western parts of the cemetery may have become in use at the same time. The oldest horizon of graves in the east is not such a compact early group of graves as presented by the excavators. (59) Chronology can be very tricky in such a case, because if the colonists died at a very old age and members of the group (children?) died early, the latter group will be the archaeologically older ones ('phase 1) and the old colonists will be the dead of 'phase 2'. In order to analyse colonization, it is necessary to have good age and sex determinations and preferably scientific analysis of the bones to establish family relations (DNA) and indications of regions of origin (trace elements).

Fig. 1.7
Plan of the cemetery at Meerveldhoven (Netherlands).
The oldest graves are indicated in green.



A last example is the small cemetery in the nearby village of Borgharen.[60] Over a period of c. 100 years c. 30 people were buried on this site that is c. 8-10 per generation. It is the burial place of maybe no more than one or two families. In several graves relatively rich sets of objects were found comparable to those of the men and women at Engelsmanshoven. In this case the colonizing group must have ben small too.

These four cemeteries evidence that colonization was an on going process, one that took place at different moments in different places. Moreover, they show that absolute distance from the old cores of habitation in the Meuse valley was not a decisive variable in the chronological–geographical development of the colonization. Places near the valley may have been occupied later than those far away. The cemeteries also show that lavish burial of the earliest dead of a colonizing group was a common strategy, although there were important variations. There is a lively debate on the interpretation of these burials. They have been interpreted as a display of social status or as a sign of local competition for power. In a later section I will deal with some of the theoretical aspects of the burial analyses. For the moment I can say that it is my view that this type of burial was not so much a display of vertical social status in relation to other local groups or within local groups (which were generally very small), nor was it used to settle a stress situation related to a disruption of local power relations upon the death of a person; rather, the early rich burials expressed families' claims to the soil in a colonization process by creating ancestors whose role was to protect the new community and give fertility.

After several generations (at the end of the seventh century), habitation was distributed very unevenly over Maastricht's hinterland. Occupation was most dense in the valley itself. The narrow valley south of Maastricht provided less opportunity for habitation than the wide valley basin to the north, which must have been densely occupied by the end of the seventh century. The fertile loess soils to the south-west, where the *pagus* Hasbania was, showed a differentiated occupation pattern depending on the presence/absence of small brooklets that seem to determine choices of settlement locations by the colonists (fig. 1.5). Numerous streams cut the loess soils north of the river Geer/Jeker. Occupation seems to be relatively dense in that area and in the lower valley of the Jeker itself. The upper valley, upstream of Tongres, and the region immediately to the north of it, seem to be less occupied. There is also a large area south of the river Jeker that, as far as we can judge on the basis of present evidence, was avoided by early colonists. Settlement is found in those places where small streams that flow south into the Meuse originate.[61] This pattern is illustrated by the presence of Merovingian cemeteries in many villages along the river Mehaigne to the north of Amay. The present distribution pattern of cemeteries, churches and places mentioned in the texts suggests that an area north and south of the Jeker/Geer upstream from Tongres/Rutten was hardly occupied in Merovingian times.[62] The loess soils to the east of the Meuse showed a similar pattern. There was no habitation in the hills between the rivers Meuse and Geul where small streams are virtually lacking, but there may have been scattered habitation to the east of the river Geul where small streams are present. The only large cemetery that is known at present in that area is at Aachen.[63] The loess soils north of the Roman road from Maastricht to Cologne show few traces of early habitation. The only habitation that is found is west of Sittard; however, it is merely an isolated pocket.

(60) Dijkman 2003; Lauwerier/Müller/Smal 2011; Lauwerier/De Kort 2014. (61) That there is hardly any habitation further south along these streams is probably a result of the presence of a steep slope along the Meuse into which these streams have cut themselves. Habitation in these narrow valleys is probably not possible. Only at the place where these streams meet the Meuse valley were settlement locations again available. Liège was situated in such a location at the lower end of the Legia stream. (62) Future research should include an analysis of place names in the area. (63) Plum 2003, 175-187. (64) A figure mentioned in the first quarter of the ninth century for Pelt (in the Belgium province of Limburg) in relation to an estate of the abbey of Lorsch in Germany (Camps 1979, 21 (no. 15)). (65) The northern part of the sandy region west of the Meuse is subject to intensive settlement research. (66) Unpublished cemetery. The finds are on display in the Roerstreekmuseum at Sint Odiliënberg. (67) Posterholt: Willems 1985; De Haas/Theuws 2013. (68) Lamarcq/Rogge 1996, 187-190. (69) For the latest overviews, see Devroey 1998; Verhulst 1999; Theuws 2008. (70) See Vanmechelen/Mees/Robinet/Plumier 2001.

To the north are the sandy areas, which were marginally colonized. The Kempens Plateau remained almost without settlement. A route possibly ran along the western limits of the Ledebos along two streams that allowed the plateau to be crossed easily. Three cemeteries indicate the presence of such a route. Further to the north pockets of concentrated habitation seem to be present on the northern flanks of the plateau and in the core of the *pagus* Texandria. Scattered habitation will have been present elsewhere in the region. The overall picture of the north-western sandy areas is of small settlements (up to 10 households) occupying the small 'islands' of soils that are suitable for arable farming; these islands are surrounded by marshy brook valleys. In Carolingian times groups of such islands may have been organized into single estates, some of which housed up to 56 *mancipia*.[64] In view of the results of recent excavations, it is unlikely that they lived in one single settlement.[65] The sandy area east of the Meuse seems to be void of habitation except for the valley of the Roer. In this valley occupation started at more or less the same time as in the loess area. Early burials of the same type and wealth as those in Engelmanshoven, Borgharen and Meerveldhoven have been found in Vlodrop.[66] Both in Vlodrop and Posterholt large cemeteries indicate intensive colonization and habitation.[67] It is possible that the colonization of Posterholt and Vlodrop was undertaken from the south-east (i.e. from present-day Germany), where more cemeteries are found, rather than from the Meuse valley. Of course, our evaluation of habitation patterns may change as a result of new finds, but the more than a century long history of archaeological discoveries may have generated a general picture that seems to reflect the ancient situation.

It was suggested at the beginning of this chapter that Maastricht was a centre on the northern frontier of late antique civilization. This image is supported by linguistic evidence. The present-day border between Romance (French) and Germanic (German, Dutch) languages lies just south of Maastricht. In late Roman and early medieval times, however, the situation was more complicated. The immediate surroundings of Maastricht and parts of Middle Belgium were bilingual, though with strong Romance influences.[68] It forms more or less a bilingual linguistic peninsula in the Germanic language area. Within this peninsula, however, there were small, truly romance speaking communities such as those around Simpelveld–Vaals and Kettenis–Lontzen–Moresnet. It would be highly interesting to compare in the near future the language geography and the development of habitation and the development of property relations in more detail.

This section on the geography of Maastricht's hinterland concludes with a reference to a long-lasting and highly interesting debate on the origins of the towns in the Meuse valley.[69] The modern point of view tends to stress the importance of town–countryside relations in the growth of the Merovingian and Carolingian economy in contrast to the old ideas of Pirenne, who pointed to long-distance trade as fundamental. Some authors tend to give primacy to rural development in the town–countryside relationship. In historiography, the centres of the Meuse valley changed from long-distance trade centres to regional centres that owed their rise to rural development based on the organization of production in large estates. The debate on the rise of towns in the Meuse valley (important as it is for our image of town development in north-western Europe) cannot be considered closed despite the consensus that now seems to exist. Now that archaeology is evaluating ever more evidence, the first impression of the development of the countryside is that it started relatively late. Large parts of the hinterlands of the 'towns' were colonized only from the middle or the late sixth century on. One can ask to what extent the small rural groups were able to sustain the Meuse valley centres in Merovingian times, that is, at the time of rapid growth. How fundamental was rural development to their rise? We have to keep on board the possibility that the rise of these centres, all of which developed along the river at the expense of inland centres such as Tongres and Aachen (a wealthy Roman spa), was due to exchange and traffic along the river. The river and everything that moved along or on it must have been of great importance to the development of these centres. In the Grognon excavations in Namur, there is evidence of artisan production already in the first half of the sixth century.[70] Following this phase is one with evidence for river traffic (and trade in the seventh century). These centres may have developed due to activities related to the river (long-distance trade?) more than we are currently willing to accept. Moreover, they may have shown a considerable dynamic of their own or in relation to other places along the river. We hope to elaborate on this theme of town development through a more detailed analysis of rural development in Maastricht's hinterland and through a renewed analysis of river-based exchange networks.

Maastricht's hinterlands: the religious landscape

The Saint Servatius project takes one of the most important cult places of the region as its point of departure. Religious transformation is also one of the interests of the project. It is a complex process involving various social groups, external impulses and 'do-it-yourself Christianity', the interaction between individual interpretations and institutional norms, and the growing encapsulation by Christian clergy of various fields of daily life. The most visible expression of this transformation process is the creation of cult places of various characters. They are known from both written sources and archaeological research. However, we must

beware of simply equating 'Christianization' with the building of cult places. For the time being I should like to divide the process of religious transformation in the early Middle Ages into several phases that may overlap.

The first phase is one of 'Christianization', that is, the acceptance by individuals, families and communities of (some) Christian values. This may have led to the attendance of Christian rites. It will have been the case that, for various reasons, Christians who defined themselves as such did not have access to a Christian infrastructure with cult places and priests. In those cases 'do-it-yourself Christianity' emerged; in other words, creative local solutions to Christian needs were developed. These solutions may not have been in line with official Christian practices defined by the leaders of the Church in their councils. For this reason a series of Christian burials may have existed that we do not recognize, used as we are to look with the eyes of formal Christianity.

The next phase is one in which this formal Christianity was created and imposed by the clergy. This is 'Clericalization', a process that went hand in hand with the growing power of the clergy and the Church.[71] When this power was strong enough the third phase will have started, that is, a phase of 'Institutionalization'. In this process, the power of the clergy was transformed into Church institutions. Bishoprics were stabilized, archdeaconries and parishes created as well as formal burial grounds in rural contexts, etc.[72]

A phase of 'stabilization' (and quantitative growth) may have followed this phase of institutionalization, but I assume that in our region this was a process of the twelfth century and later and thus falls outside the scope of this project. What we have to analyse is the relation between the creation of cult places and the various phases of religious transformation. Creating churches may equally well be related to institutionalization as to Christianization. Past historiography concentrated especially on the institutional aspects, namely the development of the Church. It also had a top-down perspective: Christianity came from above, which means that missionaries and bishops brought it. Christianity was presented as being 'given' to the people – or rather as imposed on them. Religious transformation may equally well have been a bottom-up process. When Willibrord consecrated churches in the *pagus* Texandria, as he states in his calendar, he may not have created these and thus brought Christianity to this heathen country; instead, he may have consecrated already existing *memoriae* perceived as Christian, where 'do-it-yourself rites' had developed. The consecration is in that case rather an element of clericalization. Bottom-up and top-down processes of religious transformation then merge in the act of consecration.

An element of an institutional perspective on religious transformation is the statement that our area is part of the bishopric of Tongres/Maastricht/Liège, which in turn is a part of the archbishopric of Cologne. It is also suggested that the territory of the archbishopric goes back to the ancient Roman province of Germania Secunda, although the exact limits of this province are not known.[73] The limits of the province are often deduced from those of the bishopric. We have to be careful not to develop a circular argument. The limits of the bishopric in the form we know them now may be the result of power politics of much later centuries (up till the tenth century). We will see in a later section that the bishops of Tongres/Maastricht had little influence in the middle Meuse valley in the Merovingian period, and it may well be that the northern part of the bishopric (Texandria) was a contested area between Utrecht, Cologne and Liège in the Carolingian age, and became an uncontested part of the bishopric of Liège only in the tenth century. The bishopric as a clearly defined territory could have existed as an idea, but the extent to which episcopal power was effective in all parts of it is another matter. In our research area, the bishop of Tongres/Maastricht/Liège seems most influential, but the bishops of Utrecht and Cologne were never far away! More research is necessary to understand the transformation process in detail so that the above-mentioned themes can be addressed.

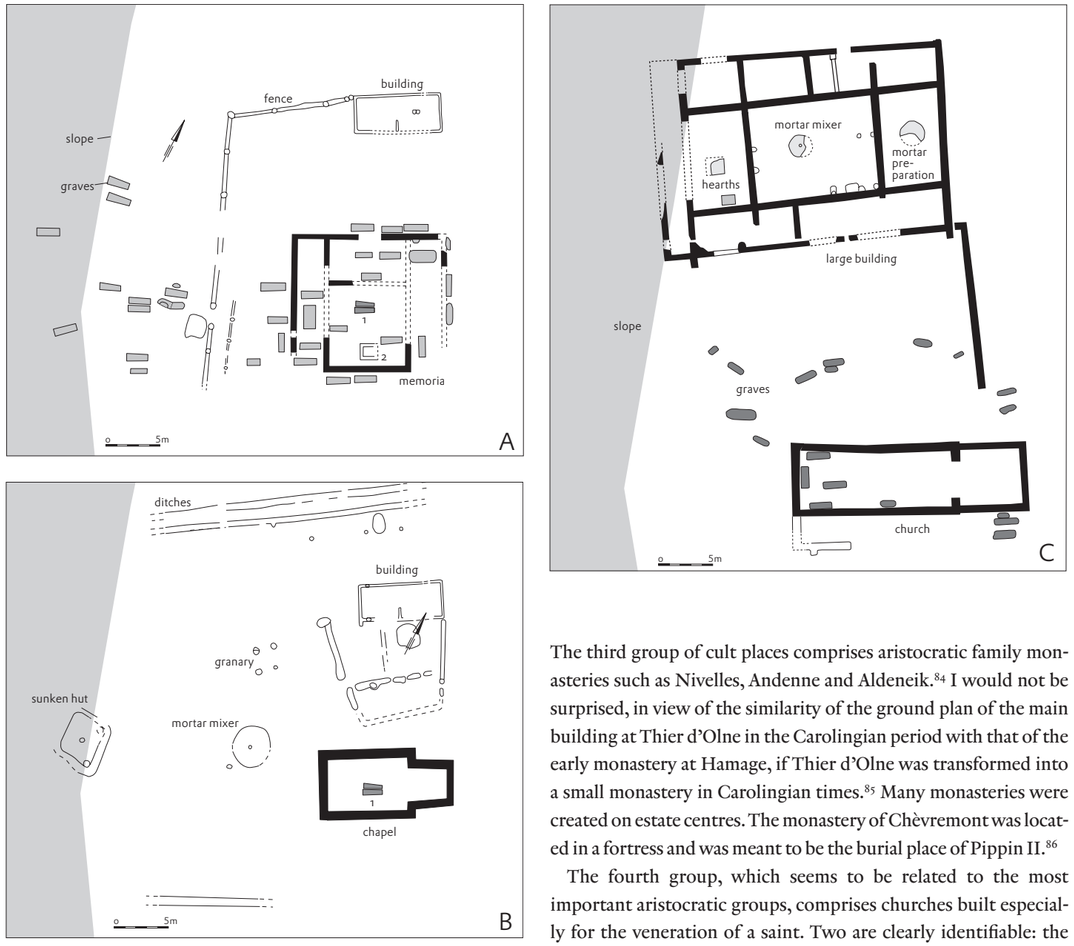
By way of introduction a series of cult places are put on the map from the Merovingian/ Carolingian period known from written sources and archaeological research.[74] Here we will content ourselves with a general image of the religious landscape around Maastricht. In describing this general image, I will use a schematic classification of cult places that could be a starting point for future research on the religious landscape as an integrated whole. This schematic classification is of course hypothetical for the time being, as is its underlying thought, namely that aristocratic communities played a fundamental role in creating this religious landscape rather than 'the Church' as an institution. I also expect that aristocratic communities perceived the various types of cult places as elements of a coherent and integrated system. Each aristocratic group of importance controlled a variety of cult places, which may have ensured their legitimate position in this world and may have been models of how society should be organized. They are active elements in creating world-views and ideal images of what should be God's given order which, including the related power structure, should not be altered. I distinguish five groups of cult places in our research area.

The first group comprises the bishop's churches dedicated to Saint-Mary in Tongres and Maastricht and the churches dedicated to Mary in Huy, Namur and Dinant, which were episcopal churches in later times, although they may have been aristocratic or even royal foundations in origin.[75] The early history and the dates of foundation of all these churches are highly enigmatic.[76] However, it is clear that they belong to the oldest Christian religious foundations in the region. Two of them are associated with a bishop–saint in tenth-century texts: Domitianus, a sixth-century bishop, is venerated in Saint-Mary's church in Huy and Perpetuus, while a seventh-century bishop is venerated in Saint-Mary's church in Dinant.[77] It is problematic to accept this late tradition without criticism as valid for the Merovingian period too. The veneration of the bishop–saints may be the result of later translations of their remains into these churches, perhaps to substantiate episcopal claims on them.[78] The Saint-Mary's churches were primarily parochial churches and it is less likely that they functioned as burial churches and were associated with early saints' cults.

The second group comprises the burial cult places in their various forms. They are not necessarily churches, but may become churches. What such a burial church looked like and how it came into being is shown by the excavations at Thier d'Olne (Engis), a hill on the right bank of the Meuse opposite Amay. Although published partly in detail, the results of the excavations have not yet received the attention of the international scholarly world they deserve.[79] They are a perfect example of how an estate centre came into being and how a building for memorial purposes was turned into a church. A memorial building was created in the middle of the seventh century (fig. 1.8a). It had stone foundations, a wooden superstructure, a mortar floor and wall plaster, indicating that it had a roof. A central room was surrounded on three sides by a *porticus* or by aisles; the entrance was to the north. More or less in the centre of the room two sarcophagi (graves 18 and 19) were dug in; they are the only sarcophagi on site. The trench for grave 18 was cut through the mortar floor. Other graves associated with this building were found, many of them in the aisles, some of them outside along the walls and some of them further to the west. In each of the sarcophagi two persons were buried: in 18 a man (c. 50 years) and a woman (also c. 50 years), and in 19 a man (c. 50 years) and probably a woman (40-50 years). Sarcophagus 19 was ornamented with two crosses, which is an indication that at least those who were buried in this sarcophagus were Christians. The excavators think that the burials in the sarcophagi were almost contemporaneous and that the members of the two couples involved died at more or less the same time.[80] They prefer this explanation to the supposition that the sarcophagi were reused after a lapse of time. In the southern part of the central room was a rectangular foundation, indicating the presence of an altar. However, it was placed on top of the mortar floor and may be a secondary addition to the building. In Carolingian times (middle of the eighth century) a chapel with a typical form of a single nave and a narrow rectangular presbytery replaced the building (fig. 1.8b). Because the first building has no presbytery, the excavators interpreted the building as a memorial building *stricto senso* in which Christians were buried, and where commemorative but not liturgical activities took place. This changed after the creation of the altar, however, when liturgical acts may have been performed. The creation of the chapel indicates that this liturgical function was enhanced. At that time it may still have had only a commemorative function. The building must have been turned into a church when, still in Carolingian times, the chapel was enlarged (fig. 1.8c). In short, the excavations at Thier d'Olne (Engis) perfectly illustrate the development of a memorial building into a church. The excavators interpreted it as a church of an estate centre. Another case is that it was said that bishop Lambert was buried in his father's tomb, an indication that his family may have had a *memoria*.[81] Because Lambert was a bishop, this place must have been a Christian place. A last example may be Saint-George's church in Amay, in which the sarcophagus of Saint Chrodoara was found and which may have originally been a burial church. Chrodoara is equated with Oda, known from a later tradition (twelfth or thirteenth century), as well as with an aunt of Adalgisl/Grimo, who is mentioned in his will of 634.[82] However, the lid of the sarcophagus is dated to about 730 on the basis of art-historical criteria, so it was concluded that the lid can not have functioned as a lid for a sarcophagus at the time of the death of Oda/aunt/Chrodoara, who died before 634.[83]

(71) It is this process that has been analysed by Paxton (1990), Treffort 1996 and Effros 1997. (72) Parallel to this phasing of the process of religious transformation other possible processes occur, related to the rate of internalization of Christian ideas and values, the process of internalization of Christian spirituality as exemplified in monastic life (Milis 1990; Milis 1992) or the development of bishops as guardians of moral values (Leupen 1985). (73) Gauthier 2002. (74) A new, detailed inventory of cult places in this area is needed. (75) Early royal property seems to have been present in these centres, although the evidence is flimsy (Werner 1980, 458-468). It is also possible that these cult places had a dual origin as a result of aristocratic and royal cooperation (aristocratic initiative on royal property?). It is also supposed that they were episcopal churches from the beginning (see for the debate, Dierkens 1990), but an alternative explanation involving aristocratic families is also possible (Theuws 2001a, 172-174). Sixth-century episcopal power in this diocese may not have been organized in such a formal institutionalized way as it was in Carolingian and Ottonian times. On the relation between aristocracy, bishops office, saints and urban topography see Wood 2001. (76) The church in Tongres was subject to excavation. The results will play an important role in the interpretation of the results of the excavations in and around the basilica of Saint-Servatius in Maastricht (van Den Hove/Vanderhoeven/Vynckier 2002. See also the various copies of the *Nieuwsbrief O.L.V.-Geboorte Basiliek Tongeren*) and Vanderhoeven 2012. (77) Dierkens 1990, 403-406. (78) The tenth-century text on which the evidence is based is the episcopal chronicle by Hériger of Lobbes, which may have been written to substantiate claims by Bishop Notger on these churches late in the tenth century (Dierkens 1990, 403). A situation in which bishops were represented as being buried in these churches from old times was of course very convenient in the light of these goals. (79) Witvrouw/Gava/Lehance/Gava/Dardenne 1991-1992; Witvrouw/Gava/Dardenne/Gava 1996-1999; Witvrouw 2005. (80) The sarcophagi, however, need not have been buried at more or less the same time; for instance, two successive generations might be involved. (81) Werner 1980, 248 (with quote from the *Vita Landiberti episcopi Traiectensis vetustissima*). (82) Sarcophagus: a vast body of literature has appeared since its discovery in 1977. A status questionis of the debate on the date of the lid of the sarcophagus and the context of its creation is given in various contributions in Dierkens 2006a. For Adagisl/Grimo, Amay and his testament and the equation of the unnamed aunt of Adalgisl/Grimo, Oda and Chrodoara, see also Werner 1980, 31-59. (83) Dierkens 2004, 77-79 and 2006b. The dating of the lid is, however, still uncertain. Works of art from our region to compare with are extremely rare. I suggest that the discussion on the date of the lid should not be considered as closed and that a date 100 years earlier (shortly after the death of Chrodoara or at the time of the testament of Adalgisl/Grimo) should still be considered. In that case, there would be more agreement between work of art and contemporary text. This is not to say that the lid may not have been moved. In the 730s it may have been an element in an elevation of the remains of Chrodoara by Bishop Floribert mentioned in the Vita sanctae Odae viduae, which is at least 400 years younger (Kupper 2006b; Dierkens 2006b). One of the arguments to date the lid in the eighth century is that this type hardly appears before c. 650 AD. The exceptional lid is perhaps one of the first of its kind.

Fig. 1.8
The development of the site at Thier d'Olne (Belgium). A. Merovingian phase (seventh century), B. first Carolingian phase, C. second Carolingian phase.



The third group of cult places comprises aristocratic family monasteries such as Nivelles, Andenne and Aldeneik.[84] I would not be surprised, in view of the similarity of the ground plan of the main building at Thier d'Olne in the Carolingian period with that of the early monastery at Hamage, if Thier d'Olne was transformed into a small monastery in Carolingian times.[85] Many monasteries were created on estate centres. The monastery of Chèvremont was located in a fortress and was meant to be the burial place of Pippin II.[86]

The fourth group, which seems to be related to the most important aristocratic groups, comprises churches built especially for the veneration of a saint. Two are clearly identifiable: the Saint-Servatius church built by bishop Monulphus in Maastricht in the sixth century, and the Saint-Lambert church built by bishop Hubert in Liège in the early seventh century.[87] Bishops were involved in the creation of these cult places, but they may have acted both as bishops and as members of important aristocratic groups or in relation to the interests of aristocratic groups (Liège: Pippinids).[88] That bishops acted as members of aristocratic groups can be deduced from the choice of their burial locations.[89] Hardly any bishops of Tongres/Maastricht were buried in what could be termed an official episcopal burial church.[90] Saint-Servatius church could have developed into such a church, but did not. Saint-George's in Amay may have been built as a saint's cult church for Chrodoara. Other churches, especially burial churches, may have been turned into saints' cult churches at a certain point in their early history, such as Saint-Peter's in Nivelle (to become Saint-Gertrud's) and Saint-Peter's in Liège (to become Saint-Hubert's). The burial function of a site may have been combined with a cult place where a saint was venerated. Such may have been the origin of the Saint-Servatius church: a burial church for an aristocratic group created by a member who was also a bishop and who brought a relic to the site.[91]

The last group of cult places comprises estate churches. The variation within this group is extreme. On the one hand we have the *palatium* chapel of Aachen, and on the other the simple wooden church that must have stood in many a place. In the southern part of Maastricht's hinterland, rural stone churches must have been a regular phenomenon since the late seventh century. Many of them will have been simple single nave structures, while others (like the one at Glons, east of Tongres) were richly decorated, as can be seen from the building fragments recovered during the demolition of the previous church around 1900.[92] The sculpture is of high quality and is dated to the first half of the eighth century.[93] Various works of art discovered during recent excavations – such as the sarcophagus of Chrodoara in Amay, the 'Flight to Egypt' relief in the Saint-Servatius church, the Merovingian capital (which was found at the beginning of the twentieth century near Saint-Mary's church in Maastricht) and the sculptured stones in Glons – are witness to a flourishing artistic production in the service of church building and elite representation. The question is: when? Is it when places like Maastricht are booming already in the seventh century, or not until the first half of the eighth century after the takeover by Charles Martel, or even somewhat earlier at the time of Pippin II? This possibility is also interesting because *if* Charles Martel's mother Alpaida did come from this region, the boom in artistic production might be related to the rise of power of the group to which she belonged. Although there is no evidence for a relation between Alpaida and the Chrodoinids, much would be understandable if Alpaida was related to the Chrodoinids in this region or belonged to them and that Pippin and Charles Martel started a building programme to canonize some of the members of this family in order to secure the political position of Alpaida's clan.[94]

Whatever the case, the oldest inscription of Glons shows that aristocrats were involved in creating stone churches around the middle and in the second half of the seventh century. Important groups of aristocrats like the Pippinids and the Chrodoinids will have possessed a range of cult places that in their view may have formed a coherent and integrated set. Through a chain of churches, religious authority was displayed and brought from the aristocratic top to the local community. At the same time, this set of cult places established their position in society vis-à-vis all social strata and in the religious landscape of their time. We have to ask how the sacred became inscribed in the landscape and in what contexts.[95]

Maastricht's hinterlands: the political landscape

The rise of the Pippinids

Next to the king regional aristocratic groups determined the political landscape in the Meuse valley in Merovingian times.[96] These groups cooperated with the king to varying degrees. We do not have much insight into the origins of these groups in the late sixth century. Like the Pippinids they appear in the written sources of the early seventh century.[97] How they were constituted, what the extent of their power base was, and how the process of accumu-

(84) Nivelle: Dierkens 2002. Andenne: Werner 1980, 401-402; Garant 1965. Aldeneik: Dierkens 1979. **(85)** Their d'Olne, see note 69; Hamage, see Louis 1997, 1998 and 2000. See also the discussion of these buildings in relation to Sclayn by van Wersch 2006. However, we have to consider the fact that identical buildings may have served different purposes. **(86)** Werner 1980, 426-441. **(87)** Saint-Servatius: Panhuysen/De la Haye/Gauthier 2002. Liège: De La Haye/Gauthier 2002, both with an extensive list of literature. **(88)** Werner 1980; Theuws 2001a. **(89)** Theuws 2001a, 172-174; Kupper 2006a. It can also be deduced from the fact that Bishop Hubert was succeeded by his son Floribert, which indicates a dynastic control of the bishop's see (Kupper 2006b). **(90)** Kupper 2006a. **(91)** Theuws 2001a, 172. **(92)** Apart from the five sculptured building fragments of two arches, three inscriptions were found (Dierkens 2004a with other literature references) as was undecorated building material of the same type of stone (Jura limestone). One inscription refers to the building of a monument (probably a church – the church at Glons?) during the reign of a King Sigibert (most probably Sigibert III (633/4-656). A later one (probably of Carolingian date) refers to the dedication of a church on 1 October of an unknown year. The third one is eleventh century or later. A discussion developed on the dating of the individual elements as well as the monuments to which the inscriptions refer. Dasnoy (1953) believed that the first inscription and the sculptured stones of the arches belonged together, and were part of a single building dating from the middle or second half of the seventh century. Others point to the fact that on stylistic grounds, the sculptured stones belong to the eighth century and may not be contemporary with the oldest inscription. Others could not believe that such a richly decorated church could have stood in Glons in the early Middle Ages and therefore supposed that the building material must have come from another, more important church in a more important place. They pointed to Saint-Mary's church in Maastricht (for literature references, see Werner 1980, 96, note 18). Werner (1980) rejects this possibility. Those who favour an origin of the stones from outside Glons can now also point to a church in Tongres. An argument against an origin from outside Glons is that next to the inscriptions and sculptured fragments also other stone material of the same type has been found. An origin from outside Glons – for instance, from Saint-Mary's church in Maastricht – implies that several cartloads of this material were brought to Glons. That could only have happened after the demolition of a Merovingian church either in Maastricht or in Tongres. In both cases, Merovingian churches will have been demolished in Carolingian times, not much later. The building of a new church must have followed the demolition of a Merovingian church in these centres. It is difficult to imagine that building material including inscriptions that could be reused in Maastricht or Tongres itself was transported out of the centre to build a rural church. In both the Saint-Servatius church and Saint-Mary's church in Maastricht, as they stand now, spolia from older periods are present. Reuse of older material will certainly have taken place in the Carolingian period as well. Comparable fragments were not found during the excavations in the Saint-Servatius church or in the cloister garden of Saint-Mary's. However, a Merovingian capital was found near Saint-Mary's church (Panhuysen 1986, 140; Den Hartog 2002, 3), showing motives comparable to those on the arches of Glons. All in all, it is not possible to establish whether the sculptured fragments of Glons originate from a local church or a church further away, although a local church in Glons seems to me to be the best candidate. **(93)** I plea for not considering the date of the sculpture to be closed, for again there is a time lag between a text (the earliest inscription) and the stylistic dating of the sculptures. Again, as with the lid of the sarcophagus of Chrodoara it is a date in the second quarter of the seventh century (inscription) and a date in the second quarter of the eighth century (sculpture). If the sculpture dates to the second quarter of the seventh century, a contemporary text and works of art are better related. On the other hand, a date early in the eighth century also has its interpretative attractions. Is it a coincidence that the persons involved in Glons and Amay have related names (CHRODOara and CHRODOaldus)? Both will belong to the group of Chrodoinids that played an important role in the Moselle/Meuse region (for the latest, see Gauthier 2006, whose conclusions on family relations reconstructed on the basis of names seem to be too far reaching). **(94)** The political connotation of the possible canonization of Chrodoara (and one can add the building of the church in Glons) has been recognized before. Dierkens (2006b) relates it primarily to the period in which Charles Martel became major of the palace. The building programme may have started earlier. Gauthier (2006) suggests that there were relations between the Pippinids and the Chrodoinids, although this does not seem likely (see Dierkens's comments in Dierkens 2006b, note 5). But there might be something to it if these relations came into being as a consequence of the marriage between Pippin II and Alpaida. **(95)** Kaplan 2001; Helvetius 2001. **(96)** See especially Werner 1980. Theuws 2001a, 2015. **(97)** Fouracre 2000, 33-37.

lation of wealth and landed property developed are difficult to establish for most of them.[98] Intensive competition must have taken place between these aristocratic groups for the control of agricultural and non-agricultural resources, the most important offices (duke, count, bishop, *domesticus*) and good marriage relations. This competition took place in a situation in which colonization, demographic growth and reclamation were important elements. In this process, new monasteries, fortresses and estate centres were created and the old centres of the Meuse valley will have become involved. Out of this competition arose one group that dominated the entire Frankish kingdom one hundred years later: the Pippinids/Carolingians.[99] It is generally accepted that the Pippinids had the middle Meuse valley as their home territory.[100] According to Werner, Pippin I was at home not only in the southern middle Meuse valley, whose central point was Namur, but also in the northern part around Liège. However, there is no contemporary written evidence for this supposition.[101] An alternative history is possible in which women play an important role.[102] It is useful to discuss this period in some detail, for the Maastricht/Liège area was an important political theatre at the time.

It is most likely that the home territory of Pippin I was the region around Namur.[103] His wife Itta established a monastery in Nivelles, which may have been a home territory of hers, not Pippin's. It is to be expected that Itta will have brought a number of estates into the couple's landed property. Each time we have to ask what part of the so-called Pippinid property the men brought in and what part was brought in by their wives. Andenne (founded by Begga, daughter of Itta and Pippin I) was closely related to Nivelles and may also have formed part of Itta's heritage. Contrary to the opinion of Werner, we have to keep the possibility open that the Pippinids proper were not endowed in the Liège region (see the location of Pippinid property around Liège in figure 1.9). We also have to ask what part of the Pippinid property at large, as we can see it in later periods, was brought in by Plectrudis upon her marriage to Pippin II. There are strong indications that the Texandrian aristocracy, who seem to be closely related to the Pippinids, were part of Plectrud's network rather than Pippin's.[104] As for Pippinid influence to the north, it can be considered an established fact that they never controlled Maastricht before Charles Martel.[105] In Maastricht there were other powerful groups that were able to oppose the Pippinids, such as the group to which Lambert, bishop of Tongres/Maastricht around the year 700, belonged to.[106] A certain Dodo, a *domesticus*, killed Lambert in or around 705. There are some vague indications that Dodo was the brother of Alpaida.[107] Fouracre suggests that the murderers of Lambert were connected to Charles Martel, who was a son of Pippin II and his second wife Alpaida. An interesting suggestion came from Gerberding, who suspects that Alpaida came from the Liège region.[108] A problem, however, is that the written sources are silent on the home base of Alpaida and Charles Martel, and that in the period 688-715 we hear nothing of them in relation to the Liège region.[109] However, their having a home base in the Liège region would explain how the Pippinids established themselves there after the marriage of Pippin II to Alpaida,[110] and again a fortunate (this time second) marriage may have helped the Pippinids to build up power.[111] I have suggested elsewhere that the creation of Liège as a cult place and the building of the fortress of Chèvremont might have been parts of a coherent scheme to enhance the status and power of Alpaida's group in the early eighth century.[112] The great interest of Pippin II in Chèvremont, where he created a community of clerics and which he possibly designated as his burial place, can be considered an attempt to gain a strong foothold in the area. Marriage relations may have brought the Pippinids first further north into the middle Meuse valley (Itta), then into the upper Meuse valley (Begga and Ansegisl), then into the Moselle and possibly the lower Rhine valley and Texandria (Plectrudis), and finally into the northern middle Meuse valley (Alpaida). After the death of Pippin II fights broke out between Plectrudis in favour of her grandson Theudoald and Charles Martell, son of Alpaida, in order to gain control of the office of *major domus* of the middle Meuse region and of Austrasia in general. The outcome of the fight is known: Charles Martel defeated Plectrudis, who retreated to Cologne. Part of Plectrudis's campaign may have been the creation of the monastery of Susteren to the north of Maastricht.[113] It seems to have been part of a strategy to contain the power base of the Alpaida/Charles Martel group by blocking it off to the north. Willibrord's presence in Texandria, a result of donations of landed property in that region by aristocrats when Pippin II was still alive, may also have served this purpose, but Willibrord changed camps from Plectrudis to Charles Martel probably in 716.[114]

The picture that emerges is one of a highly complicated political process involving several antagonistic aristocratic groups that were active in a small area: the Maastricht–Liège region, which can be considered a high-pressure region where the fate of a leading family in Austrasia was determined by the outcomes of a fight between a powerful grandmother and the son of her husband's second wife. Elements of this process are entering riskful marriages, building fortresses, having sons, occupying the bishop's seat, committing murder, creating saints, building churches, performing proper burial rites and choosing the right burial locations, writing the proper texts and creating the appropriate art. Much of this process has to be reconstructed on the basis of a later historiography in the service of the winners.[115]

The development of a royal and monastic landscape

For the Maastricht/Liège region, Charles Martel's victory means that the spotlights of historiography were turned in other directions; we do not hear much of the area again. Is this silence an indication that 'all is quiet on the Meuse front'? Probably not. The politics of the region may not have been of interest to the later writers of 'Carolingian history'; the silence may be the result of a lack of interest rather than of 'reality'. Charles Martel must have gained control of Maastricht in 717 or 718 at the latest, for in that time he imprisoned Wando, abbot of Saint-Wandrille, of whom it was said that he had been unfaithful to Charles, in Maastricht.[116] But the end of this colourful and eventful period does not mean that the political landscape was fixed by then. A gradual, almost invisible process turned the region into a truly royal landscape.[117] Reclamation was one of the strategies to achieve this.

Maastricht itself was already an important royal stronghold.[118] Merovingian kings paid several visits to the place. In the wider region, Merovingian fiscal property was found in the old centres, and in the forest of the Ardennes. It was also present around Maastricht and further north along both banks of the Meuse river. Although we did not hear much of royal politics in the seventh century the large size of the royal estates is an important indication that aristocratic politics have to be seen in the light of strong royal presence in the region. The king might have been the most important political player in the region and the family of Lambert with its Maastricht power base will have operated in close cooperation with the king.[119] The royal property will have originated to some extent from late Roman state property. The Ardennes forest seems to have been a Roman state property.[120] The property in the centres – such as the *castra*, roads and bridges – will have been Roman state property too. At a high level of abstraction, one could say that the Merovingian

(98) We saw that colonization and agricultural expansion mainly took place on a reasonable scale from the middle of the sixth century onwards. It means that the extensive power base of groups such as the Pippinids was built up in no more than two or perhaps three generations. An interesting example is of course the case of Adalgisl/Grimo (Adalgyselus qui et Grimo), whose will of 634 shows that aristocratic owners already possessed property scattered over the Moselle and upper and middle Meuse valleys in the 620s and 630s (Levison 1932 [1948], 118-138; Werner 1980, 31-59). (99) Among others: Hlawitschka 1979; Werner 1982; Hlawitschka 1985; Haubrichs 1985; Fouracre 2000; Wood 2004. That it is considered a single group may be the result of later (both Carolingian and modern) historiography. (100) Werner 1980, 341-475. (101) Hlawitschka 1985; Gerberding 1987, 120-121. (102) Theuws 2001a, 188-193; Wood 2004. (103) Werner 1980, 349; Dierkens 1985, 318-327. (104) Gerberding 1987, 126-127. Gerberding's representation of how the Texandrian aristocracy obtained their landed property differs from mine. The families concerned probably obtained this property earlier than 690. The aristocrats who donated this land in the period 704-718 state that it concerns inherited property. Moreover, he supposes that Susteren was in Alpaida's homeland, which is most probably not the case; it was rather in that of Plectrud and her aristocratic network. Developments in settlement patterns around the middle of the seventh century and the origin of the objects in the graves of those involved from the lower Moselle and middle Rhine valleys suggest that the relation between people in Texandria and the Moselle valley were already established before Plectrud became a powerful woman. The changing settlement patterns point to a process of 'manorialization' starting around 650 AD (Theuws 2008). (105) Gerberding 1994, 207; Theuws 2001a. (106) Werner 1980, 241-274; Hlawitschka 1985, 4. (107) It is a fifteenth-century gloss in a ninth-century manuscript! (see now: Wood 2004, 243). Gerberding 1987, 118-119; Fouracre 2000, 55. (108) Gerberding 1987, 118-124; Gerberding 1994, 206-207; Wood 2004. (109) Fouracre 2000, 58. Wood 2004. The reconstruction of events and especially the reconciliation of Charles Martel with the kin group of Plectrudis by Wood (2004) also leans heavily on the supposition that Dodo is the brother of Alpaida. Moreover, his reconstruction also leans on another set of 'ifs', such as the supposition that Alpaida was at home in the Liège region (which is not an established fact), that bishop Hubert was related to Plectrudis (which is not an established fact) and that Chrodoara/Odo of Amay was related to the kin group of Plectrudis (which is not an established fact). If one departs from only two 'ifs' (Alpaida was at home in the Liège region and Dodo was a brother of Alpaida), then one cannot interpret the evidence much further than I did in 2001 when I concluded that if Dodo was a brother of Alpaida, then there was a cynical element in choosing Lambert as a saint for Liège (in that they made someone they killed a saint for their power base). The cynical element may need explanation, but I accept that in this case we may not have an explanation for a lack of data. Not everything needs to be explained in terms of political antagonisms and not every line in the texts is written with political antagonisms in the back of the minds of the authors. The actions in Liège may not have taken place in the context of the struggle between Charles and Alpaida against Plectrudis, but may have been elements in the further development of what Pippin II himself started. In Wood's reconstruction, Pippin II fades away into the background, but Alpaida and Charles Martel are not only adversaries of Plectrudis but also wife and son of Pippin II, who may have had the intention of making Liège/Chèvremont the centre of his power base. He died in Herstal and may even have created the monastery in Chèvremont as a burial place for himself. We also have to remember that originally Liège may not have been in the hands of Alpaida's family, for Lambert was killed there, that is, on an estate that was probably his or the bishop's. There is no indication that he was visiting the Alpaida family on one of their estates. One can also imagine that Lambert was not the victim of Pippinid antagonisms but of the competition between his kin group and that of Alpaida, for Lambert may have controlled an important estate at an important place on the Meuse (in view of developing river traffic), which may have been surrounded by estates controlled by Alpaida's group (see the map in figure 1.9), again: *if* she originates from this region. It is probable but in the end we will never know for certain; it is the only *if* we can keep on board. (110) Again there is no written evidence to substantiate Pippinid presence in the first half of the seventh century in the Liège region. (111) In contrast to Werner (1980), Hlawitschka correctly stresses the importance of Pippin II's marriages in his build up of power (Hlawitschka 1985). (112) Theuws 2001a, 190-193. New archaeological research should establish the date of the building of the Chèvremont fortress. Merovingian pottery has hardly been found there yet (Hoffsummer-Bosson 1988), so a seventh-century date (Pippin I) seems unlikely (contra Werner 1980, 441). Fouracre (2000, 55-56) suggests that it is rather Plectrud who was in power in the Liège area. There is, however, not much evidence for this either. Susteren is in my opinion too far to the north to be used as evidence for this supposition; Bishop Hubert's familial relationship with Plectrud is not established and is unlikely (Werner 1980, 277-278). Moreover, it seems that Lambert controlled Liège before he was murdered there. (113) Hlawitschka 1985, 8 and 52-53. Charles Martel is excluded from rights on the monastery. (114) Gerberding 1994. Fouracre 2000, 62. As a result of this, the Texandrian aristocracy may have changed camps too from Plectrud to Charles Martel/Willibrord. It is interesting to see that Ansbaldus (one of the Texandrian aristocrats, a monk and member of a whole family of them with landed property in the region) gave property to Willibrord in 712, that is, before Susteren was created. He was already a monk then and must have been in another monastery. He did this again in 718 in Susteren (where the charter was drawn up). He thus gave land to Willibrord again after Willibrord had changed camps, and Susteren, controlled by Willibrord, will have changed camps too. It is suggested that Ansbaldus was one of the monks of the monastery because the charter was drawn up there. He may have given landed property to Willibrord to show his and his family's allegiance to Willibrord. *If* he entered the monastery, he may have entered Susteren either at the time of its creation (thus showing allegiance to Plectrudis) or at the time of the donation (showing allegiance to Willibrord, who had changed camps). If he did not enter Susteren, the donation (and the choice of location for the act) can still be interpreted as a signal to Willibrord that he (and his family) were loyal to him (and Charles Martel). (115) Fouracre/Gerberding 1996, 26-27; Wood 2004; McKitterick 2004. 116 Wood 1991, 12, 13-14; Fouracre 2000, 65. (117) I use the term 'royal landscape' in a very loose way. I mean a landscape that is not only to a large extent controlled by the king, but also a landscape marked in an ideological and mental sense by the presence of kings or by the memory of them. (118) Werner 1980, map 14 opposite p. 464. (119) Theuws 2015. (120) Müller-Kehlen 1973, passim, see e.g. the section on Amberloup; Noël 1997, 633.

fiscal property in the Meuse valley seems to be related to centres (with the notable exception of the large fisc in the Ardennes forest) and that Carolingian fiscal property is rather rural.

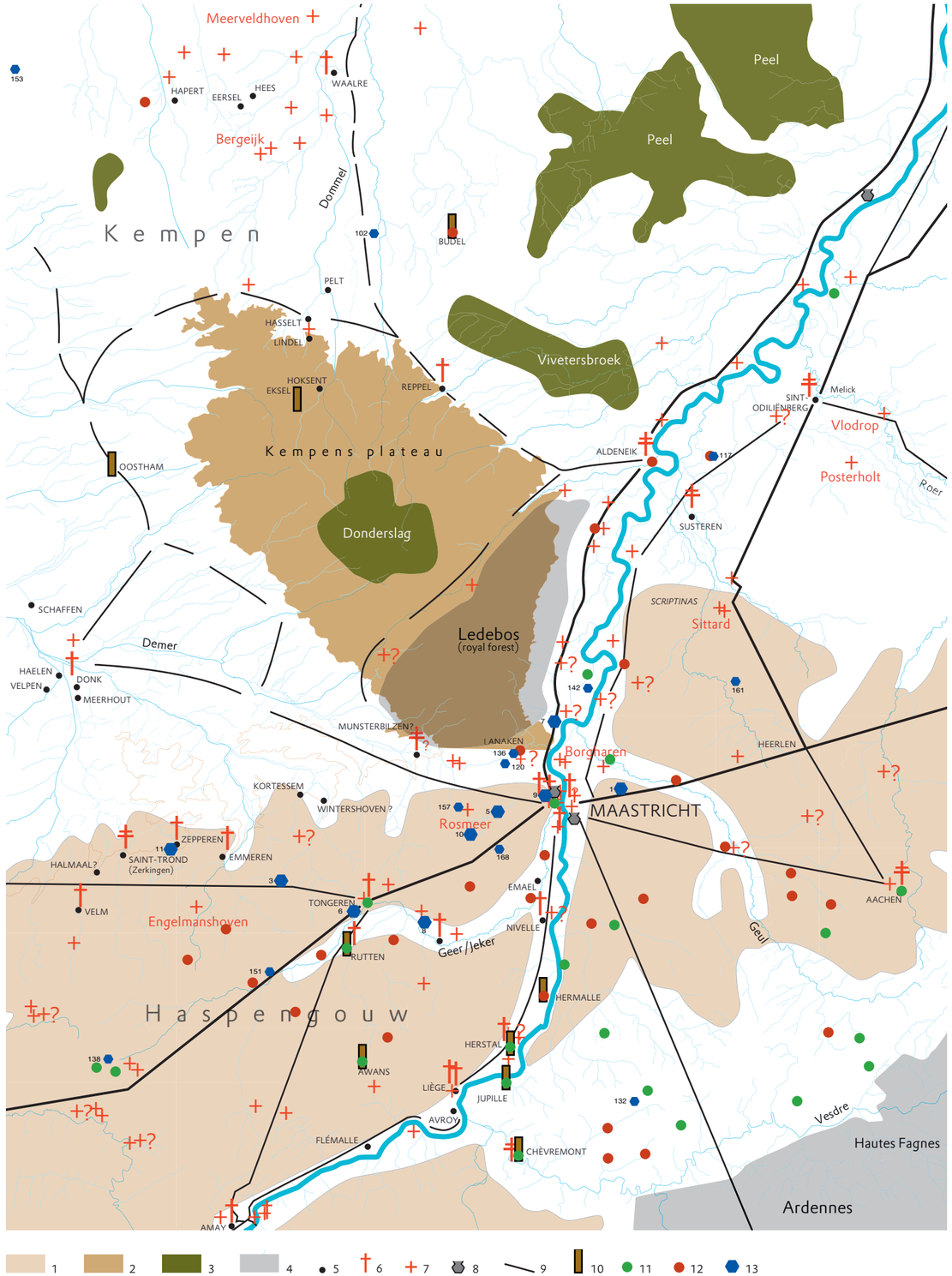
An important concentration of Pippinid/early Carolingian property is present north and east of Liège (fig. 1.9).[121] It is composed of the estates of Jupille (in which territory the fortress of Chèvremont was located), Herstal (where Pippin II died), Hermalle and Awans. Rutten, just south of Tongres, was a property of the Arnulfings, but it came into the hands of the Carolingians. There is a debate on the origin of this Pippinid property.[122] The present known distribution pattern of Pippinid property indicates that there was a spatial gap between their possessions in the southern middle Meuse and Sambre valleys and those around Liège.[123] The property complex in the Liège area seems to form a coherent group on its own, which may be an indication that they obtained it as such and that it had not been brought together in an eclectic way over a long period of time. It may have its origin in the property of Alpaida's family. There are some indications that the Liège area property complex did not develop similarly to the development of the southern middle Meuse complex. First, Dierkens indicated that the bishop had no role in the creation of the Pippinid monasteries in the southern middle Meuse valley.[124] This may have been so because bishops, who could have been related to aristocratic groups around Maastricht, will not have had much influence further south at the time of the build-up of Pippinid power.[125] The power of the seventh-century Maastricht bishops may have been quite restricted geographically.[126] On the other hand we see that, although Pippinid landed property is substantial at the end of the seventh century in the Liège area, the Pippinids did not create any monasteries in that area, even though they were active in creating or appropriating such cult places around the middle of the seventh century in the southern middle Meuse valley (Nivelles, Fosses, Lobbes, Moustier, Malonne).[127] The northernmost cases were Andenne and Stavelot-Malmedy. Later, only Chèvremont was created. Upon the death of Pippin II, the Meuse valley between Andenne and Susteren was thus still almost free of monasteries.[128] This difference between the two areas and the absence of monasteries in the Liège area until the creation of Chèvremont are perhaps best explained by supposing that the Pippinids did not have any property there before Pippin II married Alpaida.

Fig. 1.9
Early Pippinid and (later) royal property in Maastricht's hinterland.
1. löss, 2. the Kempens Plateau (contour line is 50 m above sea level), 3. moors, 4. large forests, 5. places mentioned in the eighth century, 6. early medieval churches (provisional), 7. Merovingian cemeteries (provisional), 8. Merovingian pottery production, 9. roads and routes, 10. early Pippinid property, 11. royal property mentioned in the ninth century, 12. royal property mentioned in the tenth to twelfth centuries, 13. early property of the *basilica* of Saint Servatius.

In later times, the Pippinid property in the Liège area became royal property. Herstal was one of Charlemagne's favourite residences in the early years of his reign.[129] He later switched to the newly built *palatium* in Aachen.[130] The creation of this palace may have triggered an intensive colonization and reclamation of the region east of the Meuse. This may have been an initiative of the king. However, it could have been the other way around: because of the colonization and reclamation already under way, it was possible to create a palace at Aachen near the old Roman baths, for its provisioning was guaranteed by the presence of a range of estates in the wider environs. This chicken and egg problem can only be solved by archaeological settlement research in the area between Aachen, Maastricht and Liège.[131] Royal estates mentioned in ninth-century texts are especially found in the area north of the Vesdre river.[132] The appearance of these estates seems to point to a large-scale undertaking. Other (new?) royal estates are found in the loess area. The increase in the number of royal estates was probably more intensive in the eighth and early ninth centuries than the map represents. Many of them may not have been mentioned in the contemporary written evidence. For that reason all royal property mentioned up till the twelfth century is mapped so that we may gain an impression of the scale of control by the king of the countryside in the Maastricht–Liège–Aachen region.[133] It is highly relevant to analyse how this came about in order to understand how royal control worked, and how ideas on rulership were objectified in the organization of the landscape, in relation to aristocratic and ecclesiastical communities in one of the core regions of the Carolingian realm.[134]

An archaeological and historical analysis of settlement systems and settlement history should be carried out in correlation with a detailed analysis of property relations in the area. In this context it is interesting to look at the distribution pattern of the property of the abbey of Saint-Servatius.[135] First, compared to other

(121) Werner 1980, 341-475. (122) A problem is also that we probably do not have full insight into the composition of the entire property complex of the Pippinids around 700 AD. (123) For the southern middle Meuse and Sambre, see Dierkens 1985, 318-327. (124) Dierkens 1985, 326. (125) Nor did they seem to have much influence further north, where they had no part in the process of Christianization and where they did not obtain much property for the bishop's church (Gerberding 1987, 128-129). The property of the bishop of Liège further north as seen in later texts may have been build up in Ottonian times (Bijsterveld 2015). (126) See the section on the territorial extent of the bishopric. (127) Dierkens 1985. (128) The date of the foundation of the monastery of Aldeneik is difficult to establish with precision, but it was most probably created after the death of Pippin II (Dierkens 1979). The monastery of Sint-Odiliënberg is further north and probably also of younger date; see now Theuws 2007b and Linssen 2008. (129) McKitterick 2008, 161, 170. (130) The literature on Aachen is immense. See various contributions and literature in: Stiegemann/Wemhoff 1999. For the archaeology: Schaub 2011. (131) Such research is badly needed, not only to establish the chronology of colonization and settlement but also to analyse how settlement in this royal landscape was organized. A perfect example of such research is that on the hill of Thier d'Olne opposite Amay, where the remains of an estate centre (not necessarily of a royal estate; see also the section on the religious landscape) have been excavated; see Witvrouw et al., 1991-1992. Witvrouw et al. 1996-1999. It was created around the middle of the seventh century and existed until the tenth century. (132) This section on royal estates is based on Rotthoff 1953 and Werner 1980. (133) Not mapped were those that became royal property at a late moment and were alienated again. (134) Examples of such research that we should like to combine with archaeological research are Helvetius 1994 and Innes 2000. For an earlier period, Halsall's research in the Metz region (Halsall 1995) may serve as an example.



important Carolingian monasteries, the property complex of Saint-Servatius seems modest and to have been located in regions relatively close by. Is this an indication that its landed property did not develop in a way comparable to other large Carolingian monasteries? Second, all the important *curiae* (except two: Berneau and Heer) that figure prominently in the property complex of Saint-Servatius in later times are already mentioned in 1139. Hackeng suggests, I think rightly, that they probably form the oldest core of property of the abbey/chapter.[136] Third, the property is concentrated mainly west of the Meuse and north of the Geer/Jeker river and to the north of Maastricht. Hardly any property is situated to the east or south-east of Maastricht, where a royal landscape was created in Carolingian times.[137] Fourth, an important concentration is found immediately to the west of Maastricht and seems to originate from royal property.[138] Fifth, hardly any property is found in the Carolingian core area around Liège.

I therefore conclude that the abbey did not acquire much property in those areas where Pippinid and later Carolingian royal property dominated. On the contrary, the property of -Servatius is found in areas that were colonized in Merovingian times, rather than in areas colonized in Carolingian times, although there are of course exceptions. The question is thus: did the Carolingians significantly add to the property of the abbey of Saint-Servatius? Does this mean that its property complex was already formed to a large extent before the early eighth century, that is, before the Carolingians – more specifically Charles Martel – got hold of Saint-Servatius? These are suggestive questions. The specific composition of the property complex of Saint-Servatius (small), the specific distribution (in Merovingian lands rather than Carolingian lands) and the lack of written texts on it (hardly any Carolingian evidence) may have been determined by its early creation in Merovingian times out of vast complexes of Merovingian royal property and that the Pippinids and Carolingians hardly added to this property in regions they controlled. This is contradictory to Hackeng's conclusions that it is built up out of Carolingian property complexes and that the royal property complexes around Maastricht were created in Pippinid or Carolingian times.[139] An alternative is that much of the property of Saint-Servatius was of Merovingian royal origin but donated to it by Carles Martel (as mayer of the palace) out of the large Merovingian royal estate.[140] It is possible that the concentration of property around Tongres may originate from episcopal donations.[141] Hackeng again suggests that this property and the nearby *redemptiedorpen* originate from Pippinid or Carolingian royal property.[142] To me this is rather an indication that it is older and may also originate from Merovingian royal property or indeed episcopal property obtained at a time when the bishops were residing in Maastricht.

In the end, the image arises of an immense royal property complex west of Maastricht that extends further north on the left bank of the Meuse to include Lanaken and perhaps Mechelen and Dilsen, where Saint-Servatius obtained substantial landed property (along other high-ranking religious institutions). The Ledebos north-west of Maastricht may have formed part of this vast royal estate. I suggest that this royal complex already existed in Merovingian times.[143] Hackeng rightly suggests that the actual state of research is only the beginning of a highly interesting search for the property relations in the region of Maastricht, a search to which he made an important contribution with his study of the property of Saint-Servatius. He has already made suggestions as how to develop this research.[144] What we now have to do is include other property complexes such as those of the abbeys of Chèvremont and Saint-Trond, the palace chapel at Aachen and the bishopric, as well as those of the chapter of Our Lady in Maastricht and of other religious institutions. It will also be necessary to include local evidence on ancient property. We have to ask how power became inscribed in the landscape and how the organization of the landscape reproduced power relations between peer groups, the king and other groups.

Maastricht as a centre in tenth-century Lotharingia

The Maastricht–Aachen–Liège triangle seemed to form a stable power base for the Carolingians and their high-ranking clients such as Alcuin and Einhard. By the end of the ninth century, this power base was encapsulated in a landscape studded with royal estates and important abbeys – a truly royal landscape. No wonder this area attracted powerful aristocrats after the divisions of the realm in the ninth century. These aristocrats developed a strong sense of shared identity, related to the middle kingdom of Lotharius I (died 855) and more specifically to the kingdoms of Lotharius II (855-869) and Zwentibold (895-900).[145] This Lotharingia turned into a duchy after the death of King Zwentibold in 900 AD. Around 923, it became part of the east Frankish kingdom. After the duchy had been split into two, the Maastricht–Aachen–Liège triangle was the centre of Lower Lotharingia, situated to the north of the Eiffel and Ardennes forests and comprising much of eastern and central Belgium, the Rhineland and the Netherlands. The counts who controlled the fertile loess regions and the Meuse valley were in a favourable position in the competition for power in Lotharingia.[146] Moreover, they could control the prestigious sites related to the Carolingians. Gislebert (died 939) – who was a count in the Meuse valley as well as duke of Lotharingia, and was married to a daughter of King Henry I (the Fowler) – had his power base in the Meuse valley. In the later ('official') historiography he had a bad press, but recent research has led to a re-evaluation of his position and dealings.[147] One of the pillars of his power base was the lay abbacy over several important monasteries. The key monastery seems to have been the Saint-Servatius abbey, which Gislebert obtained as a *precarium* of the bishops in Trier in the years between 928 and 939.[148] After a re-evaluation of the written sources related to the commemoration of Gislebert in several religious institutions, Dierkens and Margue conclude that Maastricht was the centre of Gislebert's power base and that he may have had plans to elevate it into a sort of 'capital'. His untimely death in 939 prevented this and, according to Jocundus in his *Miracula sancti Servatii*, Gislebert was buried with great splendour in Maastricht, probably in the Saint-Servatius church, which received a donation from his wife on that occasion.[149] His grave has not been identified during the excavations.[150] His burial in Maastricht once more underlines the importance to Gislebert of this regional centre and cult place.

After the death of Gislebert, his wife Gerberga (the daughter of Henry I (the Fowler), king of East Francia and thus sister of Otto I, who at that time was king of East Francia) married Louis IV, a Carolingian and the king of West Francia. She was thus related to both royal houses and had strong affinities to one of the most powerful aristocratic groups in Lotharingia. She cherished this affinity until the end of her life, as evidenced by her donation in 968 to the church of Reims (where her second husband, Louis IV, was buried) of the estate of Meerssen (where Reinier I, the father of Gislebert, may have been buried). Surprisingly, the donation was made to commemorate Gislebert, who was probably buried in the Saint-Servatius church.[151] Gerberga seems to have been a master at weaving memories, using burial places and estates.

Gerberga had a son by Louis IV, Charles, who was thus by birth a Carolingian too, and who can be considered 'a post-mortem stepson' of Gislebert as well. Charles was frustrated in his claims to a royal position in West Francia and went over to the east where he became duke of Lotharingia. What then developed was an extremely complicated struggle for power in Lotharingia and West Francia, a struggle that recalled the nature of the battle for power in the years around 700 AD. Intermingling political allegiances and familial loyalty as well as antagonism made power politics a delicate game. Charles lost. According to tradition, his son Otto (the last Carolingian) succeeded him as duke of Lower Lotharingia and brought his father's body back to the church of Saint-Servatius, where he buried him (1001). This tradition was contested and doubts existed as to the factual value of the indications.[152] However, during the excavations in the *basilica* of Saint-Servatius, a lead cross was found in the grave of provost Humbertus dating from 1086.[153] The text on it refers to, among other things, the building activities that Humbertus undertook. These building activities thus probably took place at the time or more or less the same time Jocundus was writing his *Miraculae* and his *Vita Sancti Servatii*.[154] One of these activities was the renovation of the *sepulchro D(omi)ni. (et) ducis Karoli*. There can thus be no doubt that a grave monument to Charles existed in the church of Saint-Servatius. This church then was the burial place of two great dukes of Lotharingia (probably Gislebert and certainly Charles), who were indirectly related to each other. It is possible that Otto, the last Carolingian, was buried there as well. For this group, related to both royal houses, the Saint-Servatius church was obviously a cult place of prime importance. It has been suggested that it was its close relation to the Carolingians, more specifically Charlemagne that lent it great prestige and therefore became a place to be buried for those who had similar aspirations as he had.[155] The meaning of the early ninth-century key of Saint-Servatius as '*clavis David*' representing the position of Charlemagne as '*novus David*', *rex et sacerdos*, controlling both heaven and earth, should be kept in mind.[156] At the time of Gislebert and Charles, the key was not yet associated with Servatius, which is a later eleventh-century tradition.[157] When the old tradition was still valid, he who controlled

(135) The distribution of property indicated in figure 1.9 is based on the study by Hackeng (2006) of the property of the chapter of Saint-Servatius. His detailed inventory replaces the list of properties provided by Deeters (1970, 124-132). What I indicated on the map is probably the oldest property of the chapter of Saint-Servatius as far as it can be reconstructed on the basis of texts from the early twelfth century. Unfortunately, the written evidence from the early Middle Ages on property of the abbey and later chapter of Saint-Servatius is very rare. Much of the property, as it is known in the early twelfth century, may be of ancient origin; some, however, may be of more recent origin (tenth-eleventh centuries), although it is my suggestion below that most of it is very old (Merovingian) property. Indicated on the map is the property mentioned in a charter of 1139 (as far as it lies within the limits of the map), other property that Saint-Servatius had before 1139 but that is not mentioned in the charter, and some properties that were not mentioned until shortly after 1139 but that are thought to be much older. The abbey also had property outside Maastricht's hinterland (see the maps in Hackeng 2006), but the majority was located in the Maastricht–Liège area. Moreover, this far-away property was much less important than that in the immediate environs of Maastricht. Property mentioned in 1139 on the map (the numbers refer to the catalogue in Hackeng 2006): Lens (138), Zepperen (*curia*, 11), Grandville (*curia*, 151), Niel (*curia*, 3), Koninksem (*curia*, 6), Sluizen (*curia*, 8), Zichen/Zussen (168), Vlijtingen (*curia*, 10), Hees (*curia*, 5), Mechelen (*curia*, 7), Echt (117), Achel (102), Vaesrade (161), Tweebergen (*curia*, 9) and Berg (*curia*, 1). Not mentioned in 1139, but indicated in older texts: José (132), Lanaken (uncertain, 136), Meeswijk (142). Mentioned after 1139 but expected to be ancient property: Rosmeer (157), Gellik (120), Oosterwijk, Massenhoven, Ravels, Eel (of which Eel is inside the limits of the map, 153). (136) Hackeng 2006, 229. (137) Is it a coincidence that two important curiae east of the Meuse (Heer and Berneau) were not mentioned in 1139? Are they younger acquisitions?

(138) Hackeng 2006, 217-218. (139) Hackeng 2006, 214, 217-218. (140) Theuws 2015. (141) Hackeng 2006, 218. (142) Hackeng 2006, 218. *Redemptiedorpen* are villages for which the court of the royal estate (Vroenhof) functions as a court of appeal for the local alderman's courts. (143) See also Hardenberg 1962 and Theuws 2001 with warnings to be cautious when reconstructing old estates such as these big ones. We should avoid static reconstructions, and we should consider aristocratic participation in managing royal estates (think of the *domesticus* Dodo, who killed Bishop Lambert). See also Hackeng 2006, 217. I differ with his opinion about the date of origin of this vast royal complex. (144) Hackeng 2006, 228-229. (145) Bauer 1997. (146) Bijsterveld 2006, 377-382. (147) Dierkens/Margue 2004. This re-evaluation is not necessarily a re-habilitation. (148) Dierkens/Margue 2004, 880. (149) Dierkens/Margue 2004, 884-887 (with French translations of the relevant passages). Jocundus started writing the Miracula before 1076 and finished it in 1088. On Jocundus, with Dutch translations of his texts, see now: De La Haye/Arentsen/Sassen 2006, for this specific passage p. 232. (150) However, a detailed analysis of the burials may provide possible candidates. It depends on how well we can date graves into this period. (151) Dierkens/Margue 2004. (152) Linssen 1985, 67-81; See now Bijsterveld 2006. (153) Panhuysen 1988b; idem 1988c; idem 1988d. Panhuysen 1990, 543-545; Panhuysen 1991, 17. (154) As on other occasions there might have been an intimate relation between building and writing (a mythical past) such as at the time of Monulphus in the second half of the sixth century and possibly Charles Martel in the early decennia of the eighth century. The new build church could have been finished by that time. Hubert was provost from 1051 until 1086, while Jocundus wrote from before 1076 until 1088; De La Haye/Arentsen/Sassen 2006. (155) Borghuis et al. 1979, 162-173 (156) Koldewey 1985, 86-96. (157) Koldewey 1985, 66-67.

the Saint-Servatius church literally held an important key to power. To see that more clearly I will drift down further and have a look at Maastricht in the early Middle Ages.

Maastricht: the early medieval centre

One of the long-term objectives of the research programme is the analysis and interpretation of the topography of early medieval Maastricht on the basis of archaeological evidence. This is not an easy task. There are numerous excavations and an immense volume of raw archaeological data, but little is known in any detail about the medieval topography and spatial development of the town before the thirteenth century. Because of this, different models for the development of Maastricht in the post-Roman period have been suggested.[158] In this short introduction I will not repeat the lively discussion on these models, but limit myself to presenting some elements.[159]

Merovingian Maastricht

Early medieval Maastricht developed out of a late Roman *castrum* and cemeteries to the west of it (fig. 1.10).[160] The *castrum*, which protected the Roman bridge and road, was situated on the left bank of the Meuse, just north of the delta of the river Jeker. It is possible that a small stronghold on the right bank completed the defences.[161] One of the questions to be answered is to what extent and for how long the Roman infrastructure determined the layout of the *vicus* in the early Middle Ages. Remains of the walls of the *castrum* may have been visible up till the ninth century, but it is not clear to what extent the *castrum* functioned as such after AD 700. Anyway, the walls must have disappeared before the present Romanesque west work of the church of Our Lady was built in the first half of the eleventh century (fig. 1.11).[162] In the fifth/sixth century a new moat was dug around the south-west corner of the fortress, suggesting that it still functioned as such at that time.[163] In the seventh century this moat was already filled up and small buildings were built on top of the fill. Inside the fortress habitation layers are found, as are indications for artisan activities in the sixth and seventh centuries.[164] How far into the eighth century these activities continued is not clear, as not much evidence exists for Carolingian habitation in or around the fortress. The nature of habitation and whether it was related to the presence of episcopal and royal (comital) residences is impossible to establish without further analysis. Another enigmatic matter is the early history of the church of Our Lady. It is generally expected that it dates from Merovingian times, but when it was first constructed is not known.[165] Following a traditional scheme, the church of Our Lady in the fortress could have been a bishop's church (the *ecclesia*) complemented by a burial church outside the fortress on the site of an older cemetery. Until new archaeological research has been carried out, we will have to be content with the few things we know now.

A second important element in the development of the town since Merovingian times is the *basilica* of Saint-Servatius with its surrounding burial grounds, which I will discuss in a later section. A third element is the settlement that existed around the fortress, probably continuously since late Roman times.[166] Although the structure of this settlement is not very clear, it is evident that it became of great importance in Merovingian times. Maastricht is the place with by far the largest known number of *monetarii* in the region, indicative of a regular minting activity for different purposes in the seventh century.[167] Artisan activities must have been important in this settlement. Remains of glass working, bronze working, and bone and antler working have been found.[168] A fourth element is a settlement on the opposite (right) bank of the Meuse in the present Wyck (from *vicus*?) quarter, where remains of habitation, artisan activity (potter's ovens) and burials have been found.[169]

The aforementioned elements may have made up the Merovingian centre of Maastricht. Further to the north and to the south additional features of Merovingian date are of great interest. To the north is the Boschstraatkwartier settlement where remains of post-built structures, artisan activities and burials have been discovered.[170] To the south is the site around the chapel of Saint-Peter, where a number of sarcophagi and remains of post-built structures have been excavated.[171] A provisional map has been made, showing all the locations where Merovingian remains have been discovered (fig. 1.12A). These locations are scattered over the entire town centre of Maastricht.

(158) Theuws 2005b. (159) Basic articles are Panhuysen/Leupen 1990; Panhuysen/De La Haye/Gauthier 2002; Theuws 2001a; Theuws 2005b. (160) Panhuysen 1996, 51-66. (161) The eastward displacement of the Meuse may have washed away these defence works (Panhuysen 1997). (162) Bosman 1990, 90-95. (163) The date has not yet been established in detail; see all the (scattered) literature on this find in Theuws 2001a, 178 note 59. (164) Dijkman in press. (165) All kinds of theories have been formulated in the past on the basis of different fragments of walls and foundations (Panhuysen 1996, 59-61). The *communio opinis* now is that we know of no structural remains of a pre-Romanesque church dating from Merovingian and Carolingian times. A capital dated in the Merovingian period may belong to an older church (Panhuysen 1986). See also the discussion on the sculptured stones found in Glons (note 82). (166) Not much of this habitation has been published yet, although some find categories have been discussed: late Roman 'Rädgensigillata' (Dijkman 1992), glass finds (van Lith 1987, 1988; Sablerolles 1995 and Sablerolles/Henderson/Dijkman 1997), coins (van der Vin/Panhuysen 1983; Pol 1995), remains of bone and antler working (Dijkman/Ervinck 1998), ecological remains (Bakels et al. 2000). (167) Pol 1995; Theuws 2004. The chronology of Merovingian coin production in Maastricht needs to be scrutinized anew. (168) See the literature in note 150. (169) Panhuysen 1997. (170) Panhuysen (R) 2005, 97-105. The Merovingian graves and settlement remains were studied in the context of a master's thesis at the Amsterdam Archaeological Centre. (171) It has been suggested that this is the location where Bishop Lambert was buried after being murdered in Liège and brought back to Maastricht to be buried in his father's grave.

Fig. 1.10
The Merovingian *vicus* of Maastricht at the confluence of the Jeker and Meuse Rivers. The map in the background is the cadastral map of 1830. The medieval and early modern town walls are also indicated.

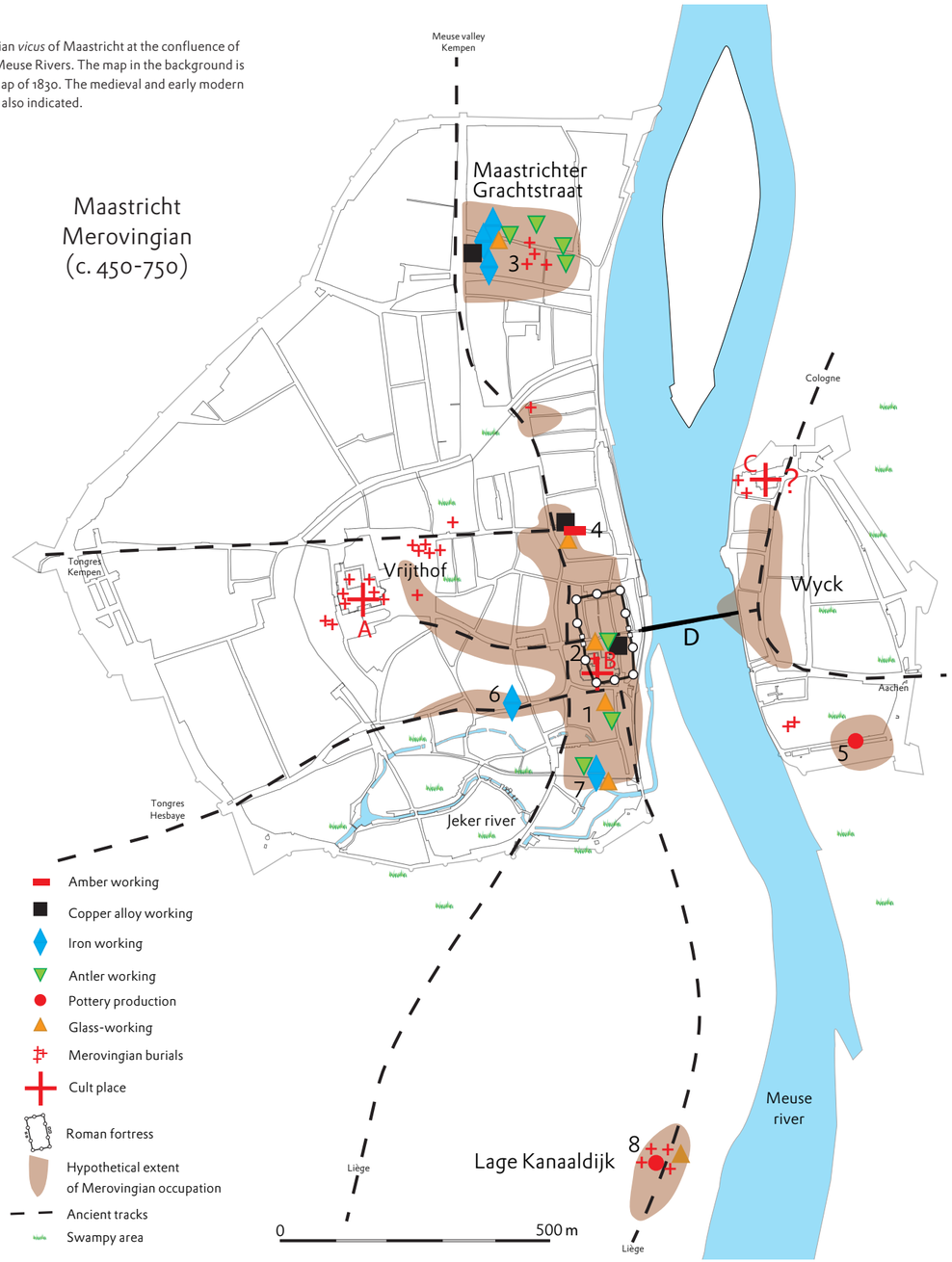
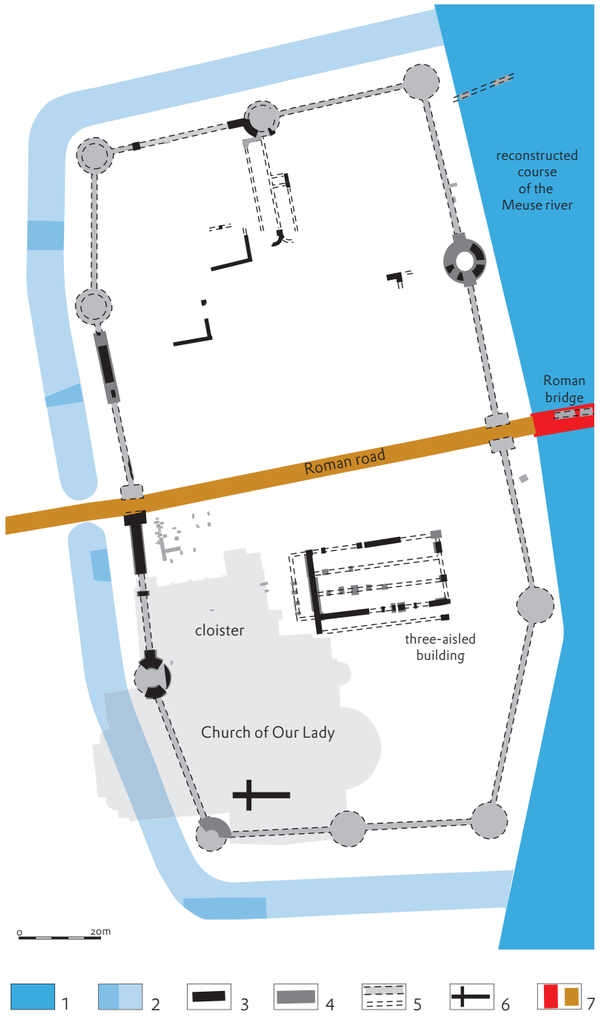


Fig. 1.11
Plan of the late Roman fortress of Maastricht. 1. reconstructed course of the Meuse River, 2. moat (documented and reconstructed), 3. walls documented, 4. foundations documented, 5. walls reconstructed, 6. possible location of Merovingian bishops church, 7. Roman bridge and road.



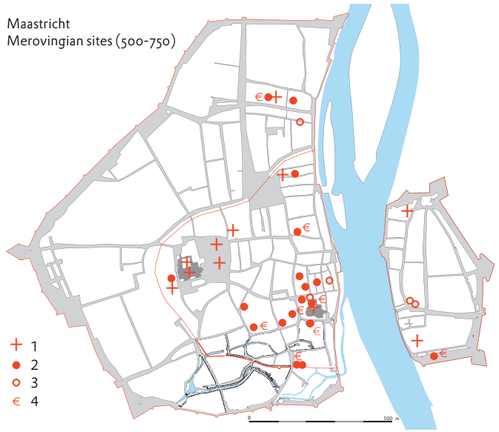
Carolingian and Ottonian Maastricht

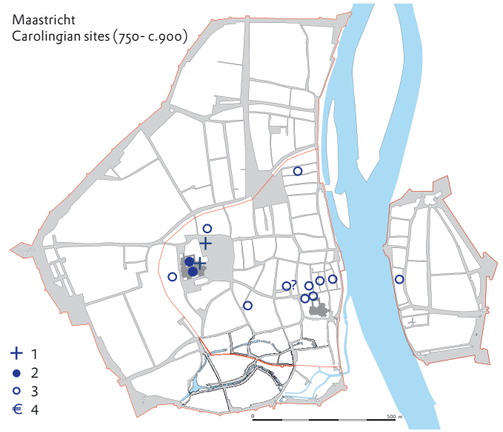
Carolingian Maastricht was an enigmatic place. Written sources indicate that it was a lively centre. In a charter of Charlemagne dated 779, Maastricht is mentioned as one of the five important toll stations in the north of the realm.[172] Einhard (c 770-840) – the lay abbot of Saint-Servatius – describes it as a crowded place frequented by merchants.[173] And in the ninth century a change of terminology in the texts indicates that it had been fortified.[174] However, archaeologists wonder why there are so few remains of this period in their excavation trenches.[175] There is a splendid *basilica* of Saint-Servatius, but that is virtually everything we know of Carolingian Maastricht (fig. 1.13). A provisional map with locations where Carolingian remains have been found (fig. 1.12B) illustrates the big difference in the archaeological visibility of the Merovingian and Carolingian periods. Is this difference the result of archaeological–methodical problems, or a highly interesting historical phenomenon? A comparable situation in Namur suggests the latter possibility.[176] Future research should specifically address this problem. In Maastricht there are some indications of habitation along a road that in later times is indicated as Via Regia and today is called Bredestraat ('wide road'). On a map by Simon de Bellomonte from AD 1587, it is a road lined with elite houses.[177] It may have been a central axis in Maastricht already since late Roman times, for its eastern end links up with the west gate of the Roman fortress and the Roman bridge. Up till now there are not many indications for an undisturbed, continuous organic development of the Merovingian *vicus* along the Meuse into Carolingian times. It is important to analyse, not only for local reasons, the nature of the possible transformation of this centre around 700 AD, which is exactly the period when high politics in the region rose to fever pitch.[178] Another enigmatic structure is a Carolingian fortress, which replaced the Roman one. Written sources indicate that there is one, but we have no idea where it is to be found, although on the basis of the street plan from the early nineteenth century and the course of the thirteenth-century town wall I made a suggestion as to where it could have been located.[179] The building of this fortress took place in the 840s.[180] Future excavations will prove or disprove this hypothesis.

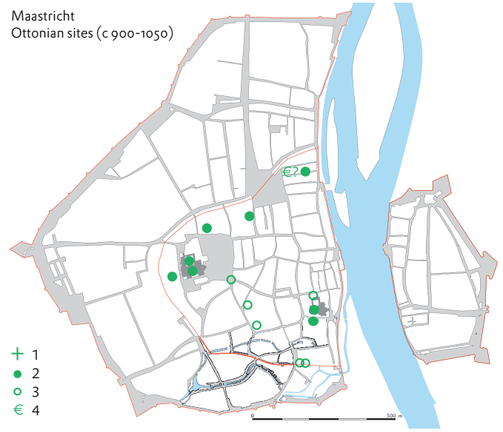
The middle of the ninth century was another important turning point in the development of many centres in the Meuse valley.[181] Trade and artisan activities flourished (again?) and many centres are indicated with a new term: *portus*. Some of them suffered from attacks by the Vikings, but only temporarily. In fact, the Viking threat seems to have triggered investments by the king (e.g. the fortifications of Maastricht and Nijmegen) and major

(172) Lebecq 1983. (173) *Translatio et Miracula sanctorum Marcellini et Petri auctore Einhardo*, ed. G. Waitz, in: *Monumenta Germaniae Historica*, *Scriptorum 15.1*, Hanover 1888, 4.13. Translation: Dutton 1998, 122. Einhard is mentioned as abbot of Saint-Servatius for the first time in 820. (174) Leupen 1996. (175) Theuws 2007a. (176) Theuws 2007a. (177) Reproduction in: Ramakers 2005, 26. (178) Maastricht may be a perfect example of a 'wandering' early medieval town (Bijsterveld/Theuws 2012; Theuws/Bijsterveld 2015). (179) Theuws 2005b. (180) Leupen 1996. (181) Verhulst 1999, 47-51. (182) Hulst 1994. (183) Jocundus, *Vita sancti Servatii Tungrensis episcopi et miracula*, c. xli. See also van Ommeren 1991, no. 101, and the translation by De La Haye/Arentsen/Sassen 2006. (184) When we find either of them we will probably have discovered both (i.e. the Carolingian and the Ottonian one). See however chapter 2 for a possible candidate for this wall in the Sint-Servaasklooster

Fig. 1.12
A. Merovingian sites in Maastricht plotted on the cadastral map of 1830.
1. burials, 2. site with structures, 3. site with finds only, 4. site with craft activities.
B. Carolingian sites in Maastricht plotted on the cadastral map of 1830.
1. burials, 2. site with structures, 3. site with finds only, 4. site with craft activities.
C. Ottonian sites in Maastricht plotted on the cadastral map of 1830.
1. burials, 2. site with structures, 3. site with finds only, 4. site with craft activities.







abbeys, which may have had a positive effect on the late Carolingian economy. Again the archaeological visibility of these developments in Maastricht is limited. Structural remains of settlement in the tenth and the eleventh century are virtually absent from the archaeological record (fig. 1.12C). Pottery from this period has been found along the Via Regia mentioned above. Important building activities took place north of the Vrijthof square where early in the eleventh century an impressive building with a representative character was created. The excavators believe it was the royal *palatium* of Maastricht.[182] The demolition of the Carolingian *basilica* of Saint-Servatius and the building of the Romanesque church had begun somewhat earlier, in the later tenth century. Around AD 1000 the Vrijthof square must have been lined with building trenches. It is the period of Duke Charles of Lotharingia and his son Otto. Jocundus (writing the *Miraculae* somewhere between 1076 and 1077/1087) mentions that Duke Gislebert built a stone wall around the royal abbey of Saint-Servatius and the *palatium*.[183] If this wall was indeed built by him, the construction must have taken place before his death in 939. This fortification has not been rediscovered by archaeologists with certainty.[184] Some scholars suppose Gislebert's wall replaced the Roman fortress, while it is also possible that it replaced an older Carolingian, wooden rampart. That Gislebert did built a stone wall may be deduced from the fact that Maastricht was one of the last towns in the region to be provided with a stone town wall (from 1229 onwards).[185] The thirteenth-century town wall may thus have been the fourth defensive structure of Maastricht.[186] The topographical structure of the town at the time of the construction of the thirteenth-century stone wall will have been more or less identical to the one visualized by the maquette of 1748.[187] How this topographical structure (including the Wyck quarter on the right bank of the river) came into being since Merovingian times is conjecture. Two elements acted as focus points in this development: the church of Our Lady and that of Saint-Servatius. It is to the last church that I will now turn my attention.

excavations. (185) Morreau 1979, 3-32. There are some indications that older fortifications were built in 1204 or even in the late twelfth century (c. 1180). What may be the remains of an earth and wooden rampart were discovered in the 'Rijksarchief' excavations (Panhuysen et al. 1991, 242-246; Panhuysen et al. 1992, 283-288). A new analysis of the evidence seems desirable. (186) The successive defence systems may have been: the Roman fortress (fourth century), the (earth and wooden?) Carolingian fortress (840's), Gislebert's stone wall (before 939), the thirteenth-century stone wall. If the duke of Brabant did build one in 1204, it would have been the fifth (Morreau 1979, 3-4). (187) On this maquette and the related plan, see Ramakers 2005, 32-33.

The basilica of Saint-Servatius

The results of the excavations will certainly put an end to a number of speculations about the architectural development of the building, but will also create new problems.[188] Panhuysen published a preliminary report on the excavations carried out between 1981 and 1989.[189] Some of the interpretations he presented became subject to debate.[190] I do not intend to recapitulate here the debate in detail, for this is to be dealt with in the volumes to come on the basis of a detailed presentation of the archaeological evidence. I will use the help of several great men who determined the fabric of the complex to a high degree to represent a short history of the *basilica* up to the end of the eleventh century (fig. 1.13).[191] The men are Bishop Servatius (fourth century), Bishop Monulphus (sixth century), majors of the palace Pippin II and Charles Martel (c. 700 AD), Charlemagne's courtier and lay abbot Einhard (early ninth century), Duke Charles of Lotharingia and his son Otto (c. 1000 AD), and finally Provost Humbertus (died 1086). Others could have been chosen but it is not my intention to present a comprehensive history of the *basilica* here.

Fig. 1.13
Air photograph with the *basilica* of Saint-Servatius, the parish church of Saint-John (with red tower), the Vrijthof Square to the right and the curved tracé of the thirteenth century town wall to the left (courtesy of the Town of Maastricht).



Servatius

Servatius is usually considered to be bishop of the Tungri around the middle of the fourth century.[192] In recent years doubts were raised as to the historicity of Servatius.[193] These doubts were raised because a key witness, Gregory, bishop of Tours (c. 538-c. 594)[194], created a whole new story in the second half of the sixth century that was probably related to a fourth century bishop but most of all to new developments in Maastricht in his time.[195]In my view it is necessary to be very critical of the sources related to the earliest bishops of the region, but doubting the historicity of Servatius as bishop of the Tungri in the fourth century is in my view the product of a hypercritical attitude. The bricolage by Gregory of Tours created a lot of fog, but does not necessarily have to lead to discarding the information in the older sources. It is justified in the first scholarly volume on the archaeological remains of the Servatius complex to have a look at the evidence on Servatius once more.

Sulpicius Severus (363-c. 420/25) mentions in his *Chronica* Servatius (*Servatio Tungrorum episcopus*) as one of the bishops present at the synod of Rimini in 359.[196] This is the only certain identification we have of him as bishop of the Tungri. De La Haye however, in an attempt to get rid of the fourth century Servatius, considers the possibility that the addition *Tungrorum episcopus* was a later addition by the copiist of the eleventh century manuscript.[197]He does not give any reasons why he thinks so. It is an unlikely supposition in my view. Why would an eleventh century copiist add *Tungrorum* (Tungri, certainly associated with Tongres in the eleventh century) and not *Traiectensis*? There is no Servatius cult related to Tongres in the eleventh century and the building activities in Maastricht on a new majestic *basilica* of Saint-Servatius were in full swing or had just ended. Moreover a new Servatius legend was in the making by Jocundus.[198] It would almost be an insult for a copyist not to relate Servatius explicitly to Maastricht. Another argument against the idea that Servatius was bishop of the Tungri in the fourth century he proposes is the scarce evidence of Christian life in that age in the region.[199] For the moment I see no arguments to doubt the information provided by Sulpicius Severus. If Servatius was bishop of the Tungri his *sedes episcopalis* will have stood in the capital of the civitas, the present-day Tongres. Maastricht was in his day a new but small *castrum* near the bridge over the Meuse river and will have had a military function which is not exactly a place to accommodate a bishop and his entourage.

Athanasius (c. 295-373), a contemporary of the Servatius of Sulpicius Severus, mentions a Sarbatios subscribing the decisions taken at the synod of Serdika in 342.[200] It is not certain that Sarbatios was there, for his name figures on a list of Gallic bishops who were present at a synod in Gaul in 346 (so-called council of Cologne) to subscribe the decisions of Serdika.[201] Athanasius may have added this Gallic list to that of the original subscribers of the council at Serdika. Sarbatios may have been present at the Gallic synod only.

Athanasius mentions again a Sarbatios in the context of his defence against accusations that he was not loyal to Constantius and had contact with Magnentius the usurper. He suggests that the emperor should ask the two envoys of Magnentius to the court about the letters he was supposed to have written after he received letters from Magnentius. The envoys were bishops Sarbatios and Maximos and two others not indicated as bishops. A bishop Sarbatios was thus member of a delegation of Magnentius to the east in the years 350-353.[202] The same mission is also mentioned by Zonaras, a twelfth-century chronicler who used late antique sources in a trustful manner.[203] Are the two (council of Serdika and envoy) identical? The identification of Athanasius' Sarbatios with Sulpicius' Servatius is not certain. Identical names are as such an insufficient argument to identify Sarbatios 1 (Serdika) with Sarbatios 2 (envoy) and Servatius of Sulpicius. Servatius however is a rare name.[204] When in the same period the name appears three times and all three are bishops one could accept that the three were identical.

If the two Sarbatioi are identical to Bishop Servatius of the Tungri, this bishop was an important member of the Gallic clergy around the middle of the fourth century.[205] I fact we know nothing of his activities in the civitas of the Tungri, we only have information on his activities outside the civitas. In fact there is nothing to substantiate any involvement of Servatius with the fortress in Maastricht. The sources give no information on a bishop Servatius after 358, although later tradition holds that he died in Maastricht in 384.[206] If we would not have the texts by Gregory of Tours written more than 150 years after Sulpicius wrote his chronicle we would be fairly certain that there was a bishop Servatius of the Tungri in the fourth century on the basis of contemporary or near contemporary texts.[207] However we do have the texts by Gregory and the later traditions of the Servatius cult are mainly based on these texts not on the older ones.

The Servatius tradition is based on two short stories recounted by Gregory, bishop of Tours and developed later. One is in the second book of his *Historiarum libri decem*, which were written in about 576-580.[208] The other is in his *Liber in gloria confessorum*, which was written in 587 and includes a prologue written in 593.[209] In the *Historiarum libri decem*, Gregory tells the story of a Bishop Aravatius who lived in the fortified town of Tongres. In the *Liber in gloria confessorum*, Aravatius is bishop of Maastricht. According to Gregory, this bishop lived at the time of the invasion of Gaul by the Huns. To prevent devastation he travelled to Rome, returned to Tongres, then travelled to Maastricht, where he died

(188) The literature on this magnificent building, its treasures, liturgy and institution is overwhelming. Recent studies are, for example: Kroos 1985; Koldeweij 1985; Mekking 1986; Leupen 1997; De La Haye 1997; Dierkens 2000; Den Hartog 2002; Panhuysen/De La Haye/Gauthier 2002, 106-115. (189) Panhuysen 1990, 1991. (190) Theuws 2001a. (191) Women do not seem to play a great role in the history of this institution (although Gerberga (tenth century) may be an exception), but we will see later that archaeology will bring them to the fore in the sixth century. They might have played an important role in the years around 700, but the sources are silent on them. (192) Vlekken 1935; Brennecke 1986; Kupper 1982, 48-49; Gauthier 1986; Dierkens 2000, 547 and many local and regional authors. (193) Regis de La Haye 1994; Ristow 2007, 61-62. (194) Wood 1994b. (195) On the most likely backgrounds of the creation of this story see:Theuws 2003, 2004. (196) Sulpicius Severus, *Chronicorum* Libri II, c. 44. For translation see the edition of De Senneville-Grave in the Sources Chrétiennes (1999, 324-325 and 326-327). Vlekken indicates that the text was written between 400-403 (Vlekken 1935, 4, see also De Senneville-Grave 1999, 12-16). (197) De La Haye 2015, 192-193. The manuscript is supposed to be of Rhineland origin, but where exactly from the Rhineland (north, south?) is not clear (De Senneville-Grave 1999, 59) (198) De La Haye/Arentsen/Sassen 2006. (199) An argument ex silencio, which might change with new excavations in Tongres. (200 Athanasius, *Apologia Secunda*, c. 49,1. (201) Brennecke 1986. (202) Athanasius, Apologia at Constantium, c. 9. (http://www.athanasius.theologie.uni-erlangen.de/apolconst.html) For translation see the edition by Szymusiak in Sorces Chrétiennes (1987, 104-105); Brennecke 1986, 24-25.Vlekken (1935, 3) indicates that the *apologia* was written in 357. (203) Zonaras *Epitome ton istorion*, XIII-7. Brennecke 1986, 25. (204) De La Haye 2015, 191. (205) There is a general consensus that Servatius and Serbatios are identical. (206) See on the development of the legends around Servatius: Koldewey 1985; De La Haye 1994; Kroos 1985; De La Haye/Arentsen/Sassen 2006, 33-65. On the time of his death: Vlekken 1935, 36-40. The tradition of his death in 384 was created by the Bollandists in the seventeenth century (*Acta Sanctorum* May, volume 3, 213; Vlekken 1935, 40). (207) This answers the question posed by De La Haye whether there is an historical bishop Servatius in the fourth century (De La Haye 2015, 193). (208) Gregory of Tours, *Historiarum libri decem* II, 5; translation: Thorpe 1974. For the dating of his writings, see Wood 1994b, 3. (209) Gregory of Tours, *Liber in gloria confessorum*, c. 71; translation: van Dam 1988. For the dating of the writings, see Wood 1994b, 3.

and was buried next to the public road. This Bishop Aravatius is generally identified with Bishop Servatius of Sulpicius Severus.[210] If Gregory had this Servatius in mind, his stories are full of 'mistakes'. It is clear that Gregory wrote in relation to events that occurred in his own days, rather than accurately recount what happened in the fourth century. Gregory's stories are not very useful for a reconstruction of evenemential church history in Tongres/Maastricht in the fourth century.[211] I will come back to this when discussing our next great man, Bishop Monulphus. Panhuysen identified the foundations of a small rectangular building, which he dated in the late fourth century, as the sepulchre of Saint Servatius.[212] Doubts arose as to this identification of the building.[213] Doubts also arose as to whether Servatius was buried in Maastricht in the fourth century.[214] These doubts arose on the basis of what Gregory wrote at the end of the sixth century about the activities of Bishop Monulphus.

Bishop Monulphus

According to Gregory, Bishop Monulphus built a *magnum templum* in honour of Aravatius to replace a small wooden oratory, which was collapsing all the time. This is what is recounted in the *Liber in gloria confessorum*.[215] In that same story Gregory tells us that Aravatius is said to have been buried next to the bridge of the public road, and finally he tells us that the body of Aravatius was translated into this church. Unfortunately, he does not reveal from where the body was translated. It is generally accepted that Aravatius is Servatius, that he was buried in Maastricht and that his body was translated from one place in Maastricht into another. However, the possibility that he was brought over from Tongres has to be considered.[216] Gregory's story in the *Historiarum libri decem* ends with the following statement (in translation): 'How, after the lapse of many years, his holy body was moved elsewhere I have described in my *Book of Miracles*'.[217] This *Book of Miracles* thus seem to antedate Book 2 of the *Histories*. But we have no story about this translation in a miracle book by Gregory; we have the story in the *Liber in gloria confessorum*. This book, however, is post-dated to Book 2 of the *Histories* by Wood.[218] Wood, however, warns us about Gregory's editing. Individual statements need not undermine the chronology.[219] A chronology of texts whereby Book 2 of the *Historiarum* was written eight to ten years before the *Glory of the Confessors* illustrates Gregory's intentions very well. What were these intentions?

In order to explain them, we first have to read critically his story about Aravatius in Book 2 of the *Histories* (possibly the earlier text) and pay special attention to his statements about where Aravatius is buried. I too suppose that Gregory intended to write about the fourth-century Bishop Servatius, and that thus Aravatius is identical to Servatius (see below).[220] After recounting how Aravatius travelled to Rome, where his death was foretold, Gregory tells us (in translation): 'When he reached the town of Tongres, he quickly made all the preparations necessary for his own burial'. Aravatius said goodbye to the clergy there and then left for Maastricht. In the (translated) words of Gregory: 'He made his way to the town of Maastricht and there he fell ill of a mild fever. As soon as his soul had left his body he was washed by the faithful and buried beside the public high-road'. Then follows the line recounted above about the translation: 'How, after the lapse of many years, his holy body was moved elsewhere I have described in my *Book of Miracles*'. End of story. Now Gregory leaves us puzzled. The burial location is indicated as 'beside the public high-road'. Because the line about his burial follows the line about his departure for Maastricht, where he fell ill, everyone writing about Aravatius/Servatius accepted that Aravatius died in Maastricht and was buried there. This image is strengthened by Aravatius's farewell to the clergy and the citizens of Tongres. But that Aravatius was buried in Maastricht is not explicitly stated by Gregory. What he did state is that Aravatius made preparations for his burial while he was still in Tongres. Two explanations can be given for the specific form of Gregory's text. First, Gregory may not have found it necessary to explain the obvious: the bishop was to be buried in Tongres (the centre of the diocese), beside the public high-road, of which Tongres had several. Why he left for Maastricht before his death is not possible to establish.[221] Did he really leave for Maastricht in the fourth century (a fact) – or is this statement an element of the sixth-century narrative (a representation) to include Maastricht in the story? Are we to use this text to reconstruct an evenemential history? In fact, on the basis of this text it is not possible to decide definitely where Aravatius died and was buried: was it in Maastricht (died and buried), in Tongres (died and buried), or in Maastricht (died) and Tongres (buried)? The second explanation is that Gregory's text on Aravatius in the *Historiarum* is a very clever rhetorical text: it may not necessarily distort evenemential reality in the fourth century, and it can be read in accordance with the new situation in the sixth century because of the suggestive order of lines.

In the *Liber in gloria confessorum*, Gregory calls Aravatius 'bishop of Maastricht', which he certainly was not. He also adds a new piece of information about the location of the burial of Aravatius: 'He is said to have been buried next to the bridge of the public road'. This is a strong indication that he means Maastricht, for there was the Roman bridge over the Meuse. We now have to ask whether we are allowed to simply add the information in the *Liber in gloria confessorum* to that in the *Historiarum* (1 + 1 = 1?), as historiography has done up till the present. I think not, because I do not think that Gregory intended to reflect a 'true' evenemential reality by adding information in the *Glory of the Confessors* to that already given in the *Histories*. He rather intended to 'develop' the new situation in Maastricht and was helping Monulphus in this way. We can see him elaborating on this in the two successive texts. If we accept that the *Liber in gloria confessorum* was written after the *Historiarum*, some of Gregory's intentions are revealed. Aravatius changed from a bishop of the Tungri (*Histories*) into a bishop of Maastricht (*Confessors*). This change and the added information about the burial location of Aravatius indicating, but still not explicitly stating, that it was in Maastricht, point to a stronger accent on Maastricht in the *Liber in gloria confessorum*. This is certainly related to the building of the *magnum templum* by Monulphus and his translation of Servatius's body into this church, which is the central story in the *Liber in gloria confessorum*.[222]

Gregory may have known Monulphus and wrote for him about his magnificent new church and the relic of Saint Servatius. At the same time, Gregory's intention was to give historical debt to the new situation (Servatius buried in Maastricht and now being a venerated saint there) to legitimate it, without having much accurate information about Servatius. He had the name wrong and the date. The false date was however in my view a part of the rhetorical construction (see below). Gregory developed this theme by first writing a clever text and then a more explicit text. In the end, we have to reckon with the fact that the evenemential reality of the fourth century was quite different from Gregory's literary construction that Servatius died and was buried in Maastricht.[223] We have to reckon with the fact that he died (and was buried) in Tongres and brought to Maastricht in the sixth century by Monulphus.[224] How would Gregory know about the events in Maastricht in the sixth century? There are no indications that he had ever been there. So his information came either from Monulphus directly (in written form) or, more likely in view of the wrong name, in an oral form one way or another.[225] Whatever, he was not well informed because he had the name of Servatius wrong. That Aravatius is meant to be Servatius can be deduced from the fact that in Maastricht a Servatius cult developed, not an Aravatius cult.[226] Monulphus created a Servatius cult and Gregory got the name wrong. Nancy Gauthier's dating of the epitaph for Servatius transmitted in a *Vita Sancti Servatii* to the sixth century is quite convincing. She relates it to the creation by Monulphus.[227]

That Gregory relates Servatius to the Huns of the fifth century fits conveniently Monulphus' intentions. Servatius was to be the defender and patron saint of the town, created by him and for him. What he needed is an effective defender of towns. He got the saint he needed on a plate by Gregory who made Servatius a successful defender of a town against the greatest menace possible in the eyes of contemporaries: the Huns, destroyers of cities. It was a better saint than the real one: a representative of a lost cause (Magnentius). So the wrong date is not a 'mistake' by Gregory of Tours but a deliberate rhetorical choice. There is no need to search for a fifth century bishop Aravatius.[228]

Next, there is a discussion as to the motives of Monulphus.[229] He elevated and translated a saint, built a *magnum templum* for him, 'commissioned' a convenient legend or two and commissioned a grandiose epitaph. We would call this in German a '*Gesamtkunstwerk*'. Did he mainly act as bishop and were his activities meant to enhance episcopal power (an institutional perspective)?[230] Or did he act as a member of an aristocratic group in order to enhance the power of this group by creating a cult place with an inalienable possession, the relic of a saint, and a burial place for himself and his family?[231] It is impossible to say yet. We have to keep in mind, however, three elements in the debate. The first is that there is no evidence that the two bishops before Monulphus (Falco [c. 500-VIa] and Domitianus [VIb]) payed any attention to Servatius in Maastricht and may thus have resided in Tongres.[232] Since the excavations in the *basilica* of Tongres and the discovery of a sixth century church there this is a difficult to avoid conclusion (see below). Second, Monulphus is the only bishop buried in the *basilica* of Saint-Servatius, which is an indication for a family burial place rather than an official episcopal burial place.[233] Third, recent excavations in the *basilica* of Our Lady in Tongres have surprisingly revealed the existence of a late Roman building (a church?) and churches from the Merovingian, Carolingian and later periods at the site of a large town house from the Roman

(210) See, however, De La Haye 1994 who places Servatius in the fifth century. His ideas on this are not generally accepted. (211) Gauthier 1986, 502. See also Beaujard 2000, 53. (212) Panhuysen 1990, 544; 1991, 19. (213) Theuws 2001a, 165-172; see also Panhuysen/De La Haye/Gauthier 2002, 107. (214) Theuws 2003, 12-13; 2004, 130-131. (215) Gregory of Tours, *Liber in gloria confessorum*, c. 71; translation: Van Dam 1988. For the dating of the writings, see Wood 1994b, 3. (216) Theuws 2003, 12-13; 2004, 130-131. On translations of local saints, see Beaujard 2000, 416-419. (217) Thorpe 1974, 115. (218) Wood 1994b, 3. (219) That Gregory made a mistake in the reference is also an indication for a later addition. Had the *Glory of the Confessors* already been written (thus early in Gregory's career as a writer, and therefore before he had produced a large opus,) he would probably not have made this mistake. (220) Gauthier 1986, 501-502 with a recapitulation of an older debate on the identity of Aravatius Servatius between Bruno Krusch (no identity) and Godefroid Kurth who refuted Krusch's arguments. (221) Elsewhere I suggested that Maastricht was his family's home base and that he went there for that reason. Now I am less inclined to accept the information as factual. (222) Theuws 2003, 12-13; 2004, 130-131. (223) One could even say that the more he put an accent on Maastricht, the more likely it is that Servatius was originally buried in Tongres which would be the normal situation. (224) Theuws 2004, 131. This also explains why there is no Servatius cult in Tongres. There is in fact no saints cult at all and there is no *basilica extra muros*. Gauthier seems to imply the same sort of translation (Gauthier 1986, 503). (225) Dierkens 2000, 547. (226) Gauthier 1986, 502. (227) Gauthier 1986, 509. (228) As De La Haye suggests 2015, 191-193. (229) See also Theuws 2003 and 2004. (230) Panhuysen/De La Haye/Gauthier 2002, 109-110. (231) Theuws 2003, 12-13; 2004, 130-131. (232) On these bishops see Kupper 1982, 49-49-50. Domitianus is once indicated as '*episcopus ecclesiae Tongrorum quod est Traiecto*'. There is a debate on whether '*quod est Traiecto*' is a later interpolation or not (De La Haye 1985, 40-41). A new analysis of the texts in the various manuscripts could be revealing. (233) Bishop Lambertus was also buried in a family burial place (Theuws 2001a, 172-174). This too is perhaps rather rhetorical than evenemential in order to accentuate the contrast with his new public burial place in the church of Liège (which he of course deserved in the eyes of the writer of his *vita*) after his *elevatio and translatio*. Kupper 1984. However there is no such thing in those days as an official episcopal burial ground (Dierkens 2000, 548, note 27; Theuws 2001a). (234) Vanderhoeven et al. 2002, 75-89; Van den Hove/Vanderhoeven/Vynckier 2002; *Nieuwsbrief O.L.V. Geboorte basiliek Tongeren* 1-5, (2005-2006); Vanderhoeven 2011. He also suggests that there need not be continuity of use between the Late Roman and Merovingian building (Vanderhoeven 2011, 137).

period.[234] The late Roman *basilica* is dated to the middle of the fourth century on the basis of archaeological arguments (stratigraphy and coins).[235] What was not expected is an archaeological fact: next to Maastricht, Tongres was also an early Christian centre at least in early Merovingian times (sixth century), and probably in late Roman times.[236]The most striking fact however of the late Roman town of Tongres is that it had no extramural *basilica* to venerate a saint. There is no Servatius cult in Tongres although one would expect such a cult in an early Christian Roman town or in the sixth century when bishops are known that probably resided in Tongres. Tongres however declined considerably in the fifth century and did not really recover until Ottonian times.[237]I suggest that this reluctance to revive was also caused by a transfer of Servatius from Tongres to Maastricht by Monulphus. The only way to prove this is to find an abandoned *extra muros basilica* in Tongres.[238]

Panhuysen identified the remains of a Merovingian church found during the excavations in the *basilica* of Saint-Servatius as those of the *magnum templum* of Monulphus.[239] He also found several dispositions of the monument commemorating Monulphus.[240] Archaeological research should however concentrate on dating the Merovingian remains independently of the written evidence.

Pippin II (died 714) and Charles Martel (died 741)

Strictly speaking there are no reasons to include both Pippin II and Charles Martel in the list of great men who determined the fate of the church of Saint-Servatius or who altered its fabric substantially. There is hardly any contemporary evidence concerning their dealings with the *basilica*. I dealt with politics in a previous section, so I will keep the story of Pippin and Charles short. However, we know that after a long struggle for power in the middle Meuse valley, the Pippinids must have got hold of Maastricht, and the *basilica* in particular. The *basilica* must have been in the hands of Charles Martel by 717-718, when he imprisoned Abbot Wando there.[241] One of the important questions to be answered by the archaeological analysis is: when was the Carolingian *basilica* built? Here we have to follow the strategy that was applied to the Merovingian church: we have to establish this date independently of the written evidence. Whether Pippin II or Charles Martel took the initiative to build a new *basilica* remains to be seen.

Einhard

Einhard was one of Charlemagne's and Louis the Pious's most important courtiers (c. 770-840).[242] He was present at the court in Aachen for many winters. During his career he obtained the lay abbacy of seven royal monasteries.[243] One of them was Saint-Servatius in Maastricht.[244] Some of his dealings with the monastery are known from his own writings and from works of art. Moreover, after he had brought relics of saints Marcellinus and Peter to the *basilica* of Saint-Servatius, many wonders happened, which were recorded in a booklet handed over to Einhard. He refers to it and quotes from it in his *Translation and Miracles of the saints Marcellinus and Peter*, most of which was written in 830.[245] The *basilica* of Saint-Servatius mattered to Einhard; he probably reformed it under his abbacy.[246] Of great importance was the splendid work of art that he dedicated to the church in Maastricht.[247] It is now lost, but a drawing of it is preserved in a manuscript from the seventeenth century in the Bibliothèque Nationale in Paris. The object has the form of a Roman triumphal arch on top of which a cross was fixed, although this had already been lost when the drawing was made. An inscription above the way through reads (in translation): 'Einhard, a sinner, strove to set up and dedicate to God this arch to support the cross of eternal victory'.[248] In this object Einhard combined the symbolism of the triumph of antiquity with a triumphant Christian programme, which was well under way at the time.[249] Monastic reform and the dedication of such an object may have gone hand in hand. Another important object –the key of Servatius[250] – may have reached the church in the same years. It dates from this period, and was probably made at Aachen, but it is not certain that it was dedicated to the church of Saint-Servatius already in the early ninth century, although it is generally believed to have been so. In that case, it is possible that Einhard also gave the key to the church. Einhard was intimately involved with the well-being of the church of Saint-Servatius (abbacy, reform, translation of the relics of saints Marcellinus and Peter, dedication of prestigious objects). It is therefore all the more surprising that, as far as we can see, he did not leave any archaeological traces, although we know that he built several churches elsewhere and followed the appropriate building programmes in accordance with reform ideals.[251] Again, we have to pay special attention to the archaeology of the Servatius complex in Carolingian times in order to understand the contexts of its development, especially because Carolingian Maastricht is an enigmatic place, and we discovered that it is possible that the Carolingians did not donate a lot of property to the church of Servatius.

Charles of Lotharingia and his son Otto

Maastricht was an important centre in Lower Lotharingia. Duke Gislebert probably considered it his 'capital'. At the end of the tenth-century, Duke Charles of Lotharingia (977-992/3), brother of the West Frankish king, must have had strong ties with Maastricht. After his death, Otto, his son and successor as duke (992-1005(?)/1012), buried his father in the *basilica* of Saint-Servatius. Tradition holds that Otto was also buried in the *basilica*. Charles's tomb is mentioned on the lead cross that was found in the sarcophagus of Provost Humbert (died 1086), so we can safely accept the tradition that his son buried Charles in the *basilica*.[252] Choices of burial locations usually have a highly political and symbolic significance, especially in times of political struggle.[253] It is possible that Charles or Otto considered himself a founder of the new *basilica*. The excavations have shown that a new building campaign started late in the tenth or early in the eleventh century.[254] A church dedication in 1039 can be related to this new church.[255] It is tempting to regard Charles or Otto as being involved in creating a new *basilica*, which they may have considered as their burial place from the beginning. The new church was to have an exceptional layout with a three-aisled nave, a transept with polygonal ends and ambulatories, and a presbytery with an apsidal end. It must have been one of the earliest, if not the earliest example of such a trefoil disposition of the eastern part of the church in the north.[256] Although we are not yet certain about the involvement of the last dukes of Lotharingia of Carolingian descent in the building of the new *basilica* at Maastricht, Otto's decision to have his father buried in the *basilica* is a strong argument in favour of this supposition. However, the trefoil disposition of the east part was not to last for long, for our last great man was to change its layout already in the second half of the eleventh century, perhaps even before it was finished.

Humbert/Hugo, provost from 1051 to 1086

Humbert would not have figured on this list if it had not been for the large lead cross that was put in his tomb when he was buried.[257] His stone sarcophagus was rediscovered in the western end of the church on the central axis of the building.[258] An inscription identified the man buried inside as Humbertus (*hui(us) ecclesie (et) leodiensis su(m)m(us) preposit(us)*). The lead cross placed behind his head enumerates again his functions mentioned on the sarcophagus, and also that he was archdeacon of Texandria. Of great interest is that he was buried in Maastricht and not in the episcopal centre Liège, where he was also provost of the most important church. Perhaps Maastricht was closer to him. Anyway, the lead cross also enumerates all the measures he took to renovate the church. The renovation concerned mainly the eastern part of the church (new presbytery, crypt, tomb of lord Charles, three chapels as well as a number of subsidiary buildings (chapter, dressing room, school and cloister) and the monument to bishops Monulphus and Gondulphus, and a ciborium above the altar of Servatius.[259] Moreover, he donated reliquaries, liturgical vestments and utensils. What we see is a combination of building activities and the donation of prestigious objects. It is what we expect Einhard to have done as well, but we lack in his case the kind of detailed information we have about Humbert's activities. Strangely enough, the lead cross does not mention anything about his activities in Liège. Although later alterations did change the fabric of the church to some extent, it is Humbert's church that we can still visit and admire in Maastricht.

Here ends the first part of the general introduction to the project. In it I dealt with the historical and geographical context in which early medieval Maastricht developed and became a regional centre. It was not my intention to be comprehensive, or to prelude all the problems we will encounter. Nor was it my intention to present a comprehensive research agenda, although we have already encountered problems, some of which may be solved with the help of archaeological research.[260] Other problems do not present themselves when reading written sources; they appear only when reading archaeological sources. What can archaeologists contribute to the understanding of the meaning and significance of the Saint-Servatius complex? In the following section,

(235) Vanderhoeven 2011, 134-135. Vanderhoeven suggests that the Late Roman basilica was a church. (236) Those who question the religious status of the building have not yet come up with an acceptable alternative suggestion for the function of this building in the outskirts of the Late Roman town. In view of this location a public function is not likely. A private function too has quite some implications for the interpretation of the late Roman inhabitants of Tongres. We will patiently await the results of a detailed analysis of the excavated remains before any further speculations are made. (237) Vanderhoeven 2011, 137. (238) The late Roman cemeteries of Tongres produced (vague) finds that could indicate the presence of Christians in the town (Vanvinckenroye 1985). (239) Panhuysen 1990, 544; 1991, 19. (240) Monulphus is also commemorated in Chartres where there is a relic of him, although he is not considered a saint by modern historiography (Beaujard 2000, 288, note 4). (241) Leupen 1996. (242) See now: Schefers 1993; Dutton 1998; Smith 2003a, 2003b; Dierkens 2004b (who gives a more extensive bibliography). (243) Schefers 1993, 19-23. (244) This lay abbacy is mentioned in 819 or 821 (Schefers 1993, 19 and note 80 with facsimile of the charter. Dierkens 2004b, 345 and note 28). (245) Dutton 1998, xxv-xxvi. (246) Schefers 1993, 22-23. (247) See now Dierkens 2004b, 346-350. See photographs in e.g.: Timmers 1971, 25; Stiegemann/Wemhof (1999) 2, 700-701; Dutton 1998, 64-65; Den Hartog 2002, 4. (248) Translation by Dutton 1998, 63. (249) Dierkens 2004b, 350. (250) Koldewey 1985. (251) Binding 19982, 39-62; Smith 2003a; Dierkens 2004b. (252) See now Bijsterveld 2006. (253) Lauwers 1997. See the volume of the *Publications de la Section Historique de l'Institut G.-D. de Luxembourg* 118, which deals explicitly with this topic. (254) Panhuysen 1990, 550-551; 1991, 21-22. (255) Mekking 1986, 21-25. Panhuysen is careful in his dating of the church. It is doubtful whether we will ever be able to date the start of the building campaign precisely. So we will probably not know whether it started when Charles was duke or when Otto was duke, or even later. (256) The other early example is Sankt Maria im Kapitol in Cologne (start of building activities before 1049, dedication in 1065 (Kubach/Verbeek 1989, 64). Kubach/Verbeek 1989, 100-104; 274-281; 593. In Maastricht there is no ambulatory in the east end as in Sankt Maria im Kapitol. (257) Panhuysen 1988c. (258) Panhuysen 1988b and 1988d. (259) Bishop Gondulphus seems to be a mythical figure. Kupper deletes him from the episcopal list (Kupper 1982). De La Haye wants to keep him on board (De La Haye 1985, 47-48). (260) An interesting aspect for which I carried out a preliminary survey is the religious architectural landscape at the time of the creation of the *magnum templum* in the middle or second quarter of the sixth century including areas to the west of the area dealt with by Ristow (2007). This story, however, was difficult to fit in the present narrative so I have kept it for another occasion. One of the (not so surprising) results was the outstanding character of the buildings in Trier, which are immense in comparison to the other contemporary, religious buildings of the Germaniae and Belgica Prima. The Cologne churches (the cathedral and Saint-Gereon) are much smaller, but still large in comparison to a third group of buildings (Cologne-Saint-Ursula, Boppard, Arlon, Tongres, Mainz, etc.), which are relatively small, although in the eyes of contemporaries they might have been large buildings. Difficulties arose as to the categorization of buildings on the basis of their plan: episcopal churches with cathedra (ecclesiae?); burial churches with liturgical acts (basilicae?); memorial buildings above a grave (which ones are for Christians and which ones are for non-Christians? Is the one found in Xanten under Saint-Victor a Christian memorial? How do we establish this?); secondary churches with baptismal rights (such as Boppard); monasteriae; rural memorial buildings that might have liturgical functions such as Arlon; estate churches with liturgical functions. How can we distinguish a late Roman building with a secular function from one with a religious function? What architectural changes must be observed to decide that liturgical acts were performed there? These and other questions have to be answered in an analysis of the sixth-century religious landscape of north-eastern Gaul.

I will try to provide some insights into our research agenda and our perspectives, both of which are guidelines rather than straightjackets. The research potential of the Saint-Servatius complex is so vast and our time is so limited that choices had to be made.

Perspectives and themes: a first outline

Macro-problems and micro-histories

One of the major challenges faced by a research programme such as this, with its various spatial components (ranging from a single building to northern Gaul) and a time slice that includes major transformation processes operative at a European scale, is to combine macro problems and micro histories. Archaeologists share this problem with anthropologists who, while working on a village level of data acquisition, deal with global problems.[261] The middle Meuse valley and its towns, villages, peasants, merchants, artisans, priests and aristocrats played a role in some of the debates on macro problems, such as the role of long-distance trade and commerce in the rise of the Carolingian empire and the growth of towns. The central question is how Europe recovered after the collapse of the Roman state. Henri Pirenne started his research with a study of one of the middle Meuse towns.[262] His interests are still at the centre of modern research, although the vocabulary and concepts have changed. These interests are the transformation of the Roman world, the nature of Carolingian society, and the rise of commerce and the town. These major themes can be broken up into a number of sub-themes that are in fact interrelated long-term processes, such as the Christianization of the northern world, the accumulation of wealth and power, the development of kingship and aristocracies, the ruralization of the Carolingian world, the development of towns, the changing nature of exchange systems, and the development of cultural groups and group cultures. It is possible to have multiple perspectives on each of these processes; multiple interpretations have been given. We took the Saint-Servatius complex as a point of departure in studying early medieval society in the middle Meuse valley because *all* these processes merge in this complex. Our ultimate goal is to construct in detail the micro history of this complex and to relate it to macro problems. It is impossible to elaborate here on all these themes and to explain the whole range of perspectives we want to work from. We will tackle these in the appropriate places.

One way of solving the ever-present problem of combining macro problems with micro histories is to try to adopt an ethnographic perspective in the analysis of local societies on the basis of archaeological evidence. What we would like to do is what ethnographers do, namely be present in a peasant village, estate centre or religious complex, walk around, attend a mass, ask questions, talk to different people. However, neither archaeologists nor historians can do that: medieval society is lost forever. Nevertheless, we can try to imitate that ethnographic method in our way of excavating sites, in how we analyse and describe them, and in how we interpret our evidence. We can also reconsider the themes we want to address and the concepts (like 'culture') we use. We can leave behind our perspectives and social models that refer only to what is observable (e.g. vertical social relations and hierarchies, power and competition). Colonizing the countryside, for instance, is not only an ecological–technological or spatial process, but also a social and mental process. The landscape is altered not only in a physical sense, but also in a mental and symbolic way. Macro problems of early medieval Europe have mostly been defined on the basis of written evidence. Can we be sure that an analysis of local groups/communities on the basis of material remains and landscape elements from an ethnographic perspective can be combined or compared with major processes discussed on the basis of written evidence?[263] An ethnographic perspective on local groups/communities that is based on archaeological evidence *might* address other themes than written sources will allow, or we might be able to provide alternative perspectives held by different medieval groups on the same subject matter.[264] Material culture, like spoken and written words and gestures, is a complicated means of expressing thoughts and is to be considered a medium at the same level of sophistication, or perhaps at a higher level of sophistication. Material culture is good to talk with because it is possible to express ideas without having to speak. Material culture provides the opportunity to voice the unspeakable and thus 'safely' to confront another person. It shares this capacity with written texts, but material culture was more widespread (and more evenly spread in geographical, temporal and social senses) in medieval society than texts were. None of this is to say that material culture should be analysed simply using linguistic methods and concepts to discover the symbolic meanings. However literary methods to unravel rhetorical strategies may be an apt way of studying material culture.[265] As in historiography a 'literary turn' in archaeology might be very profitable. Material culture may constantly express associated values that can be subject to negotiation between groups, such as gender relations, relations of inequality or religious relations.[266] But because it does so these relations are not only represented (in a symbolic way), but also reproduced, created, negotiated and contested. Moreover, material culture may play an important role in the internalization of values and norms.[267] Material culture is thus also to be considered a medium with the same level of effect on contemporary society as texts have; material culture is good not only to talk with but also to conserve or transform with, to generate memories or to negotiate. Material culture (and texts) do not just provide information about the past: they are first and foremost to be considered elements *in* the past. We have to know what they did then.[268] We have to contextualize them in order to operate our ethnographic perspective. Material culture might be more active than we imagine on the basis of our modern representations of the meaning of the disenchanted material world (it may not be disenchanted, but that is how we like to represent it). If this is true, how are we going to deal with the immense variability of the material world compared to language? There are only a few words for a house (that we know of) in the early Middle Ages, but the variability in houses from that period in Europe is huge, and all those forms express different ideas about living, the composition of the house group, gender relations and positions, the valuation of animals and plants, the cosmological order, etc.[269] The uniforming nature of a limited vocabulary is counterbalanced by the sheer endless variability in material expressions. How do we avoid getting lost in this variability of evidence while it is exactly this variability that should be in the forefront of archaeological research? One of the answers might be the ethnographic analysis of local groups instead of comparing house plans from all over north-western Europe irrespective of their local context, or comparing elements of the burial ritual over large areas irrespective of their local context. An ethnographic perspective in archaeology favours the local because as Austin and Thomas explain, standing on the shoulders of Bourdieu: 'It is in the context of the home and the hearth that people will internalize the most fundamental values and structures that will guide their future lives'.[270] I would add that this goes not only for peasants but for everyone living in a house, whether we call it a castle, a palace or a monastery, and (in line with their thoughts) that what is involved is not only internalization but also the transformation and creation of these values and structures. I would also add that next to home and hearth, the cemetery is an ideal place to analyse these aspects. Because an important part of the research in the context of the Saint Servatius programme is based on burials, it seems appropriate in this first volume to elaborate somewhat more on the perspectives we have on the analysis of the early medieval burial ritual.[271]

Perspectives on the early medieval burial ritual

The analysis of the early medieval burial ritual has been subject to historical research itself. The work of such scholars as Härke, Effros, Halsall, Brather and others has laid bare the suppositions and concepts used in this analysis since the nineteenth century.[272] Next to these analyses of the interpretative history of burial analyses, many scholars have tried to develop alternative interpretations to the ones handed down since the nineteenth century in the context of the analysis of specific cultural situations.[273] It is not necessary to repeat the debate. I will content myself with a short overview that shows the basics of our position in the debate on early medieval burial archaeology. Accepting the risk of oversimplifying the state of affairs in burial analysis today, I like to divide this research into two major perspectives: a long-established historical perspective and an ethnographic perspective.[274]

The historical perspective is characterized by a homogenizing concept of culture and simple cultural oppositions, such as Romans vs Germans, Christians vs pagans, civilized vs barbarian, etc. A buried person must fit into one of these categories borrowed from written sources. This perspective also includes the supposition that the objects in the grave are in some way the personal belongings of the deceased person and reflect his/her status in life. The person in question may have obtained these objects either early or later in life.[275] However serious doubts have arisen about the validity and 'reality' of the outcomes of the seriation of graves and the creation of clear chronological demarcations.[276] This perspective also accepts that the ordering of the cemetery accurately reflects the social ordering of the local group.[277] It was originally thought that a cemetery represented the population of a single settlement. Although this idea has been discarded, it is generally accepted that a burial community (a group of persons that buries its dead in a single cemetery) constitutes a local community whatever the exact spatial layout of the settlement or habitation. On the basis of this perspective, many local aristocracies have been reconstructed. In the historical perspective, vertical social ordering is the almost exclusive model used to explain social organization. It is discussed what elements have brought this vertical order into being: wealth, juridical status or proximity to the king. It is also suggested that the burial ritual is to a high degree determined by ethnic identity, and that it is possible to identify an individual as a member of one of the various ethnic units mentioned in the written sources on the basis of specific objects. This supposition includes the idea that men and women whatever their age had only a very limited choice of objects that they could wear or use. Being a member of a specific ethnic group thus means that this person

(261) The underlying assumptions and the effects of this characteristic way of working is, however, also in anthropology a matter of debate. (262) Pirenne 1889; 1925 [1980]. (263) Moreland 2001. For the difference I make (as an archaeologist) between groups and communities, see Theuws 2010. (264) On the relation between archaeology and written texts, see Moreland 2001. Italics for *might* because I do not want to suggest that archaeologists fill gaps in knowledge of the past left by the written evidence. I believe that archaeology can tackle almost all problems of society and its transformations in the past. It is possible that we might not reconstruct philosophical thought from the Middle Ages, but categorizations and cosmological orderings are within our grasp. (265) Culler 20022. (266) Moore 1986; Miller 1985, both using concepts borrowed from Bourdieu. (267) Austin/Thomas 1990, using concepts borrowed from Bourdieu. (268) Moreland 2001. (269) Austin/Thomas 1990; Huijbers 2007. (270) Austin/Thomas 1990, 46. (271) For a recent overview of modern medieval burial analyses, see Williams 2005; Fowler 2004.

(272) A selection of their writings: Härke 1991, 2000; Effros 2002, 2003; Brather 2004; Halsall 1995, 2009; Effros 2012. See also Samson 1987. (273) Halsall 1995. See e.g. the contributions in Theuws/Nelson 2000. (274) I use the term ethnographic for it seems to me that this term better fits (and triggers a better perception of) a whole range of questions about and approaches to early medieval burials, than terms such as post-processual, which belong to the secret language of archaeologists. We simply want to know why people in the middle Meuse valley buried their dead as they did. I realize that the answer will be complicated and that many different answers to this question are possible. Moreover, not all subjects of interest to an archaeologist who holds an ethnographic perspective (chronology) are considered post-processual. (275) Steuer 1977. See now Kars 2011 and 2012 (2014). (276) Theuws 2001b; Kars 2011 and 2012 (2014). (277) See for instance Koch 2013.

acts on the basis of a 'blueprint for acts and prerequisites for social action'.[278] This perspective predicts that many households could only use Frankish pots in Frankish houses in Frankish settlements, and Frankish women could only wear Frankish brooches (as defined by archaeologists!), wear Frankish clothes and eat Frankish food. These categorizations are often found in studies that deal with only one element of the material culture (brooches, or houses, or pots). However, if we analyse the material culture of a local society in its entirety we are probably struck by the variability it presents. This variability is then explained in terms of mixing (not merging!) of people of various ethnic origins. It would be interesting to see this at work in practice in the villages of northern Gaul. We have to deal with this variability instead of pressing all evidence into bipolar models and forgetting about that which does not fit.[279] This perspective consequently accepts that the development of the burial ritual is to some extent also determined by evenemential processes mentioned in written sources or reconstructed on the basis of them, such as the 'Frankish conquest of Gaul' or the expansion of the Alamannic people, or the migrations of tribes or the settlement of the Goths in Spain. The method *par excellence* that characterizes the historical perspective is the supra-regional distribution map of individual elements of the burial ritual, such as individual types of brooches, sword graves from specific periods, burials under small hills, etc. They are then compared to the geography of the constructed narrative of the conquest or even to the area in which the *Lex Salica* is supposed to have been effective.[280] In analyses such as these, the motives of local groups and family groups to arrange a burial in a specific way, the meaning of the objects used, and the active role of the ritual itself in creating social bonds, identities, norms, values, cosmological categories, memories, personhood and an imaginary world are almost entirely ignored. They are merely insignificant elements in the grand schemes or narratives that brought forth early medieval Gaul and the burial rituals to which individuals had to adhere.

An alternative perspective is the ethnographic perspective, which we will try to develop further. This perspective departs from a distributive concept of culture. Culture is distributed in a variable way over a society and the various groups within it on the basis of a process of internalization, appropriation and interpretation of cultural sources perceived by individuals and groups/communities and their negotiation on values and ideas.[281] This process of 'discursive reflection' is essential in society and its transformation.[282] Rituals may play an important role in this process both as a form of representing values, norms and ideas, and in creating, contesting or reproducing them.[283] The forefront of research is held not by homogeneity, but by variability and the creative capacities of groups and individuals. In an ethnographic perspective, the accent in cemetery analysis is not at first on the living society to be discovered beyond the burial, but on the burial and the ritual acts and practices themselves. These were certainly related to aspects of the living society.[284] New themes are relevant such as gender,[285] age categories,[286] family and house groups, the construction of the 'person' and of the 'body' in ritual,[287] remembrance and creating memories,[288] the agency of material culture (objects, as well as individual cemeteries and groups of cemeteries), and the metaphorical use of objects and places.[289] There is an accent on both the reflection and the creation of local, group and individual identities.[290] A concept such as the complementarity of cemeteries was developed to grasp the complicated spatial and social aspects of the burial practices of local groups.[291] Parallel to the development of these thoughts on the burial ritual, new thoughts developed on the 'value' and 'worth' of the objects used in the burial ritual.[292] Concepts such as the cultural biography of objects and changing concepts of exchange altered our perception of grave goods.[293] The use of pottery in the burial ritual is probably much more sophisticated than can be detected by the usual simple univocal typological identification that is based only on morphological criteria (and its underlying modern assumptions).[294] The burial ritual (consisting of groups involved, a dead person, choice of location, creating a specific sepulchre, ritual acts and objects used) is thus intimately related to the creation of identities, conceptions of the person and the body, the constitution of groups and group cultures, memories, the 'value' of things, norms, ideas, values and cosmological categories. It goes beyond the simple equations between objects and ethnic identity, graves and positions in the local community or the directly observable social competition for local power and social stress.

The burial ritual might be considered a narrative. We can analyse the burial ritual on the basis of the complicated relations between the main character (the deceased person), the audience and the author of the ritual.[295] Of course, the burial ritual was not created in the way a novel is, but analysing the burial ritual in terms of didactic relations (between 'author' and public), relations of identification (between public and main character, or even between author and main character) or various rhetorical strategies could be rewarding in understanding why the ritual was performed in that specific way, in that location with those objects in that type of grave in relation to that imaginary world (which is created or recreated at the same time) and with those people present.[296] Just like the novel, the burial rite is 'a powerful device for the internalization of social norms'.[297] This does not mean that those norms were fixed and not negotiable. The burial and the cemetery are arenas where the agency of the participants interacts with the norms of society. The burial ground is a place among others such as the farmyard where societal structures relate to the agency of persons.

The narratives and the rhetoric of the burial rites cannot exist independent of society, they have to be meaningful to the participants, like texts cannot exist independent of society. Gabrielle Spiegels concept of 'the social logic of the text' helps to contextualize the rhetoric of the burial ritual.[298] However, we found out that in order to follow this path we have to analyse in a critical way the suppositions and methods used in ordering the material culture of cemeteries in the way it has been done up till now.[299] On the other hand, in order to avoid that interpretations on themes such as personhood, mourning, the self, the body etc. start to float above the evidence we need to create an intermediate level of analysis in between the data and the interpretations: the analysis of practices, more specifically the analysis of the variability in practices.

However, modern early medieval mortuary archaeology suffers from one important drawback: the analysis of practices and new promising perspectives and research themes require high-quality data. No matter how creative modern archaeologists are, I fear that these new perspectives suffer from a lack of empirical evidence of sufficient quality. Moreover we need different orderings of material culture than those offered by traditional typo-chronological research. One way out is to develop further the physical anthropological and scientific analyses of skeletal remains. One great advantage of this project is that we can use a large body of physical anthropological data on the persons buried in the Saint-Servatius complex.[300] The data created by this research are essential for further developing the early medieval burial analysis. However, I have to temper too great expectations. A lack of money meant that only basic analyses could be carried out, but we feel that this is the right order of doing things. After this first analysis, we are in a better position to define the objectives of such time-consuming and costly scientific analyses. The potential of the dataset is high. To do this it is necessary to reorder the data in order to answer as yet unperceived questions. We hope to organize our databases in such a way that we can rearrange the data at will.[301]

Moreover we found out that many cemetery publications in the best traditions of their time do not provide the evidence necessary for our analyses. Many publications for instance provide only a selection of grave plans or contain only scanty evidence on the re-opening of graves.[302]

As we will see, important lacunae in the analysis of early medieval continental mortuary practices were discovered (such as the in-depth analysis of grave constructions). We also asked questions about the methods used in the past (such as those about the underlying cultural and methodological assumptions of the generally accepted typo-chronological methods). In the course of the project we will elaborate on these lacunae, suppositions and methods. An ethnographic perspective favours the individual burial community as a context of research. The question is, however, are we ever going to detect meaningful patterns in burial rites on the basis of small datasets?[303] How can we relate the variability in cemeteries, grave constructions and rites of different communities to a possible norms of burial rites and identities? Do regional identities for all groups that inhabit an area exist in the early Middle Ages? How does the existence or absence of these identities relate to the names of *pagi* mentioned in the written sources? In the end, it boils down to asking questions about the relations between agents and structures. How can we identify structures on the basis of archaeological evidence alone, and do our groupings of material culture relate to such structures? The same questions can be asked about settlements and the variability they exhibit. One type of settlement that interests us is the early medieval central place.

Perspectives on early medieval central places[304]

It has been said that Maastricht was one of the northernmost Merovingian centres. Was it a town? The answer depends on what one thinks a town is. I will avoid the discussion on the definition of a 'town' and 'urban continuity' of late Roman centres into the Middle Ages, however interesting these discussions may be.[305] In the eyes of contemporaries in the early Middle Ages, Maastricht was an important place for various reasons. The question asked by the Russian poet Joseph Brodsky – 'What would / an ancient Roman, had he risen now, recognize?[306] – would probably have been answered in a different way by various people in Maastricht living in different centuries, as well as by various people in Maastricht living at the same time.

We start with a simple question: what did Maastricht look like in the centuries subsequent to 300 AD? We do not really know, but that is not our major problem here. The first problem we have is describing what Maastricht is. 'Maastricht' is in the first place a name for 'something' to those who used it or wrote it down.[307] It is obvious that for different users or writers 'Maastricht' could have meant different 'things'. Moreover various forms of 'Maastricht' and its qualifications need not to be related to fixed material forms. The first time 'Maastricht' is mentioned is in the writings of Gregory of Tours discussed below. Maastricht, or Tricht is in fact a river crossing, in this case a crossing of the river Meuse. It may have had this 'name' referring to a crossing already in Roman times, maybe it was not yet a name just a noun: 'river crossing'. By

(278) Barth 1992, 23. (279) For comments on the ethnic perspective in early medieval burial archaeology see among others Brather 2004; Theuws 2009. (280) Farnoux 1995. How can we establish where the Lex Salica was effective at a given moment in time? (281) See e.g. Barth 1992. (282) Barth 1992, 22. (283) Theuws 2000a, 8-11. (284) Huntington/Metcalf 19802. (285) Stoodley 1999. (286) Halsall 1995. (287) Bazelmans 2002; Fowler 2004; Theuws 2013. (288) Williams 2003. (289) For a overview of developments in burial analysis, see Williams 2005. (290) Theuws 2000a. (291) Panhuysen (R.) 1999; Theuws 2000a; Panhuysen (R.) 2005, 282-283. (292) Bazelmans 1999. (293) Kopytoff 1988; Theuws 2004; Kars 2011. (294) See e.g. the analysis of pottery by Miller 1985. Theuws/Van Haperen 2012, 166-175. (295) Theuws 2009. (296) Theuws 2008. (297 Culler 20002, 92. (298) Spiegel 1997, 3-28. (299) See literature cited in note 242 and Williams 2005; see Kars 2005; 2011, 2012 (2014) and this volume. (300) Part of it has already been subject to study: Panhuysen (R.) 2005. (301) See chapter 4. (302) Van Haperen 2010. (303) Dickinson 2002, 77. (304) A previous discussion of this aspect regarding Maastricht can be found in Theuws 2001a, 2004, 2005a and 2005b, 2007a. (305) See Wickham 2005 for an argument how difficult it actually is to avoid this discussion. I, however, should only like to avoid it now. (306) Joseph Brodsky *So Forth*, 1996. (307) Panhuysen 1996, 76-78. See for the early medieval names 'Maastricht' Van Ommeren 1991.

Merovingian times it was certainly more than just a river crossing. But what did contemporary writers refer to when they mentioned 'Traiectum'?

The use of conceptual pairs such as 'town and countryside or hinterland' or 'centre and periphery' suggest that a centre like Maastricht can be distinguished from its surroundings. If Maastricht is a central place, what is it the centre of? What is 'countryside' and how can we distinguish it from the 'centre'? If in the seventh century one were to walk from the centre of the centre to the centre of the uninhabited forests around Maastricht, at what point would one have the idea that one has left the central place? Do the potters in the southern part of present-day Wyck belong to the centre or not? Is the Boschstraatkwartier settlement to the north part of the centre or not? I suspect that no clear distinctions can be made between centre and hinterland in the Merovingian and Carolingian landscape of the middle Meuse valley. I also suspect that there is no clear distinction between town dwellers and countryside dwellers in that period in the middle Meuse valley in the immediate surroundings of Maastricht or of the other centres. Archaeologists have great difficulty in identifying 'aristocratic settlements' in northern Gaul other than late Roman towns or castra before the advent of Carolingian palatiae. The countryside is a sea of rural peasant settlements. Where were the residences of aristocrats and how did they look like?[308]

How fixed were people's lives in spatial terms? The lives of aristocrats do not seem to be very spatially fixed: it is often not possible to pinpoint an aristocratic group to a single region.[309] Aristocrats related to elements of Maastricht might also be related to elements elsewhere which makes it difficult to see them as 'from Maastricht'. Complex social relations and spatial pluriformity blur the relations between 'town' and 'countryside'. People who colonize an area may maintain intensive relations with the region of origin (where their family is?), and there are strong indications from the archaeological evidence of settlements in the *pagus* Texandria in the north, that even remote rural dwellers of the late seventh century had long-distance contacts or came from afar.[310] Peasant mobility too was probably more intense than we think. They might have had a more complex 'sense of belonging' than the opposition between town and countryside allows us to establish.[311] It may have been built up of several elements that were still loosely connected to each other each element having its own identities. It could be useful to consider an early medieval centre like Maastricht as an onion: an identifiable object with many layers but no real core. These layers need not necessarily be exclusively geographical and geometrical (and measured in terms of distance); they might be social as well as religious. The circles might overlap with those of other centres. Centres in Merovingian and Carolingian times might not have had strictly delineated territories like Roman towns had. Maastricht and its surroundings thus might rather be compared to an onion than to a peach. The structure of such a centre might also be responsible for a phenomenon we observed before: the spatial instability of part of the urban fabric. Maastricht might be a 'wandering town' like Utrecht was, Gent, Namur or London.[312] We know about 'wandering settlements' but the idea that early medieval towns on the continent could wander too should not surprise us anymore.[313] We have to include it in our conceptualisation of early urban processes. Churches however seem to be stable elements and the churches may have played a primordial role in the fixing of the urban fabric through time.[314] So early medieval 'towns' may not have been as central as we used to think and might neither be as stable as we thought. Maastricht seems to be an excellent case to study these aspects of early urbanisation. These aspects thus include among others: the 'town' as an undefinable phenomenon, the 'town' that merges with its surroundings, the 'town' that moves in the landscape, the 'town' as a conglomerate of elements rather than an integrated whole and the 'town' not populated by in a legal sense 'townsmen', but separate groups that depend on different lords.

A central question is: what caused the revival of the Meuse valley towns in early medieval times.[315] In the older literature, their revival was ascribed to the emergence of a long-distance river system of exchange; now, however, greater emphasis is placed on regional economic vitality. This debate closely resembles the debates on the revival of towns on important rivers, such as those along the river Po in northern Italy.[316] The best models of the revival and/or emergence of 'towns' are probably those that integrate river-based exchange networks, rural transformation and the development of religious institutions. A regional project, such as this one, combined with an analysis of river-based settlement networks might produce just such models.

Early medieval centres, as I argued elsewhere, might be centres not only in a spatial sense, but centres because they play a central role in the 'whole transactional order' whatever their physical appearance.[317] This is not the same as saying that they are commercial centres. Maastricht is central because it is a place where the articulation of gift exchange and commodity exchange was linked to the keeping of inalienable possessions at a level above the individual group.[318] The name 'Maastricht' may thus stand for a non-physical phenomenon that is difficult to describe, difficult to delineate and difficult to define. Defined in this way it is even more difficult to translate 'centrality' into geographical terms. If we speak of 'Maastricht' in the context of our programme, we use the same name to indicate different phenomena: a modern town, a high medieval town with its judicial connotations and an early medieval centre, which is difficult to describe. The same name tempts us to overlay the past with modern models of centrality and towns. We must keep that in mind when we use such words as town, centre and countryside.

One aspect of the 'functioning' of Maastricht is its particular material presence and layout. We have to ask questions regarding the materiality of an early medieval centre. Places like Dorestad have often been called wooden mushroom towns. In what ways do early medieval centres differ from each other, and what does this mean for understanding their role in constituting society? The presence of stone churches gives a place a sense of eternal permanence, although we have to accept that early medieval centres were still 'on the move'. We have to ask then who was building in stone, when and in what places? We can ask the same questions while analysing the burial ritual; the use of stone and wood may be an element of wealth, but it certainly had these imaginary connotations. We have to ask questions about the layout of the place in relation to ideas about the norms and values, and how the ordering of elements (houses, churches, open areas, cemeteries, streets, etc.) plays a role in the 'internalization of social norms'. In relation to this, we also have to ask questions about the appropriation of past space. Early medieval Maastricht did not develop on a *tabula rasa*. Each generation had to deal with the heritage of the past and reflect and act upon it. We have to ask questions about the nature of the exchange system (relating to such diverse goods as grain and the arch of Einhard) and about the production of goods if we define a place on the basis of its place in the whole transactional order. Unfortunately, in the case of Maastricht we will have to go a long way before we have a proper understanding of its 'urban' fabric. As I indicated earlier, we started the project with a simple question: how did Maastricht develop in the centuries subsequent to 300 AD? When answering this question, we will keep the perspectives just outlined in the backs of our minds.

(308) See for instance the discoveries of 'magnate farms' and 'halls' and central places in Scandinavia (Poulsen/Sindbaek 2011; Grimm/Pesch 2011). (309) See for instance the distribution of property of persons such as Adalgisl Grimo, Plectrud or Adela of Pfalzel (Werner 1980, 1982). (310) See also Loveluck/Tys (2006) who contrast (unjustly I think) the coastal area (with wide-ranging contacts and possibilities to obtain precious objects at low levels of society) with inland rural communities (short-range contacts and few possibilities to obtain prestigious objects). (311) There is a vast new literature on the subject. Inspiring for me, in the sense of making me aware of the complexities of residence and belonging, were for example various chapters in Ingold 2000; Lovell 1998; Roseman 1998. (312) Theuws 2007; Bijsterveld/Theuws 2012.

(313) Theuws/Bijsterveld 2015. (314) By the eleventh century this process of stabilization seems to have resulted in the towns as we know them from the Central and High Middle Ages. It must be said that not all towns were wandering. Others were stable, yet others developed out of conglomerates of elements. Various forms of urbanization can now be identified. (315) This debate still continues with the contributions by Despy 1968, Devroey 1991, Verhulst 1999 and Devroey 1998 after Pirenne 1925 [1980] and Rousseau 1930 set the stage. (316) Balzaretti 1996, 218-219; Gelichi 2008. (317) Theuws 2004. (318) Theuws 2004, 132.

2 Archaeological observations and excavations in and around the Vrijthof square in Maastricht: a review

Over the years, excavations have been carried out and finds made in and around the Vrijthof Square in Maastricht, with varying results.[1] In terms of their use as historical sources, they can roughly be divided into the reports and observations from before 1950, which provided us with information that was interesting but often poorly documented and difficult to interpret, and the results of scientific research conducted during archaeological excavations and documented observations, mostly after 1950. Nevertheless, in this chapter I wish to trace as much material evidence as possible relating to the history of the Vrijthof and its environs.

The eleventh century

The oldest 'documented' investigations date back to the Early Middle Ages and relate exclusively to the Basilica of Saint-Servatius. According to Jocund, the eleventh-century author of the extensive Legend of Saint Servatius, people were searching for the skeletal remains of Saint Servatius and the treasure of the diocese of Tongres centuries before his time.[2] The core of Jocund's story may be true, but we do not know whether to believe his own version, in which Charlemagne plays the leading role, or a modern interpretation whereby Charles Martel or – much later – Charles of Lotharingia supposedly instigated the search. Whatever the truth may be, it is the case that, before the existing Basilica of Saint-Servatius was built at the beginning of the eleventh century, digging had taken place in a search for the remains of the holy bishop in the crypts and floors of churches that have since disappeared. Even earlier, before Bishop Monulphbuilt the first church in the mid-sixth century, other searches had supposedly been carried out in the old Roman burial ground on the road to Tongeren for the skeletal remains of Servatius, in order to raise them to the honour of the altars.[3]

From the *Miracula sancti Servatii* by the priest Jocund (c. 1088)

The *Miracula sancti Servatii*[4] by the priest Jocund begins with a story that describes how Charles (Martel?) defeated the Saracens:[5] 'After this they departed for Paris with their illustrious sovereign Charles, while they praised Him […] and above all the glorious bishop, the venerable Servatius, since on the day that the church celebrates his feast (= 13 May), the fall of the heathens was decided […] our Saviour, who decides all matters in such a wondrous way, […] has permitted the Saracens to invade our land, so that this glorious bishop whom we knew so little hitherto, would become known to us through the glory of such a great power.' [6] A certain Bishop Vulvegisus was then sent to Maastricht by the emperor to restore the dilapidated church.[7] This happened during the time that Hubert was Bishop of Maastricht (c. 705-727). Vulvegisus wanted, by the order of God, to raise Servatius from the earth:[8] 'Accompanied by the bishop of the city, the aforementioned Hubertus, […] he entered the crypt, which faced towards the east, situated as it were outside the basilica itself. […] For an angel had appeared to him and had indicated to him that, beneath the sanctuary, from the time of bishop Monulph who had built this church, a secret space could be found that was inaccessible and known to no-one. In this place he thought that we would find him […]. Towards midnight he gave the command to break through the west wall of the crypt, above which the entire edifice of the church rose up into the sky. When the wall had been penetrated, they discovered a place filled with sweet fragrance and glittering with precious objects like the starry sky. The two bishops and a number of priests stepped inside and – see – there they found all around, placed on low benches, all the treasures of the church of Tongeren and all its ornaments, while the relics of the saints were set out a step higher. In the centre stood the coffin of marble, in which, in the opinion of all, the honourable bishop […] rested. Thou knowest, however, how the blessed prelate Monulph had moved him from this place to a more elevated place, where he had set up for him a finely worked throne, which the pious envoy of the sovereign, Vulvegisus, had fully restored. They then entered a small room in which Servatius had been interred, removed the stone, and discovered nothing upon looking inside. […] Finally they took up that which they had found, and carried it forth, closed the tomb as previously by means of a new wall and, in front of the place where they had broken through the wall, they placed an altar as proof and as a sign to all of what they had done.' [9]

The seventeenth century

Stories of remarkable finds and intentional diggings have come down to us from later centuries, before archaeology had become an academic science. On 14 February 1702, during the construction of the grave for Dean Jan Adolf van Brederode van Bolswart[10] the sarcophagus of Dean Geldulfus, the eleventh-century builder of the church, was discovered at the centre of the church.[11] This is recorded in the protocols of the Chapter.[12] There is even a precise drawing of the lead grave cross that was found in the stone coffin. Jan Adolf was buried to the west of Geldulfus' grave, with a grave cross modelled on the eleventh-century find. In August 1903, on the basis of the eighteenth-century protocol text, the archivist P. Doppler (1861-1938)[13] initiated digging, during which the cross of Geldulfus was found.[14] In August 1988, Geldulfus' grave was opened for the third time. Hardly anything remained of the dean's bones, but the inscribed lead tablet that Doppler had left in 1903 was still there.[15]

The nineteenth century

An example of a sanctioned 'treasure hunt', by a certain Willem Heck, is known to us from the beginning of the nineteenth century. Heck was a slater who, while working on the towers of the Saint Servatius Basilica, had discovered indications of where to find the hidden Chapter treasure, which disappeared during the siege by Alessandro Farnese (1545-1592)[16] in 1579. In 1810 the church elders gave Heck permission to dig in the Catholic church, but he was forced to stop when new members of the church council objected because he was a Protestant. In 1811, Heck appealed to the French government in Paris and succeeded once again in obtaining permission. At the beginning of January 1813, he resumed his search under the watchful eye of an architect. However, he dug such large holes that there were fears for the stability of the building. Again, he was forced to stop the work. He tried once more in 1815, after the French occupation, this time by writing to the new Dutch King William I, but he was not granted permission again. Willem Heck invested a fortune in his enterprise, with

(1) Ubachs/Evers 2005, 566-567. (2) Ubachs/Evers 2005, 256. (3) Ubachs/Evers 2005, 358. (4) Published by Köpke under the title: *Translatio Sancti Servatii*. Translated into Dutch by De la Haye/Arentsen/Sassen 2006. (5) Jocundus, Translatio Sancti Servatii, 93-94 c. 2-4. (6) Dutch translation (De La Haye/Arentsen/Sassen 2006, 153-154 c.4): '*Hierna trokken zij met hun roemrijke vorst Karel naar Parijs, terwijl zij Hem […] prezen […] en vooral de glorievolle bisschop, de eerbiedwaardige Servatius, omdat op de dag dat de kerk zijn feest viert (= 13 mei) de ondergang der heidenen werd beslist. […] de Verlosser, die alles op zo wondere wijze beschikt, […] heeft toegestaan, dat de Saracenen binnendrongen in ons land, opdat deze glorierijke bisschop die wij tot hiertoe weinig kenden, door de heerlijkheid van een zo grote macht ons meer bekend zou worden.*' (7) *Jocundus, Translatio Sancti Servatii, 94, c. 5 : '[…] Venit ille Traiectum cum multis oblationibus, et ad verbum imperatoris munera preciosa patrono illi donavit. Post haec ipsam regiam, in qua reconditus erat, novis muris et tectis – erat enim nimia ex vetustate dilapsa – sicut decebat reparavit. Super ipsum beatissimum pontificem novum erexit thronum, auro et gemmis adornans eum preciosissimis, in tantum ut in oculis intrantium quasi solis speculum videretur lucidum. Cetera necessaria summo reedificavit studio; iusserat enim bonus imperator, ne quando cessaret, donec ad unguem omnia perduceret.*' (8) *Jocundus, Translatio Sancti Servatii, 94, c.7 : 'Pontifex vero […] assumpto secum eiusdem civitatis antistite, prefato beato videlicet Huberto […], criptam, que respiciebat ad orientem, positam quasi extra basilicam, intravit […]. Noverat per visionem angelicamque demonstrationem subtus oratorium quoddam secretarium in terra haberi a tempore beati Munulfi, qui illam construxerat ecclesiam, nulli cognitum, nulli pervium. In hoc revera, quem […] esse repositum putabat. Noctis vero circa medium fodi precepit murum contra occidentem positum, super quem imminebat tocius sanctuarii machina. Cum ergo apparuissent illud, locus apparuit omni suavitate redolens, omnique ornatu quasi celum stellis refulgens. Intrabant pontifices paucique sacerdotes, et ecce, quasi sedilia in circuitu, in quibus omnis thesaurus Tungrensis ecclesiae omnisque ornatus eius, in excelsiori gradu reliquiae sanctorum, omnium in medio de marmore preciosissimo sarcofagus, in quo quia ipse nobilis presul,[…] sit reconditus omnes estimabant. Sed pius antistes beatus Monulphus hoc de loco in superiorem, ut audistis, transtulerat eum, ubi thronum miri artifitii erexerat; quod ille fidelis nuntius regis tunc ad unguem reparaverat. […] Hinc accedentes ad loculum quo claudebatur, lapidem tulerunt, respicientesque in eum, nichil invenerunt.[…] Ablatis demum quae invenerunt, clauserunt sarcophagum, clauserunt secretarium sicut prius muro, ponentes ante ostium altare, ut signum sit omnium que modo geruntur et certissimum.*' (9) Dutch translation (De La Haye/Arentsen/Sassen 2006, 158 c. 7): '*Vergezeld van de bisschop van de stad, namelijk de voornoemde Hubertus, […] trad hij de crypte binnen, die op het oosten uitzag, gelegen als het ware buiten de eigenlijke basiliek. […]Want hem was een engel verschenen, die hem had gewezen hoe onder het priesterkoor, nog uit de tijd van bisschop Monulfus die deze kerk had gebouwd, een geheime ruimte bestond, ontoegankelijk en aan niemand bekend. In dit verblijf dacht hij hem, […], te vinden. Tegen middernacht beval hij de westelijke muur van de crypte door te breken, waarboven heel het bouwwerk van de kerk zich verhief. Toen deze muur doorgebroken was, ontdekten zij een plaats vol zoete geur en als de sterrenhemel schitterend van de kostbaarheden. De beide bisschoppen en enkele priesters traden naar binnen en zie, daar vonden zij rondom, op lage banken geplaatst, heel de schat van de kerk van Tongeren en al haar ornamenten, terwijl een trede hoger de relieken van de heiligen waren opgesteld. In het midden stond de zerk van kostbaar marmer, in welke volgens ieders mening de edele bisschop […] rustte. Gij weet echter, hoe de zalige kerkvorst Monulfus hem van deze plek iets hogerop had overgebracht, waar hij hem een schoon bewerkte troon had opgericht, die de vrome gezant van de vorst, Vulvegisus, geheel had hersteld. […] Zij gingen nu op naar het kleine vertrek, waarin Servatius had begraven gelegen, namen de steen weg, en toen zij naar binnen keken, vonden zij niets. […] Eindelijk namen zij op wat zij hadden gevonden, en droegen het heen, sloten de grafstede weer als vroeger door een nieuwe muur, en plaatsten vóór de plek, waar zij de muur hadden doorgebroken, een altaar als een bewijs en een teken aan allen van hetgeen zij hadden verricht.*' (10) Ubachs/Evers 2005, 94. (11) Ubachs/Evers 2005, 187. (12) From the Book of Protocols of the Chapter of Saint Servatius, kept in the RHCL at Maastricht, RAL, *Archief kapittel Sint-Servaas*, inv. no. 6 (1702). (13) Ubachs/Evers 2005, 152. (14) The cross has since been on display in the Treasury of the Basilica of Saint Servatius. (15) Panhuysen 1991, 454-455. (16) Ubachs/Evers 2005, 399 s.v. Parma.

no tangible result except for a satirical poem comprising 29 verses that was printed in 1814 in the *'opregten Antwerpschen Almanach'*. The old popular legend was still very much alive during the excavations between 1981 and 1989, to the extent that the excavators were regularly asked whether they were looking for the 'Twelve Silver Apostles', the legendary Saint Servatius treasure.[17]

FAMA CRESCIT EUNDO. Virg.
MASTREEGTER LOF-DICHT OP EINEN SCHAT-GRAUVER.

Dau druimden in seinen op en nagt
Dat aun de kant van de Huitwagt,
Of in de Kerk van Sint Servaus
Ein auwe Schat verborge waus :

Ach tou erme minsch !
Biste dan verkins ?

Zonder get te zekken aun zien vrouw
Leep heer nau de Kerkmeisters tou
Um permissie te verzeuken
Van de Schat te durven zeuken :

Ach tou erme minsch !
Biste dan verkins ?

Mair wie heer permissie hauw,
Waus heir wie eine duvel zou gauw,
Heit heir geliek vief knegts genommen
En met iver aun 't grauve begonnen :

Ach tou erme minsch !
Biste dan verkins ?

Wie heir drei maunden hauw gezeuk
Doe zaug er dat heir waus verneuk,
En zie doegen heum dreum versaaken,
En zien looker weer tou maaken :

Ach tou erme minsch !
Biste dan verkins ?

Etc., etc.

Discoveries after the demolition of the Sint-Servaasgasthuis (Hospital of Saint Servatius) in 1821

The first serious record concerning the discovery of ancient materials at and around the Vrijthof dates back to 1821, when remarkable finds were made in the subsoil of the old Sint-Servaasgasthuis in the south-east corner of the Vrijthof between Bredestraat and Platielstraat (cat. no. 1).[18] This involved a chance discovery during the demolition of the old buildings and subsequent new construction. The finds were so exceptional that, in two articles from 1825 and 1829, the Maastricht historian M. van Heylerhoff (1776-1854)[19] attempted to interpret them and place them in their historical context. Today, almost two hundred years later, he is still cited and discussed in the academic debate, as he was the first person to attempt, on the basis of archaeological evidence, to locate the presumed early-medieval power centre of Maastricht.[20]

In 1825 Van Heylerhoff wrote:

'Des restes d'anciens fossés remplis d'une épaisse couche de vase spongieuse, qu'on a découverts en construisant les caves et les fondations de plusieurs maisons, qui vers l'est, bornent la Place-d'Armes (=Vrijthof), confirment l'opinion des savans que nous venons de nommer. Un exemple récent nous en à été offert, lorsqu'en 1821 on a fait les excavations nécessaires à la construction du grand bâtiment élevé sur l'emplacement de l'ancien hôpital de Saint-Servais. On a trouvé, à 6 aunes 5 palmes (= 6,50 m) sous terre, une quantité considérable de vase, entre-mêlée de palissades et d'autres objets qui indiquent manifestement l'existence ancienne d'ouvrages défensifs en cet endroit.'[21]

In 1829 he wrote:

'Lorsqu'en 1821, après la démolition de cet hospice et de la chapelle y attenante, on creusa le sol pour jeter les fondemens du bâtiment actuel, on découvrit, à quelques palmes sous le sol de la sacristie de la chapelle, un mur angulaire d'un aspect très antique, et construit en grès à gros grains, dont on ne connaît aucune carrière aux environs; ce mur était haut de 5 ¾ aunes; l'épaisseur du tiers inférieur était une aune 4 palmes et celle des deux tiers supérieurs d'environ une aune. Les faces de cette dernière partie étaient très unies, tandis que celles de la partie inférieure offraient beaucoup d'inégalités; d'où l'on peut aisément conclure que la partie inférieure seule avait servi de fondement, et que le reste, formant les deux tiers du mur, dut se trouver autrefois au-dessus du sol. L'angle de ce mur se dirigeait exactement vers le sud-ouest; par conséquent un de ses pans faisait face à l'occident et l'autre au midi. Il était impossible de suivre bien loin ce mur dans l'une ou l'autre de ces directions, puisque la partie qui se dirigeait vers le nord passait sous la rue près de l'angle du secrétariat actuel des pauvres, et que la partie qui se prolongeait vers l'est était couverte par les bâtimens encore existans de l'hôpital. La longueur de la première partie, qu'on put seule découvrir, était d'environ cinq aunes, et celle de la seconde une aune et demie. Le mur était assis sur un fond d'argile très ferme, qui se continuait dans l'intérieur de l'angle aussi loin qu'on put creuser; mais il n'en était pas de même à l'extérieur. Le fond argileux ne se prolongeait vers le sud que d'environ une aune à partir du pied du mur; à cette distance, l'argile était remplacée par un terrain vaseux, qu'on sonda jusqu'à une profondeur de plus de sept aunes, sans rencontrer un fond d'une autre nature. Dans la première couche de cette terre vaseuse, on trouva une grande quantité d'objets très anciens : tels étaient des fragmens de statues, dont plusieurs de plus d'une aune de dimension, représentant des parties de vêtemens très bien drapés; des chapiteaux de colonnes assez bien conservés, le tout du même grès que le mur; des cruches de terre cuite et d'autres poteries de toute espèce, la plupart brisées; des fers à cheval et beaucoup d'éperons, en grande partie consumés par la rouille; une rame entière, et une grande quantité de palissades en bois de chêne, dont plusieurs encore avec leurs traverses. Tout fait présumer que le terrain vaseux provenait d'un fossé rempli d'eau, qui anciennement avait entouré le château, et qui dans la suite avait été comblé par les ruines du château même. On y découvrit en outre des parties de murs de hauteurs différentes et placées dans toutes sortes de directions, ainsi qu'un ouvrage en maçonnerie de forme ronde, construit en pierre de différente nature. On prit d'abord cet ouvrage pour un puits; mais sa dimension extraordinaire, qui était de plus de quatre aunes de diamètre, fit bientôt abandonner cette idée, et on supposa avec plus de fondement que c'était la partie inférieure d'une tour. Dans la même année, quelque temps avant la découverte dont nous venons de parler, ont fit quelques réparations à une maison derrière l'hôpital de St.-Servais, qui, très probablement en était autrefois une dépendance; en y creusant, on trouva, à deux aunes sous terre, des souterrains voûtés, ayant pavés en carrelage d'un assez bon goût et assez bien conservé.

La réunion de toutes ces circonstances prouve à l'évidence qu'un château-fort, entouré de palissades et d'un fossé, a existé sur ce terrain. Or, comme il est certain que la ville de Maestricht possédait autrefois un palais royal, que ce palais était situé près de l'église de St.-Servais, nous avons tout lieu de penser que ce sont les débris de palais qui ont été mis au jour par les découvertes dont nous venons de parler.'[22]

Van Heylerhoff believed that the remains of a 'castle' with a palisade and moat (i.e. the form of – medieval – fortification best known to him) had lain under the Sint-Servaasgasthuis. He linked this to the tradition that there had once been a royal palace in Maastricht, close to the Basilica of Saint-Servatius.[23] He knew no better than to interpret the old heavy walls as the legendary palace of the Merovingian and Carolingian rulers.[24] Van Heylerhoff's observations and his description are still of interest today, although it is difficult to locate and understand all the details (figs. 2.1 -2.4). A reconstruction: until 1821 the Sint-Servaasgasthuis stood in the south-east corner of the Vrijthof, far outside the east building line of the Vrijthof square. The hospital chapel was on the north side of the complex, with its north wall on the Platielstraat. The south side of the hospital adjoined the Bredestraat and was originally opposite the Sint-Jacobskapel of the Jacobsgasthuis.[25] The Sint-Servaasgasthuis was demolished completely in 1821 to make way for new building in the east section, behind the new building line – extending from the north – of the square. At the building plot, two heavy walls forming a corner were found at a shallow depth, one extending 5 m to the south from under the north side (Platielstraat), and a second wall, of which only 1.5 m was seen, at right angles to it at its southern end and extending to the east (disappearing into the remaining substructures of the hospital at the construction site). The walls were described as 'ancient walls' of an unidentified coarse-grain stone. The lower third was 1.40 m thick, narrowing to 1 m. The transition between the foundation, which was almost 2 m high, and the smoother and narrower work (visible work?) above was almost 4 m below street level and could have marked a former ground level. According to the person describing it, the wall was preserved to a height of almost 6 m (!), which is considerable. Van Heylerhoff describes the subsoil of the foundation as '*vaste leem*' (firm loam), which is familiar to modern Vrijthof archaeologists, but we do not know how deeply the layer began. The same applies to the mudlike black layers that he interpreted as an old ditch.[26] He wrote that the moist soil was at the short section near the south side, one metre away from the wall. If this had been a moat, it would have extended from east to west. The finds made in the upper layer of the wet ground give the impression of architectural sculptures from the Romanesque or Gothic period. Finds of iron horseshoes and spurs occur in Maastricht from the tenth century onwards; the description of quantities of complete earthenware pots calls to mind the usual Maastricht collections of finds from late-medieval cesspits from the eleventh century onwards, rather than contexts from the Early Middle Ages. The other walls and the round structure four metres in diameter (probably a cesspit) appear to have been found in shallow ground layers and should probably be attributed to the late-medieval phases in the construction of the hospital. It is highly possible that there are still parts of the same building in the remaining nineteenth-century substructures of the existing premises or in the immediate vicinity – below street level. The description of the discoveries calls to mind an older phase of the hospital [27], but a 'stone house' or fortified tower house is also a possibility. The wall extending northward means that, in any case, the Platielstraat was considerably narrower than it is today, and was possibly separated only by a narrow alley from the presumed '*Schönecken*' stone house on the north side of the street.[28]

(17) Flament 1884, 1006-1008; Blonden 1933; Koreman 1969, 53-56; De La Haye 1985a, 173-175; De La Haye 1985b, 175-176; Ubachs/Evers 2005, 34 s.v. apostelen. (18) The Sint-Servaasgasthuis is first mentioned in 1171, but is probably much older. It was located inside the immunity area of Saint Servatius (Ubachs/Evers 2005, 477). (19) Ubachs/Evers 2005, 226-227. (20) Hardenberg 1962, 33-36; Panhuysen/Leupen 1990, 441, 446; Hulst 1994, 17; Theuws 2005b, 94-95, 108; Jenniskens 2005, 8-9. (21) Van Heylerhoff 1825, 110. (22) Van Heylerhoff 1829, 107-109. (23) Ubachs/Evers 2005, 395-396 s.v. palts. (24) Panhuysen/Leupen 1990, 441, 446. (25) Founded by the Chapter of Saint Servatius, the chapel was demolished in 1803 (Ubachs/Evers 2005, 250 s.v. 'Jacobsgasthuis' and 'Jacobskapel'). (26) In his article of 1825 (Van Heylerhoff, 1825, 110), he uses this phenomenon as an argument in support of the existence of defensive enclosures surrounding the city older than that of 1229 and interprets it as part of a westerly moat that supposedly extended from south to north (see also: Hardenberg 1962, 34. Cf. Theuws 2005b, 94). The theory was recently revived (Wetzels 2006, 192-194). (27) Hulst 1994, 17. (28) See the discussions on the 'Schonecghen' stone house on the other side of Platielstraat in the publication by Jenniskens (2005, 10) that occurs in the archives between 1309 and 1414 but is probably much older.

Fig. 2.1
Plan of Maastricht by the French military engineer Larcher d'Aubancourt (1748). Detail of the Vrijthof area with coloured overlays for the building of the Spanish Government (green), Hospital of Saint Servatius (red) and St. Jacob's Chapel (blue) (after HCL Maastricht, GAM LGOG 87).

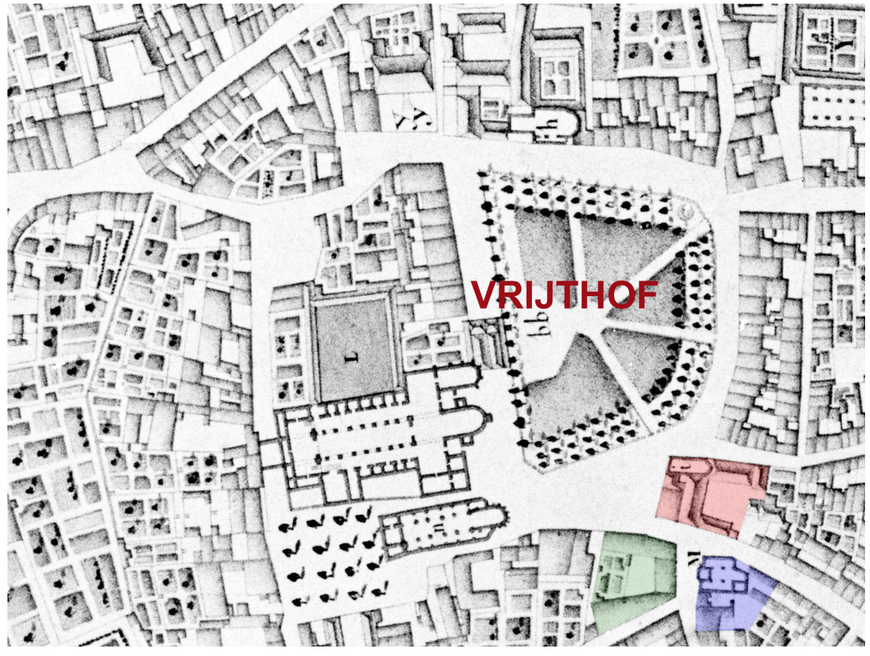


Fig. 2.4
Cadastral situation of the south-eastern corner of the Vrijthof after the demolition in 1821 of the Hospital of Saint Servatius (1830) with the outlines of the former hospital (red) and the existing buildings of the Spanish Government (green).



Fig. 2.2
Buildings in the south east corner of the Vrijthof: building of the Spanish Government (right), Hospital of Saint Servatius (left) and St. Jacob's Chapel (centre) after the original by Valentin Klotz (1671) (HCL Maastricht, GAM LGOG 42).

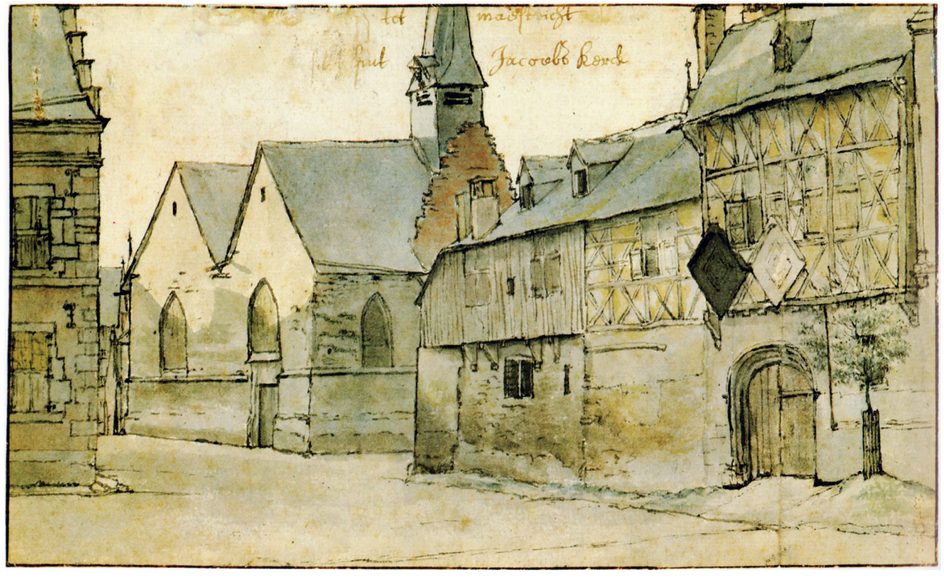


Fig. 2.3
South-easterly corner of the Vrijthof by Valentin Klotz (1671), showing the eastern row of buildings at the square with the protruding Hospital of Saint Servatius at the very right (HCL Maastricht, GAM LGOG 44).



Observations in 1920 at the corner of the Vrijthof next to the property called '*Spaans Gouvernement*'.

The demolition of the medieval Sint-Servaasgasthuis in the nineteenth century was not an isolated event. In the eighteenth and nineteenth centuries, most of the buildings at the monumental Vrijthof were replaced by new ones. Where necessary, building lines were straightened.[29] On the north side was the old chapel of the White Ladies' Convent (*Witte-Vrouwenklooster*)[30], replaced in 1804 by the neoclassical city palace by P.F. de Ceuleneer (1743-1816). At the time of the Belgian Revolution it was the residence of General Baron B.J.C. Dibbets (1782-1839).[31] Since then it has been known as the '*Generaalshuis*' (General's House) and is now the entrance to the Vrijthof Theatre. There were occasional new building developments into the first half of the twentieth century and thereafter, along the south side, the north side and in the north-west corner of the square. And yet, as far as we know, all this building activity rarely gave rise to commotion due to archaeological discoveries.[32] There was one exception, namely when the old buildings next to the 'Spaans Gouvernement' at the corner of the Vrijthof, Sint Jacobstraat and Papenstraat were demolished in 1920. This caused the archivist W. Goossens (1869-1933)[33] to pay regular visits to the construction site and make notes in his journals concerning the discovery of heavy walls and medieval pottery sherds (cat. no. 11).[34] The find was made no more than a few tens of metres away from the finds of 1821 described by Van Heylerhoff.

On Friday 16 July 1920, Goossens writes: *'Noticed at the Spaansch Gouvernement that there is a layer of grey clay 4m below the level of the Vrijthof. Mr (W.) Sprenger had found small shells there. Horns and swine's teeth also found at the site. There were no Roman vestiges.*

On Monday 30 August: *'Seen on the corner of Vrijthof/St Jacobstr./Papenstr. Here, where the new bank is to be built, very heavy old foundations deep in the ground* (fig. 2.5). *The base of the foundations is more than 5 m below street level. It rests on the black, marshy, foul-smelling ground that rests on the layer of grey clay. The foundations seemed to me to be more than a metre wide. They consisted of blocks of coal-sandstone with a great deal of mortar comprising mainly yellow sand and not much lime. The mortar was therefore loose and not strong. The height of the foundation seemed to be 80 to 90 cm. There was no trace of the wall that it had supported. On the Vrijthof side there was a very old foundation that ran inside the foundation of the demolished house. It was 1.20 m thick on the south side and had a smooth coating of loam. It was not particularly deep, but its base could have been approximately 2.5 m below street level. It was still approximately 1 metre high. The supervisor promised that he would draw in the foundations on the site plan. The foundations would be taken into account when further trenches were dug.'*

On Saturday 18 September: '*On arriving at the construction site of the former Spaansch Gouvernement, I observed that the heavy foundation wall that ran from the Papenstraat to the Jacobstraat did not extend any further, that a heavy wall of coal-sandstone and yellow mortar also extended along the Jacobstraat and had mainly served as a foundation for the external wall along Jacobstraat, and that a heavy foundation of the same material continued in the direction of the Vrijthof, approximately in the centre of the façade facing the Vrijthof. I also observed that the layer of grey clay became higher to the south-east towards the Sint Jacobstraat* (fig. 2.6).'

On Friday 24 September: '*Visited the Spaansch Gouvernement site again. At the corner [X] of Vrijthof/Jacobstraat, the digging went surprisingly deep because they had not yet reached solid ground. They had penetrated a grey clay layer as far as a type of grey clay that seemed to have blended precisely at that spot with iron oxide and was quite moist. Under the grey clay, which was at a depth of some 5 m, there was a layer of blackish soil, then the soil with rust-coloured patches.* (fig. 2.7).'

On Tuesday 28 September: '*Sp. Gouv.: coal-sandstone wall along the pavement of Jacobstraat.*'

And finally, on Friday 15 October: '*I paid another visit to the so-called Spaansch Gouvernement. Along the pavement of the S. Jacobstraat there had been a heavy foundation wall of coal-sandstone with yellow sandy mortar. It had been almost completely removed, approx. 80 cm wide and 3-4 m deep* (fig. 2.8). *I also saw the grey clay again, at a depth of almost 5 m, as found all over the site but not in such neat layers. The supervisor showed me the sherds of a fine drinking mug in Siegburg grey-white pottery with a relief depicting scenes from the story of Samson. One of the scenes showed how Samson (who lost his strength because Delilah cut off his hair) was deceived by Delilah, with the inscription DALILA / BEDREGT / SAMSVM [Delilah / deceives / Samson]. The other, of which only half remains, showed Samson carrying away the gates of a city on his shoulders.*'

In the centre of the construction pit, at a depth of 5 m (!), Goossens saw a wall, 80-90 cm thick, that ran diagonally to the south-west, consisting of coal-sandstone rubble-work and yellowish lime mortar. There were also walls of the same material along the building lines of the Vrijthof on the north side of the construction pit and along the east side near St. Jacobstraat, where they had served as a foundation for the demolished houses. The first wall was 1.20 m wide and extended to a depth of 2.5 m. The second wall was 80-90 cm wide and extended one metre deeper. There was no connection between the walls, and Goossens did not attempt an interpretation.[35]

Fig. 2.5
Fragment from the Diary of W. Goossens (Monday 30 August 1920) in the collection of the HCL Maastricht).

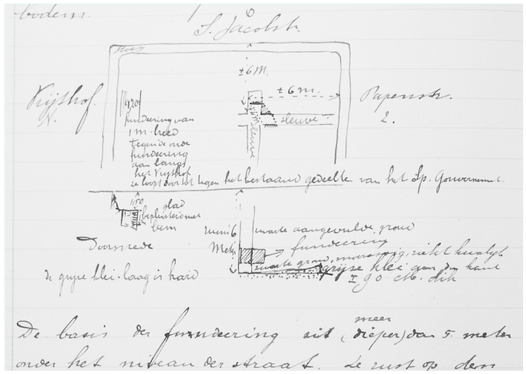


Fig. 2.6
Fragment from the Diary of W. Goossens (Saturday 18 September 1920).

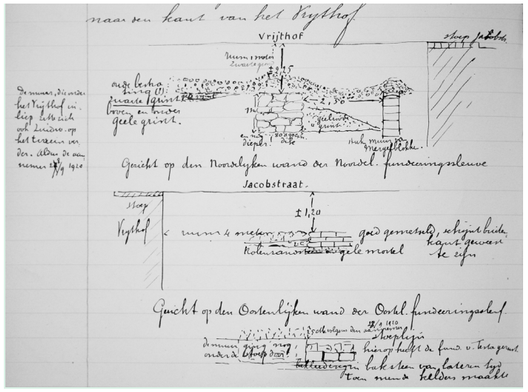


Fig. 2.7
Fragment from the Diary of W. Goossens (Friday 24 September).

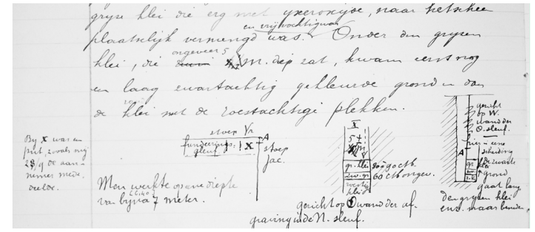
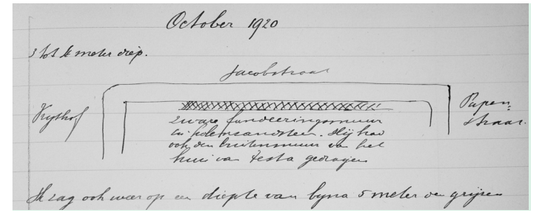


Fig. 2.8
Fragment from the Diary of W. Goossens (Friday 15 October 1920).



Chance discoveries before 1950: Roman graves, medieval pottery and walls

At the square itself, occasional observations were made of sections of the wall from the paupers' cemetery on the east side of the church and of walls of the Sint-Servaasgasthuis in the south-east corner of the square.

We know of a number of nineteenth-century reports of incidental pottery finds in the wider environs of the Vrijthof. If they were of Roman origin, these were mostly attributed to cremation graves. Such finds were made mostly in the Servaasklooster and De Kommel streets, to the west of the Saint-Servatius Basilica. Given their topographical context, it is reasonable to assume that there must have been more burials along the Roman road to Tongeren that runs north past the church.[36] It is possible that this was the location of one of the main cemeteries belonging to the Roman settlement. In 1926, in the cellars of what was then a bank at Servaasklooster 8, a complete Roman tile grave was

(29) Ubachs/Evers 2005, 451 s.v. 'rooilijn'. (30) Ubachs/Evers 2005, 586-587 s.v. 'Witte Vrouwen'. (31) Ubachs/Evers 2005, 144. (32) Interesting finds were made during the building of the new NMB bank (now ING) on the corner of the Vrijthof and Statenstraat, in 1974 (Boogard/Minis 1987, 7 [ill.]; Iterson 1992, 12; Dijkman 1993, 14-15; private collection of the contractor Knols). (33) Jamar 1981; Ubachs/Evers 2005, 199-200. (34) Journals of W. Goossens, RHCL Maastricht, *RAL inv.nr. 16.0536, Archief Goossens*, Hs. 37, 503, 516, 520, 522. 16 July: *'Gezien bij het Spaansch Gouvernement, dat daar, 4 m onder het niveau van het Vrijthof eene laag grijze klei zit. De heer (W.) Sprenger had daarin schelpjes aangetroffen. Ook waren ter plaatse horens en zwijnstanden gevonden. Vestigia romana waren er niet.'* / 30 August: *Gezien op de hoek Vrijthof-S. Jacobstr-Papenstr. Alhier, waar het nieuwe bankgebouw gaat verrijzen, een zeer zware oude fundeering diep in den bodem* (fig. 2.5). *De basis der fundeering zit meer dan 5 meter onder het niveau der straat. Ze rust op den zwarten moerassigen kwalijk riekenden grond, die op de laag grijze klei ligt. De fundeering leek mij meer dan een meter breed te zijn. Ze bestond uit brokken kolenzandsteen met veel mortel die hoofdzakelijk uit gelen zand of savel met weinig kalk bestond. Die mortel was dan ook vrij los en niet sterk. De hoogte der fundeering bedroeg naar mij docht 80 à 90 cm. Het opgaand muurwerk, dat ze gedragen had was helemaal verdwenen. Aan de kant van het Vrijthof was nog een zeer oude fundeering die van binnen langs de oude fundeering van het afgebroken huis liep. Ze was 1m20 dik en aan de zuidzijde met leem glad bepleisterd. Ze zat niet bijzonder diep, haar basis kan ongeveer 2,50 onder het straatniveau geweest zijn. Ze was nog circa 1 meter hoog. De opzichter heeft mij beloofd, dat hij de gevonden fundeeringen op het situatieplan zou aanteekenen. Bij het verder graven der sleuven zou men op de fundeering acht geven'.* / 18 September: *'Toen ik langs het bouwterrein kwam van het voormalig Spaansch Gouvernement, constateerde ik, dat de zware fundeeringsmuur die van de Papenstraat naar de Jacobstraat liep niet verder meer doorging, dat langs de Jacobstraat ook een zware muur in kolenzandsteen en geelen mortel liep, die grootendeels tot fundeering van den buitengevel langs de Jacobstr. had gediend en dat in de richting van het Vrijthof eene zware fundeering uit hetzelfde materiaal zich voortzette, ongeveer in het midden van den gevel naar den kant van het Vrijthof. Ik zag ook dat aan den Z.O. kant de grijze klei weer opliep (hooger lag) naar den kant der Sint Jacobstraat* (fig. 2.6).' / 24 September: *'Weer het Spaansch Gouvernement bezocht. In den hoek [X] Vrijthof-Jacobstraat ging men verbazend diep, omdat men nog geen vasten grond had. Men was door den grijzen kleilaag heen gedrongen tot op eene soort grijze klei die erg met ijzeroxyde, naar het scheen plaatselijk vermengd was en vrij vochtig was. Onder den grijzen klei, die ongeveer 5 m diep zat, kwam eerst nog een laag zwartachtig gekleurde grond en dan de klei met de roestachtige plekken* (fig. 2.7).' / 28 September: *'Sp. Gouv.: muur in kolenzandsteen langs den stoep der Jacobstraat.'* / 15 October: *'Ik bezocht nog eens de bouwplaats van het zg. Spaansch Gouvernement. Langs de stoep der S. Jacobstraat had eene zware fundeeringsmuur in kolenzandsteen met geelen zanderigen mortel gezeten. Hij was bijna geheel uitgebroken, ± 80 cm breed en 3 tot 4 meter diep* (fig 2.8).*'Ik zag ook weer op een diepte van bijna 5 meter den grijzen klei, dien men overal op het terrein, doch niet mooi gelaagd heeft aangetroffen. De opzichter toonde mij de scherven van een mooie drinkkroes in Siegburghs grijswit aardewerk. In reliëf waren daarop tafereelen uit de geschiedenis van Samson aangebracht. Een stelde voor hoe Samson (zijn kracht verloor doordat Dalila zijn haren knipte) door Dalila bedrogen werd, met onderschrift: DALILA / BEDREGT / SAMSVM. De andere, die voor de helft weg was, hoe Samson de poorten eener stad op zijn schouders wegdroeg.'* (35) N.N. 1920, 13, 78. (36) Panhuysen 1996, 65-66.

discovered (cat. no. 12). Merovingian pottery, found in 1931 when the old Music School between Lantaarnstraat and Sint Jacobstraat was demolished, has been interpreted as an indication of an early-medieval cemetery[37] but is more likely to come from a settlement context (cat. no. 14).[38] Dispersed finds of late-medieval pottery confirm what can be deduced from the oldest maps of the city, namely that there was urban occupation everywhere here. Rich glass fragments from the twelfth and thirteenth centuries, collected in 1955 during alterations to the former Staargebouw[39] at the Henric van Veldekeplein, tell us something about the standard of living enjoyed by the canons who lived there (cat. no. 20).[40]

Excavations by the National Service for Archaeological Heritage (ROB), 1950-1974

After 1950, the state of knowledge and the way in which archaeological research was carried out changed radically. In the first decades of the twentieth century, early Christian gravestones from the fifth and sixth centuries were discovered in the masonry of the westwork of the Basilica of Saint-Servatius.[41] In 1919, Goossens uncovered a grave with Frankish grave goods in the middle of the basilica (cat. no. 10).[42] This strengthened the conviction that it must be possible to demonstrate continuity of habitation in Maastricht from the first Roman settlement down to the present day, and that it must be possible to carry out archaeological research in Maastricht to find the earliest evidence of Christianity in the Netherlands.

Saint-Servatius Basilica excavation, Pandhof or Cloister garden (1953-1954)[43]

When, at the beginning of the 1950s, plans were announced to refurbish the cloister garden of the Saint Servatius Basilica, the newly formed National Service for Archaeological Heritage (ROB, *Rijksdienst voor het Oudheidkundig Bodemonderzoek*) based at Amersfoort was greatly interested in carrying out a thorough archaeological investigation of the site before the work commenced. Since 1947, under the leadership of director P. Glazema, the ROB had excavated a large number of churches that had been destroyed in the war, many of them in Limburg.[44] According to written sources – Gregory of Tours – it was likely that, under the Saint-Servatius Basilica, a sixth-century church – the *magnum templum* of Bishop Monulph – could be found. Other members of the ROB apart from Glazema were also interested in early-medieval (church) archaeology: J. Renaud, H. Halbertsma and J. Ypey. It was to be an excavation 'in the city' of what was, by Dutch standards, a unique phenomenon. Unfortunately, the organisation of the ROB did not allow for an archaeologist to be permanently present at the excavation. In fact, the work was managed by the field technicians at the site and the actual digging work was carried out by workers seconded free of charge by the municipal social-service department. According to the archaeological practice of the time, the cloister garden was divided into a number of rectangular trenches that were excavated and documented layer by layer. The excavation was carried out in 1953 and 1954, but with insufficient scientific support.[45] Nevertheless, the results were impressive: exquisite finds and the discovery of surprising remains of former buildings. The evidence unearthed of early Christianity and of continuity during the transition from the late Roman to early medieval period was convincing. In 1956, half of the contents of an attractive illustrated book about Merovingian objects in the Netherlands and the related laboratory work were devoted to the findings from the Pandhof in Maastricht.[46]

The Vrijthof excavation, underground car park (1969-1970)[47]

More than fifteen years later, when the ROB had already carried out many archaeological investigations into Roman Maastricht in the Stokstraat district near the Maas, the plans for an underground car park under the Vrijthof gained momentum. Luckily, the ROB, although overburdened, could not possibly ignore this threat to the city's archaeological record, which proved to be a new opportunity to investigate the transition from the Roman era to the Early Middle Ages. Unfortunately, due to local political and strategic considerations, it was not possible to devise an ideal excavation programme and the approach chosen in practice subsequently proved to be less than satisfactory (cat. no. 24).[48] In the meantime, the academic science of archaeology had advanced, and from the 1960s onwards there was increasing national and international interest in urban archaeology, which involved studying all the phases in the development of a city.[49] The research at the Vrijthof had not yet reached this stage, and the main aims were limited to the Roman and early medieval periods.[50] The central questions were tracing the extent of the cemetery known from the Pandhof excavation, the course of the Roman road from Tongeren, and the problem of continuity of occupation.[51] Day-to-day supervision by the responsible archaeologists was not possible for this excavation either. The work was therefore led by field technicians from the ROB.[52] The fieldworkers were once again provided by the local social-service department.[53] The excavation and documentation methods yielded better information than was the case with the Pandhof excavation. High-profile finds were not made until the final phase of the research. These included the development along the Roman road,[54] a Roman cellar with very fine bronze sculptures[55] and an early medieval cemetery with rich grave goods.[56] After the excavation, a temporary exhibition was held in the Bonnefanten Museum, but a final report has never been published.[57]

Municipal Archaeological Heritage: Archaeological research by the local authorities (1979-2004)

In 1979 the local authorities began archaeological research, and shortly after the municipal archaeological service was granted statutory authorisation to excavate.[58] From now on, the guiding principle was thematic 'urban' archaeology rather than incidental excavations.[59] One of the focal points of the Maastricht research was to gain knowledge of the settlement in the first millennium, in particular the transition from Roman habitation to early medieval settlement. This also involved the area of the Saint-Servatius Basilica, an area that was likely to contain traces of old and new infrastructure, Roman and medieval burials, church and monastic buildings, and possibly medieval settlement. Moreover, this site was likely to contain indications of the oldest fortifications of the city and of the enclosed monastery immunity.

The excavation at Servaasklooster 18 (1980)[60]

The first opportunity for the new town archaeologist to carry out an interesting archaeological investigation came quite unexpectedly, as the result of the demolition and redevelopment of the site of the Sisters of Charity of St. Charles Borromeo (*Zusters 'Onder de Bogen'*) at Servaasklooster, to the west of the Basilica of Saint Servatius (cat. no. 30). In January 1980, arrangements were made for the archaeological supervision of the work. The approach was still not a very professional one; the town archaeologist was still insufficiently equipped and there was not enough time to make the necessary preparations. With the assistance of field technician Arnold de Haan of the ROB, it was possible to dig for a total of five weeks in February, May and between the end of July and the beginning of August 1980, between the periods of demolition and groundwork by the building contractor. The starting point for the research was the conventional question as to the boundaries and extent of the known early medieval cemeteries of the Saint-Servatius complex. A surprising first find was made when the machine started to dig into the soil: a well-preserved biconical pot from a Merovingian grave. The grave must have been directly under the existing surface level. In total, more than fourteen burials were found during the archaeological field research. Two of these dated from the fourth century, one from the fifth century, and at least five from the late sixth and early seventh centuries. The remaining graves were probably also from the Merovingian period. The excavated section of this cemetery provided hardly any scope for conclusions, either about its relationship to the known cemeteries of the Saint-Servatius Abbey [Basilica?] or about its own structure. However, it would appear that the burials do not extend further west. Everywhere, the soil showed considerable reworking as a result of medieval and post-medieval building activity and recent demolition work. The top layer of the original landscape must have been removed as early as the Middle Ages, judging by the very shallow position of the graves on the south side of the site and the remains of monastic buildings there, just below the existing surface. From the discovery of Merovingian pottery finds further to the north, including recognisable grave goods, it was possible to deduce that originally there must have been graves on this side of the site too. The most notable find here was the discovery of a complete inhumation grave, pointing north to south, at a depth of 2 m below the current surface level (and three skulls from similar graves in a vertical section of a trench) in which no grave goods were found and that did not have a clear burial pit or other context. These graves also appeared to date from the Merovingian period, as did the deposit (or ditch fill) in which they had been dug.[61] Pottery fragments and a well from the Carolingian period are evidence that the site was inhabited in the eighth and ninth centuries. The old burial ground was no longer in use at that time. A very heavy 'double' wall construction, which could not have been built before the end of the ninth century, seems to follow the course of a possible ditch that had been filled in long before. The double wall, which ran almost parallel to the west facade of

(37) Panhuysen 1986, 135 no. VI-17. (38) Compare the finds from the excavation at Lantaarnstraat 5-7-9 in 1988 (Panhuysen/Dijkman/Boyens 1988). (39) Ubachs/Evers 2005, 500. (40) Ubachs/Evers 2005, 266 s.v. 'kapittel'. (41) Stone of *Amabeles* discovered in 1901 by Chaplain Rutten on a corner of the NW pillar of the narthex; stone of Saturninus found in 1901 in the wall at the bottom of the stairs to the towers during alterations to create access; stone of *Aluvvefa* discovered by J. Kalf in 1915 on the SW corner of the square block below the octagon that supports the pendentive dome in the westwork; stone of *Felegaridus* discovered in 1931 by Jhr. E. van Nispen on the corner to the right of the steps leading to the upper floor of the north annex against the westwork (left in situ). Lit.: Monchamp 1901; Waltzing 1903a; Waltzing 1903b; CIL XIII 3616, 3617; Flament 1915; Kalf 1915-1916; Goossens 1916; Goossens 1933; Boppert 1986, 64-96. (42) Goossens 1920, 64-65. (43) The Pandhof excavation will be studied and published in the context of the Saint Servatius Project. (44) Glazema 1948. (45) Local experts from the Bonnefanten Museum were closely involved in the excavation: the director Professor J. Timmers (1907-1996) and the archaeological curator J. Sprenger. (46) Glazema/Ypey [1956], ill. 44-92: apart from the Pandhof excavation, details are published here of the cemeteries of Rhenen and Alphen [N. Br.]). (47) The Vrijthof excavation is discussed only briefly here, insofar as is necessary to provide a total picture of the excavations at and around the Vrijthof. (48) See Chapter 3. (49) Heighway 1972; Van Es *et al.* 1982, 8-9, 72-76 (Maastricht). (50) Panhuysen 1985, 87-88. (51) Van Es *et al.* 1982, 73. (52) See Chapter 3. (53) The Vrijthof excavation was the beginning of a dark period of local 'treasure hunting' and illegal trading of archaeological objects from Maastricht, partly due to the hectic character of its final phase (all help was welcome), with many spectacular finds made at the end of the excavation (Panhuysen 2005, 114). (54) Panhuysen 1996, 50-51; Panhuysen 2005, 113. (55) Panhuysen 1996, 50 n. 161. (56) See various chapters elsewhere in this book. (57) Bloemers 1970b. (58) The author of this contribution was appointed town archaeologist by the Maastricht council with effect from 1 June 1979. Statutory authorisation to excavate was granted by the minister in December 1981 (Panhuysen 1984, 21-24; Panhuysen 1985; Panhuysen 2005, 114-119). (59) Panhuysen 1984, 25-28. (60) The Servaasklooster excavation is discussed only briefly, insofar as is necessary to give an overall picture of the questions addressed and the excavations at and around the Vrijthof. The results will be discussed elsewhere in the context of the Saint Servatius project. Until that work has been completed, please refer to the Research Master's thesis by Jantien Verduin (Verduin 2008). (61) Verduin (2008, 29 note 7) refers to the report by J. van der Plicht (University of Groningen) for the three ^{14}C-datings ($\sum$ =95%): 547-641 AD (individual 1, complete skeleton), 552-645 AD (individual 2), 667-775 AD (individual 3).

the Basilica of Saint-Servatius and was built as a defence, could possibly be explained in the context of the building activities by Giselbert between 922 and 939, described by Jocund in his *Miracula sancti Servatii*.[62]

The translation of the relevant passage is as follows:[63] c. 40: '[…] When the long-hoped-for time had come to honour and glorify Saint Servatius in a worthy manner, he built a new wall around the saint's monastery and the palace. Previously the city, after the bishop of Tongeren had come to that place, was entirely ruined; this wall was to be an impregnable defence for all time. But the spirit of man cannot comprehend what the power of God ordains. For that reason the duke, with great care, completed the work he had begun, not, in my opinion, for his own benefit, but because he was fearful of the other nobles, whom he was leading in the palace of the emperor with sage advice. For they were wealthy and ever to be feared, particularly within their own house. As we know, the enemy within is worse than the enemy outside. c. 41: Upon a day, however, that the duke was occupied with this building, Saint Servatius appeared to him in a vision and spoke to him in a gracious manner, and asked him why he had placed another foundation than the one he himself had laid. The duke recognized him from his resemblance to the gilded image in the church, and answered: "I have not seen or learned, Holiness, that others have been laid. I came here in your honour and began this work, and if it finds favour in your eyes, I shall complete it, more for you than for my own glory." The good father gave this strange and gracious answer to these humble words: "When, on account of the sins of the people, the Most High devastates and destroys the lofty towers and fortified cities, that which is created by God's right hand shall stand strong and solid for eternity." After these words were spoken he commanded that the work be stopped. The duke awoke, and after impassioned prayers of thanks he did as he was ordered and added no further stones. What the pious nobleman was intending to spend on the wall, he now used to embellish the church of the saint, wishing and desiring that the saint, mindful of his words, would keep his promise of salvation and benediction to the people. […]'[64]

According to this account, Duke Giselbert supposedly wished to construct a 'new' enclosure around the monastery (and the palace). The wall structure that was found was approximately 23 m to the west of the Romanesque westwork of the Basilica of Saint-Servatius and ran almost parallel to it with a slight deviation to the north-west. During the excavation it was possible to follow the course of the enclosure for a length of approximately 12 m. It consisted of two parallel (foundation) walls built from flint, boulders and coal-sandstone rubble and was cemented with whitish ochre-yellow lime mortar. Both walls were solid and up to 1.20 m thick. They stood as far as 1.60 m apart, with an infill of loam between them. The average width of the whole structure, within which two transverse walls were also found, was approximately 3.50 m – impressively strong, to be sure! On the west side of the wall, a slope descends with traces of a barrier of pointed wooden stakes, possibly one side of the moat that belonged to the enclosure walls. The wall extends downhill to the north, where it follows the original slope. In the south-east corner of the site, however, on a much higher level and just below the current surface level, the remains were found of a room and a narrow gateway on the side of the Servaasklooster street, the walls of which also consisted of coursed coal-sandstone rubble-work and ochre-yellow lime mortar. It is not possible that these walls were connected to the structure of the double wall. It must have been part of the first phase in the construction of the monastic buildings in the middle of the eleventh century, after the demolition of the abbey enclosure and the complete levelling of the site to the present-day surface level. Furthermore, the remains of the two demolished parallel walls were crossed by later, lighter walls and traces of buildings with many remains of panel walls made from framed building and lime plaster, which, due to their layout, orientation, building method and rich finds of pottery, can also be linked to the monastic building and deanery from the eleventh and twelfth centuries. The high feudal room of the deanery, above the barrel-vaulted ground floor in strong masonry of coursed and squared coal-sandstone rubble in small blocks, still exists and is part of the convent of the 'Zusters Onder de Bogen'.

(62) Leupen (1996, 88-91) suggests that the term *castrum*, which is used to denote Maastricht several times in the ninth century in the sources, relates to the enclosure of the Servatius abbey, and that the passage by Jocund refers to the same enclosure. If the double wall that was found is to be interpreted in this sense, it reinforces the theory of the *castrum* model of Theuws (2005b, 106-108), who precludes nothing with regard to the size and form of that kind of fortification. (63) *Jocundus, Translatio Sancti Servatii*, c. 40: *'[…] Videns ille tempus nunc opportunum, quo beatum Servatium – quod semper optabat, semper querebat – ad gloriam eius magnifice honoraret et honorifice magnificaret, circa eius monasterium imperatoris et palatium novum construxit murum, quia prior civitas, postquam intravit idem Tungrensium presul, ex toto corruit et periit, ut ipse sit murus inexpugnabilis et firmus nunc et semper omne et in evum. Sed intellegere non valet mens humana quod virtus operatur divina. Ideo dux iste quod cepit, in hoc studiosissime laboravit, laboravit utique, nec ut estimem sine salute sui, quia timebat et alios principes, quos ipse prudentia et consilio preibat imperatoris in palatio. Sunt divites in hoc seculo, sed numquam sine periculo, et maxime in domo sua. Graviores enim sunt, ut legitur, domestici quam hostes etiam extranei.'* > c. 41: *'In una autem dierum, quibus dux in hoc desudabat edificio, apparuit ei in visione beatus Servatius, et blande illum alloquens, cur aliud quam a se positum est fundamentum locaverit, diligenter quesevit. At ille agnito eo ex imagine, que deformata in auro erat in sanctuario, respondens ait: Aliud esse positum nec novi, domine, nec vidi. Pro devotione autem accessi, hoc opus coepi, et tuis si placet oculis, devotus perficiam ad tuam, pater sanctissime, gloriam magis quam ad nostram. Huius humilitatis ad verba pius pater et mirae mansuetudinis verba reddidit dicens : Quod dextra fundavit Altissimi, dilectissime fili, nisi peccatis populi agentibus, quod quandoque turres excelsas, urbes munitas deicit et destruit, ruat et pereat, in eternum stabit firmum et solidum. His dictis, iussit desistere ceptis. Ille vero evigilans, post gratiarum actiones multas et condignas, sicut iussus fuerat, fecit, nec unum quidem hinc addidit lapidem. Conversus autem, quod prius expenderat in murum ille dux benignissimus, modo tribuit ad ornandum huius beatissimi viri sanctuarium, id semper postulans, id semper adoptans, ne quando inmemor verborum sit ipse suorum, in quibus ibi habitantibus promiserat perpetuam consolationem et benedictionem. […]'* (64) Dutch translation (Haye/Arentsen/Sassen 2006, 192-193): c. 40: *'[…] Toen hij nu het geschikte, lang verhoopte ogenblik gekomen zag Sint Servaas op een waardige wijze te eren en te verheerlijken, bouwde hij om diens klooster en het paleis een nieuwe muur. Want voordien was de stad, nadat de bisschop van Tongeren daarheen was gekomen, volkomen vervallen; deze muur zou een onneembare bescherming voor nu en altijd blijven. Maar de geest van de mens kan niet bevroeden, wat Gods macht beschikt. Daarom voltooide de hertog met grote zorg hetgeen hij begonnen had, niet, mijns inziens, tot zijn eigen heil, maar omdat hij bevreesd was voor de andere edelen, die hij in het paleis van de keizer met wijze raad voorging. Want zij waren rijk en immer te vrezen, vooral in het eigen huis. Men weet immers, dat de vijand binnen de muren erger is dan die erbuiten.* > c. 41: *Op een dag echter, dat de hertog met dit bouwwerk bezig was, verscheen Sint Servatius hem in een visioen en sprak hem minzaam toe, en vroeg hem waarom hij een ander fundament plaatste dan dat hij zelf had gelegd. De hertog herkende hem aan de gelijkenis met het vergulde beeld dat in de kerk stond, en antwoordde: 'Ik heb niet gezien of vernomen, heer, dat er andere gelegd zijn. Te uwer ere kwam ik en begon ik dit werk, en als het in uw ogen genade vindt, zal ik het voltooien, meer voor uw dan voor mijn glorie.' Op deze nederige woorden gaf de goede vader dit wonderlijke minzame antwoord: 'Wanneer om de zonden van het volk de Allerhoogste de verheven torens en de versterkte steden verwoest en vernietigt, zal hetgeen Gods rechterhand stichtte, in eeuwigheid hecht en sterk blijven staan'. Na deze woorden gebood hij op te houden met het werk. De hertog ontwaakte, en na vurige dankgebeden deed hij zoals hem bevolen was en voegde geen enkele steen meer toe. Hetgeen de vrome edelman nog aan de muur had willen besteden, gebruikte hij nu om de kerk van de heilige te versieren, steeds wensend en verlangend, dat deze, zijn woorden indachtig, zijn belofte van heil en zegen aan de bevolking zou gestand blijven. […]'*

The Saint-Servatius excavation, Stiftskapel (1981-1982) and church (1985-1989)[65]

The first phase in the restoration of the Basilica of Saint-Servatius began in 1981, mainly involving the buildings of the cloister around the Pandhof. Archaeological research was not planned until the last moment, when it became clear that the medieval gravestones in the 'Stiftskapel' (Chapter Chapel) to the north of the transepts and to the east of the cloister would have to be moved. The small-scale research of the tombs below it led to the discovery of a heavy polygonal wall construction, which for some years was mistakenly thought to be part of a centralised construction in the manner of the Carolingian palace chapel in Aachen, only slightly smaller and possibly with a similar function (cat. no. 32).[66] Several years later, the results from the first diggings would form the basis for the approach to archaeological research in the church itself (1985-1989), during which a southerly counterpart of the polygon was found and both turned out to be part of an older main transept of the eleventh-century church (cat. no. 37). In addition, during the lengthy excavations that began in 1985, remains of an unknown early medieval church and its sixth-century predecessor were found, as well as a late-antique mausoleum and hundreds of graves and tombs.

The Theatre excavation (1988-1989)[67]

In 1988 and 1989, on the north side of the Vrijthof, a large excavation was carried out in preparation for the construction of the new city theatre ('Theater aan het Vrijthof') behind the 'General's House' (cat. no. 39). On this site, a number of buildings from the sixteenth and seventeenth centuries were still standing that had been part of the late medieval White Ladies' convent. In organisational and financial terms, the excavation was a precursor of the statutory requirements for archaeological heritage, as introduced by law in 2007. The excavation was part of the building project and also financed from it. A special team was appointed for the project, and the team leader was also responsible for the final report.[68] The project as a whole was supervised scientifically by the Maastricht town archaeologist. One of the aims of this excavation was, following on from the preceding research into the building history,[69] to document as fully as possible the buried development of the convent buildings. The monastery was established after 1224, when Rudolf of Worms founded the Order of the Penitents of St. Mary Magdalen at Hildesheim.[70] Another aim was to gain insight into the history of the use and occupation of the site and the relationship between the landscape development and the very old dike-shaped road embankment on the south side (= north roadway of the Vrijthof). This had developed on top of the first road construction, which was part of the Roman military road from Tongeren.[71] The surface of the original landscape to the north of the road was hardly lower than the south[72] and ran slightly downhill towards the north. Although a layer was found with Roman and some early medieval sherds, there were no traces of building or burials from those periods. From the beginning, the Roman road embankment was raised above the somewhat waterlogged (calcareous marsh deposits) roadsides.[73] Approximately 4.5 m below the modern surface,[74] with its base one to one-and-a-half metres deeper,[75] parts were discovered of the heaviest wall construction so far excavated at Maastricht. The related surface level was, on average, at a level of 47.00 m +NAP. An east-west wall, 1.70 to 2 m wide, in coursed and squared rubble [76] and brownish-yellow lime mortar, was revealed over the maximum width of the trenches of the excavation site and must have been originally at least 35 m in length. The wall extended further to the west. It runs parallel to the Roman road, 25 m north of the present-day building line. It ends in the east side, where it joins at right angles to a wall that extends to the south. There is a second transverse wall 7.80 m to the west, coming from the Vrijthof. In the ground plan, the northern section of a (quadrangular?) room of a building can be distinguished. Further to the west, no evidence was found of transverse or adjoining walls that are connected to the south side of the long northern wall. A large hall-like room can be reconstructed here. In addition, on the north side of the long wall, the bases of at least two heavy, three-metre-long counterforts or buttresses were found, possibly for the barrel-vaulted rooms on the ground floor of the building. The final report on the excavation gives a cautious dating: *'ten laatste*

(65) Here the excavation of the Basilica of Saint-Servatius is only mentioned in a general sense. The detailed reporting of this is one of the main aims of the Saint Servatius Project. (66) Panhuysen 1982, 49; Mekking 1982, 56-85; Panhuysen 1984, 78-81, spec. 80; Koldeweij 1985, 94-96; Untermann 1989, 23-24. (67) Because this excavation, in the context of the publications of the Saint Servatius Project, is not being discussed in full, some details are given in the text. (68) Hulst 1994. (69) Carried out by members of the Historische Structuuranalyse Maastricht project (1988-1992), a joint initiative of the Universities of Delft and Groningen, the Maastricht municipal authority and the National Heritage Department. It was geared to an integrated approach to the built and buried heritage as the basis for modern town planning (anticipating the 'Belvédère' principle). (70) The convent in Cologne already existed in 1229, the first Maastricht historical record dates from 1253. Ubachs/Evers 2005, 586-587. (71) Road elevations between 47.10 and 49.75 + NAP (= AOD or Amsterdam Ordnance Datum). (72) 46.30 / 46.60 + AOD on the north side, against 46.80 + (NAP/AOD on the south side. (73) Initially, the top of the road surface was at 47.95 + NAP/AOD against 46.50 / 47.00 + NAP/AOD on the north side. (74) At the back of the Generaalshuis on 50.00 m + NAP. (75) At a level of 44.00 / 44.40 m +NAP. (76) Coal-sandstone, but also silex, Roman tile fragments and a piece of millstone of Tefriet.

Fig. 2.9
Ground plan of the supposed Ottonian 'Pfalz' at the north side of the Vrijthof (Theatre site 1989).

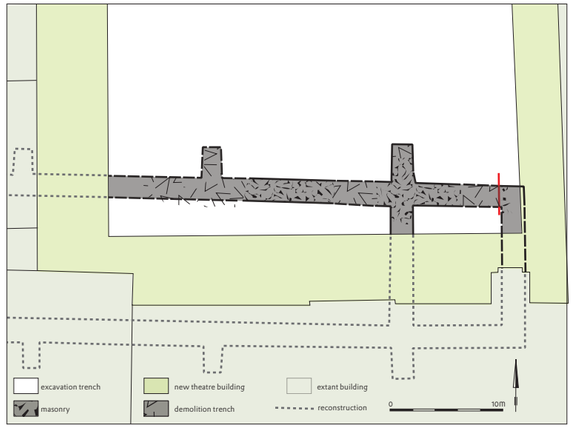
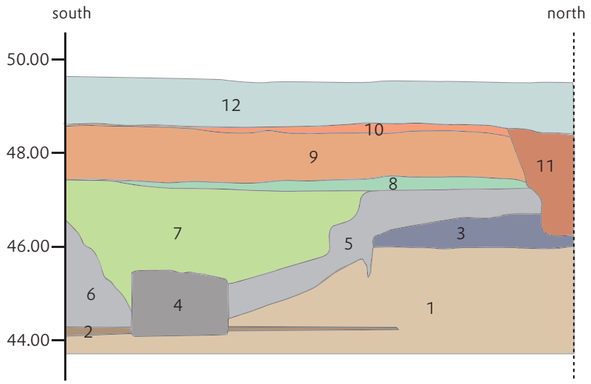


Fig. 2.10
North-South section of the Theatre site excavation (1988-1989). The stratigraphic sequence is showing the founding of the north wall (4) of the Ottonian 'Pfalz' through the layer (3) with (Roman and) Carolingian ceramics and its destruction under the layer (8) from the beginning of the 13th century. Layer 10 represents the great fire (1268) of the first phase of the monastery.



in de eerste helft van de elfde eeuw' ('no later than the first half of the eleventh century').[77] The building must have been demolished in the first quarter of the thirteenth century, after which the site remained unoccupied and fallow for some time before the construction of the first monastic buildings (figs. 2.9 and 2.10).

The hypothesis that this digging had uncovered a palace building of the kings of the Holy Roman Empire is based on the presence of extremely heavy foundations, the probable reconstruction of the plan (and the similarities to various well-known palatial buildings in Germany and Belgium), the position of the building in relation to the square in front of it and the abbey (which was 'Imperial immediate') on the west side of the square and, finally, the time span within which the building must have been functional.[78] It was supposedly the Maastricht palace of the Salian and Staufen rulers of the eleventh and twelfth centuries, who were known to visit Maastricht on a regular basis and had a residence there. On the basis of the archaeological data it is not yet possible to establish whether this means that the discovered remains of walls were also part of the palace that was supposed to be the residence of Duke Giselbert of Lotharingia in the early tenth century.

After 2000: archaeological excavations outsourced

The turn of the century was a turbulent time for the structure and organisation of archaeological research at national level, and certainly at local level too. Everything had to be changed as a result of the impending new legislation relating to archaeological heritage.[79] On the one hand, the Maastricht municipal authority decided in favour of far-reaching implementation and, in accordance with the new guidelines, to incorporate archaeological research in the procedures for developing building plans. On the other hand, it preferred to contract out most of the excavation work to excavation contractors who were sprouting like mushrooms. An advantage of the new structure for the responsible local authority is that, under the new 'originator principle', the cost regime rests with the initiator of new constructions disturbing the archaeological subsoil. Another advantage is that the excavating company is required by law to submit a report no more than two years after the completion of the excavation. Disadvantages are the risk of decreasing involvement and specialist knowledge of research supervisors and companies carrying out the work, and the loss of continuity and experience within the local-authority team, which is hardly involved any longer in archaeological fieldwork and the study of results.

Vrijthof excavation, entrance to underground car park (2003)
Nevertheless, it has since been possible to carry out two excellent excavations at and around the Vrijthof in accordance with the new principles. One of these was exclusively geared to obtaining detailed knowledge of the construction of the old Roman road on the north side of the Vrijthof and its relationship to the adjoining Vrijthof landscape to the south. The digging was conducted by the excavation company of the University of Amsterdam (UvA) under the scientific supervision of F. Theuws, who is also the leader of the Saint Servatius Project (cat. no. 45). The additional information was required to better understand the major Vrijthof excavations of 1969/1970 because, in 2003, the researchers could tackle different and more in-depth questions than the previous generation of researchers.[80] The results of the research are discussed elsewhere in this book in the context of the study of the landscape and the stratigraphy of the archaeological deposits.[81]

Entre-Deux excavation, Monastery of the Dominicans or Black Friars (2005-2006)
Two years later, a study was carried out to the north-east of the Vrijthof in the small square in front of the thirteenth-century Dominican Church (cat. no. 46). Here, the vast *Entre-Deux* shopping complex dating from 1970 was demolished and replaced by new building, for which it was necessary to go beyond the boundaries of the old construction pit – which at that time had not been investigated. The Saint Servatius Project was not involved in this study; the contract had been awarded to another party, not to the company of the University of Amsterdam. But, apart from two burials from the sixth and seventh centuries, this site yielded little relevant information that could lead to a better understanding of the Roman and early medieval periods on the north side of the Roman road.

By way of an epilogue

In his account of Bishop Monulph as the instigator of the Servatius cult, Gregory of Tours does not tell us anything about the search for the saint's remains, as the sixth-century aothor sometimes did when writing about other saints.[82] Monulph built a large church near an existing but dilapidated memorial chapel. The discovery of the saint's relics, and their removal for the purpose of raising them to the honour of the altars, derived from later interpretations and a strong belief in church tradition.[83] In fact, at the end of the eleventh century, Jocund completed the old Servatius legend in the tradition of his illustrious predecessor Gregory. What is of interest to us is the antiquarian description of the search by Bishops Hubert and Vulvegisus. This says something about the architectural state of the church in the eleventh century and about the then current perceptions of the age of the church building. We must realise that Jocund was writing in the century that saw a completely new church building (and the refurbishment of its environment!). In those circumstances, the people of the time must have become aware of 'treasures', walls and bones – the relics of saints – from past ages. In recent excavations we were able to establish how often the church builders of the tenth and eleventh centuries discovered the remains of older buildings and how many graves and tombs – including the presumed late antique mausoleum of Servatius! – they disturbed or destroyed. In the twentieth century, spolia (or presumed spolia) were found everywhere in the foundations, walls and pillars of the eleventh-century church and the westwork – early-Christian gravestones as well as fragments of limestone sarcophagi that had been laid in pieces.[84] It was with good reason that 'holy' persons from that time were buried with a lead cross bearing their name, to prove the identity of the skeletal remains in the event of uncovering their graves. The discovery of the grave of Geldulfus at the beginning of the eighteenth century illustrates this.

It was not until the beginning of the nineteenth century that we first come across traces of what one might call 'archaeological' interest in Maastricht's past. It was the amateur historian M. van Heylerhoff who, in a series of articles in the *Annuaire de la province de Limbourg*, described the historical development, defensive enclosures and most important buildings of Maastricht.[85] It is an inspiring and informative collection. It is also the first attempt at a synthesis of the city's history. Van Heylerhoff's approach was antiquarian and historical, but his archaeological and art-historical understanding is flawed. Van Heylerhoff is the first person to record 'archaeological observations', not yet refined and with contemporary interpretations that, from today's perspective, are somewhat too 'imaginative'. Van Heylerhoff describes the visible historic monuments of Maastricht – the Saint-Servatius Basilica, for example – but also what has recently gone, for example the crypts of that church, which were demolished in 1810. And, in his wish to inform people about the city's past glory, he was the first to attempt to explain the unknown walls discovered during building work, such as those underneath the Servaasgasthuis. It should come as no surprise that, based on the historical knowledge at that time, he interpreted these as the remains of the residence of the commander of the Roman army encampment, where, according to him, the Merovingian rulers, Charlemagne and his successors later resided. According to tradition and written indications, these rulers must have had a palace in Maastricht. It is a question that still preoccupies Maastricht's historians and archaeologists after all. Unfortunately there is little more to be done with Van Heylerhoff's notes.

The first excavation in Maastricht to be documented took place in 1840 under a brewery in the Stokstraat, where city architect M. Hermans made drawings of rooms that were part of a Roman bath house.[86] A number of finds were made in the nineteenth century in the wider environs of the Vrijthof, and were of interest to local antiquarians and history-lovers. In the second half of the century, state archivist J. Habets (1829-1893) described all the finds known to him in the *Publications*, but his interpretations should be treated with caution.[87] His work was certainly of benefit to the archaeology of Maastricht because, on the basis of historical knowledge and

(77) Hulst 1994, 14. (78) Panhuysen/Leupen 1990, 449; Hulst (1994, 18): 'geen definitieve toewijzing, wel de voornaamste kandidaat' ('no definite attribution, but the most likely candidate'). (79) Approved by the Dutch parliament in 2007. (80) Dijkstra/Flamman 2004. (81) See Chapter 5. (82) Weidemann 1982, 11-13, 21; Beaujard 2000, 335-337. (83) It is still the pious wish of many historians and archaeologists to investigate the age of the bones kept in the twelfth-century 'noodkist' (chest reliquary) of Saint Servatius, in order to establish for certain whether they are skeleton parts from a late-antique burial place (De La Haye 1990, 431). (84) Panhuysen 1989, 386 ill. 12. (85) Contributions from 1825 to 1831. (86) Jamar 1986, 115; Panhuysen 1996, 34 (excavated by the curator at the Dutch National Museum of Antiquities in Leiden, C. Leemans, and recorded by the Maastricht city architect, M. Hermans). (87) Habets 1882a; Ubachs/Evers 2005, 211.

interest, he made many observations of sites where building and digging took place.[88] And contemporaneously, for the first time, many trenches were dug and utilities installed under the streets. Habets' successors at the State Archive continued to show an interest in locating material objects that were 'findable' on the basis of archive research. This led to investigations in the central aisle of the Saint-Servatius Basilica by archivist P. Doppler in 1890 and 1903. It was also the period in which Maastricht's main churches underwent major restoration, and there were many finds of stones with inscriptions and carving in the walls and in the subsurface of those buildings. The architects P. Cuypers (1827-1921) and W. Sprenger (1875-1944) showed a special interest in the building history of the two churches. Sprenger also made a thorough study of the Roman remains under the Church of Our Lady and environs,[89] thereby continuing the tradition of his nineteenth-century predecessor Hermans for recording reliable measurements and descriptions.

In the first decades of the twentieth century, the librarian and archivist W. Goossens began his archaeological work in Maastricht. He was probably more of an archaeologist than an archivist.[90] He had many contacts in archaeological circles, for example with J. Holwerda, M. Daniëls and W. Ludowici. At that time it was still the rule for the National Museum of Antiquities in Leiden to initiate and lead excavations.[91] The provincial Societies for History and Archaeology (*Genootschappen voor Geschiedenis en Oudheidkunde*) had also been active in this field since the mid-nineteenth century. In Maastricht, from the municipal Committee for the Preservation of Historic Monuments (*Commissie voor de Bewaring van Geschiedkundige Gedenkstukken*), Goossens carried out various excavations between 1918 and 1926, mainly around the Church of Our Lady, but also once in the Saint-Servatius Basilica. In 1919 he examined a Frankish grave there, which Doppler had already discovered in 1890 underneath the concealed early–seventeenth century cenotaph to the memory of Monulph and Gondulph.[92] It was the first time that archaeological research had been conducted in the basilica into the traces of the presumed Roman and early medieval cemetery, following the discovery in the previous years of a number of early-Christian gravestones in the walls of the church. Goossens' research is extremely well documented and described. In general, his insights laid the foundation for archaeology theory relating to the earliest development of Maastricht in the Roman and early medieval period.

Themes, interests, status quo.

For a long time, archaeological research in Maastricht focused on the city's Roman period, in particular the settlement on the west bank of the Meuse in the vicinity of the Church of Our Lady and the Stokstraat district. There was less archaeological interest in the environs of the Vrijthof, and where there was interest, it only concerned the Saint-Servatius Basilica[93].

Historians traditionally agreed that the early medieval burial church of Saint Servatius had been located outside the old Roman settlement. Historians have formulated very diverse theories regarding the form and scale of that Roman settlement.[94] In all cases, it is assumed that the settlement should not have extended further west beyond the east side of the Vrijthof.

Interest in the Roman settlement and the burial church of Servatius built by Monulph, their relationship *and* the historical tradition of an imperial palace are subjects that have given rise to six archaeological research themes for the surroundings of the Vrijthof.

Theme 1: The building history of the Saint-Servatius Basilica. First and foremost, the history of the building of the basilica must be mentioned. New hypotheses have constantly been formulated, relating mainly to the question of which elements in the existing building can be dated to the founding by Bishop Monulph or to those of Emperor Charlemagne. Van Heylerhoff recorded his ideas during the first quarter of the nineteenth century, followed a century later by Cuypers, Schmeitz and Kalf and so many others. It was not until the 1980s that it was possible, as a result of extensive excavations in the church, to develop more reliable models for the earliest phases in the construction of the church.

Theme 2: The royal palace. In his publications of 1825 and 1829, which were based on 'archaeological' observations, Van Heylerhoff focuses attention on the question of the early-medieval royal palace. He makes no distinction between a royal palace for the Merovingian kings and a later palace that was supposedly used by the dukes of Lotharingia and the rulers of the Holy Roman Empire. This distinction was not made until almost 150 years later, by H. Hardenberg, who re-examined the old hypothesis, distinguished between the two types of royal palace and proposed alternative locations. After this, historians regularly tackled the subject. The question of location was raised twice during modern excavations. On the first occasion, this involved the interpretation of building remains at Servaasklooster 18 in 1980, one of the possible locations mentioned by Hardenberg. On the second occasion, it followed the discovery of a fragmented ground plan beneath the White Ladies' convent on the north side of the Vrijthof in 1988-1989.

Theme 3: The late antique and early medieval graves at the cemetery under the Saint-Servatius Abbey, continuity and early Christendom. The study of the Basilica of Saint-Servatius gave rise to many questions about the earliest history of the building and possible early-Christian burials at the cemetery where Saint Servatius was interred. In 1919, Goossens was the first to tackle this – by digging – followed after the Second World War by the ROB's church archaeologists and researchers of early medieval cemeteries. The Pandhof excavation was one of the largest of its kind in the early period of the ROB, and unprecedented in Maastricht. During all the excavations in and around the Saint-Servatius Abbey such as the Vrijthof excavation of 1969-1970, but also at the Servaasklooster 18 construction site in 1980, in the Basilica of Saint-Servatius itself between 1981 and 1989, and in all other excavations in the vicinity of the Vrijthof, questions were subsequently posed about the relationship between the newly discovered burials and the cemetery unearthed in 1953-1954 at the Pandhof.

Theme 4: The course of the Roman road. Van Heylerhoff was the first person to advance a theory regarding the layout of Roman Maastricht and the course of the Roman road from Tongeren in Maastricht. But he used inadequate knowledge such as the contemporary topography, and incorrect Roman datings for medieval walls and gates. The importance of knowing the correct course of the Roman road has always been clear to all historians, given that the text by Gregory of Tours mentions that Servatius was buried near the bridge of the main road. Goossens was the first person who was able to formulate new hypotheses with improved archaeological resources. According to A. Kessen and J. Sprenger, the course of the Roman road was Brusselsestraat – Keizer Karelplein – Bredestraat – Plankstraat, which means that it supposedly crossed the Vrijthof diagonally from the north-west to the south-east.[95] In 1969, one of the tasks of the Vrijthof excavation was to examine this theory, and only then was it discovered that the Roman road continues straight on in an easterly direction, towards and over the Grote Staat. During various subsequent excavations and observations in the Grote Staat, it was possible to trace the route further.

Theme 5: Traces of settlement. It was not until 1926 that E. Van Nispen tot Sevenaer outlined a serious model for the early medieval development of Maastricht.[96] He assumed that two centres existed, one in and around the Roman fortification on the Meuse river, and a second around the location of the Merovingian palace as suggested by Van Heylerhoff in the south-east corner of the Vrijthof. Only since 1979 has full use been made of opportunities to conduct research into possible settlement traces from the Early Middle Ages around the Vrijthof. The complete results of the earlier Vrijthof excavation were not known or published. However, no convincing traces of settlement from the Merovingian and Carolingian periods were found either west or north of the church and the Vrijthof. Only the thick black layers with early medieval finds from the Lantaarnstraat excavation in 1988 indicate habitation to the south-east of the Vrijthof.

Theme 6: The development of the Vrijthof square. Although, traditionally, a great deal has been written about the development and use of the Vrijthof, this was mostly on the basis of historical data.[97] It did not become an archaeological research theme until the Vrijthof excavation of 1969-1970. At that time, the approach to the scientific questioning was still flawed. Therefore, in 2003, a modern digging was initiated in the north-west corner of the square when a new entrance was constructed to the rebuilt underground car park.[98] Unfortunately, this limited research could produce only limited answers to the questions relating to the main square of one-hectare.

For the catalogue of excavations see appendix 2.1.

(88) Jamar 1981, 354-355. **(89)** Sprenger 1914. **(90)** Jamar 1981, 358-359; Ubachs/Evers 2005, 200. **(91)** Jamar 1986, 122-123. **(92)** Doppler 1890. **(93)** Van Es *et al.* 1982, 73. **(94)** Van Heylerhoff 1825; Goossens 1923, 49-54; Van Nispen tot Sevenaer 1926a; Sprenger 1948. **(95)** Kessen 1942/1946, 199-207; Kessen 1947, 9-14, 28-31; Sprenger 1948, 36-37. **(96)** Van Nispen tot Sevenaer 1926a, 4-5. **(97)** Ubachs/Evers 2005, 566-567. **(98)** Dijkstra/Flamman 2004.

3 The Vrijthof excavations 1969-1970: perceptions, politics, practices and problems

It is essential in the analysis of any old excavation to study the goals of the excavators, the excavation strategies, the contemporary standards of excavation, the organizational problems and their effects, the pre-existing knowledge and the ideas in the back of the minds of those directing the excavation and those working in the field. Several sources are available to analyze these aspects of the Vrijthof excavations. First, basic insights are provided by the written documents such as field reports and the mail exchanged between the State Archaeological Service, the town of Maastricht and various persons. Next, an analysis of the field drawings and photographs illuminate to some extent, which priorities and problems the excavators had. They were especially helpful in reconstructing the excavation techniques used.[1] Finally, an interview with J.H.F. (Tom) Bloemers helped to clarify many points.[2] I will subsequently deal with the pre-existing knowledge and ideas on the archaeology of the Vrijthof square and its surroundings at the start of the excavations, the goals of the excavators, the general excavation strategy on the Vrijthof and the history of the field campaign. In the last two sections I will illustrate the excavation methods using trench 3 as an example and describe the excavation of the Merovingian cemetery in the north-east corner of the square.

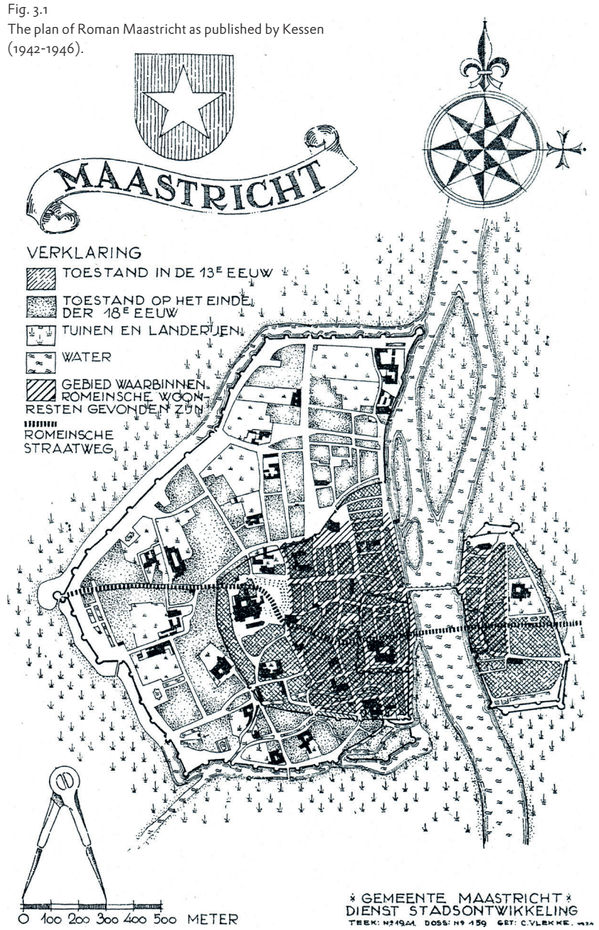
Pre-existing knowledge in 1969 and the goals of the excavation

The archaeological study of the town of Maastricht already had an old tradition when the excavations started in 1969.[3] Most attention had been directed towards its Roman past. Maastricht was considered a Roman town, some authors even thought they were able to reconstruct the typically grid street pattern forming a series of insulae characteristic of many large Roman towns.[4] The map published by Kessen is illustrative of this thinking on the topography of Roman Maastricht at the time (fig. 3.1). However, by 1969 any detailed characterization of the topography of the Roman settlement was no more than educated guesswork because of the limited number of excavations. Moreover, these were mainly concentrated on the site of the late Roman fortress.[5] Even more limited was the archaeological research into the development of the medieval town. Maastricht can boast of a number of highly interesting medieval monuments, studied by art historians and historians of architecture.[6] Historical research into the origins and development of the town concentrated on those periods for which there was ample written evidence: the Merovingian period and the period after c. 1100 AD.[7] One of the major problems in the historiography of the town of Maastricht is its lack of sufficient written sources for the Carolingian and Ottonian period.[8] The early evidence mainly concerns the monastery of Saint-Servatius.[9] This is disappointing, for Maastricht seems to have been a major centre in northern Lotharingia. Duke Giselbert (†939) seems to have considered Maastricht as his 'capital'.[10] At the time the excavations started it was believed that the medieval town had developed out of two separate nuclei, one around the old Roman fortress and the church of Our Lady and one around the abbey of Saint Servatius.[11] The state of archaeological research at the start of the excavations was thus limited and it was mainly directed at uncovering the Roman past of the town.

Reconstructing the topography of the Roman settlement and the identification of its elements was one of the goals of the Vrijthof excavations. The major Roman road from the north-Gallic heartlands to Cologne crossed the river Meuse at Maastricht. Not long before (in 1963), the location of the Roman bridge had definitely been established when finds of Roman sculpture dredged up from the Meuse river could be identified as *spolia* from the first and second century used to construct the substructure of a bridge.[12] Goossens already predicted this location in his study *Het Romeinse castellum te Maastricht*, which can be considered a turning point in the archaeological research in Maastricht.[13] The localization of the bridge was important in the search for other elements of the Roman settlement. Among these where the first to third century open settlement (*vicus*) and the late Roman fortress to defend the river crossing. Elements of the fortress had already been found, such as a large round tower.[14] This search for the Roman past received a boost when in the 1960's the town decided to renovate a whole quarter with an enormous amount of historical monuments, the Stokstraatkwartier.[15] The State Archaeological Service could excavate parts of this quarter under the direction of Bogaers. He found the remains of intensive habitation north of the Eksterstraat.[16] Among the, for Dutch standards, spectacular remains were those of baths and an adjacent (older) building of which the walls were still standing upright to a height of more than a meter. These remains, as well as the quality of the sculpture fragments from the bottom of the river Meuse, showed that Maastricht was an important and rich *vicus* in the heyday of the Roman Empire.

After the Roman bridge was localized it became possible to search more precisely for the trajectory of the major Roman road in the town centre. Hardly any archaeological evidence was available to establish this trajectory, so the later medieval street plan was used to hypothesize on this.[17] It is this hypothesis that determined the excavation strategy on the Vrijthof square considerably. It was thought that, (going from the Meuse in a westerly direction) the road followed the trajectory of the Eksterstraat, Plankstraat and Bredestraat to arrive at the southeast corner of the Vrijthof square. On the other hand grave finds suggested that further to the west, the Brusselsestraat also followed the trajectory of the Roman road. Coming from the west it reached Maastricht at the northwest corner of the Vrijthof square. An obvious conclusion was drawn: the Roman road diagonally crossed the Vrijthof square from the northwest corner to the southeast corner (fig. 3.1). There were only two certainties in this hypothesis: the Brusselsestraat trajectory and the bridge. In between these locations no archaeological evidence for the course of the Roman road was available at that time.[18] The Vrijthof excavations thus provided an excellent opportunity to establish definitely the course of the Roman road. As is

Fig. 3.1
The plan of Roman Maastricht as published by Kessen (1942-1946).



(1) To illustrate the contemporary context in which the excavations took place the introductions by Van Es in the Jaarverslag van de Rijksdienst voor het Oudheidkundig Bodemonderzoek as well as the contributions to the Berichten van de Rijksdienst voor het Oudheidkundig Bodemonderzoek 1973 are used. This volume of the Berichten commemorated the 25th anniversary of the Rijksdienst voor het Oudheidkundig Bodemonderzoek (State Archaeological Service = ROB). Its present name is Rijksdienst voor het Cultureel Erfgoed (RCE). (2) The interview with J.H.F. Bloemers took place April 21st 2006. (3) On the development of the archaeology of Maastricht see: Bloemers 1973; Panhuysen 1984, 13-28; and more specifically on the development of its Roman archaeology the numerous references in Panhuysen 1996, 19-78. For the archaeology around the Vrijthof square see chapter 2. (4) Kessen 1942-1946, 203-205 who compared Maastricht with Roman towns such as Strassbourg, Troyes, Tournai, Paris and Amiens. (5) Panhuysen 1984, 18 (map). (6) Monumenten van Geschiedenis en Kunst; Van Nispen tot Sevenaer 1933; Timmers 1955; later studies among many others are: Kroos 1985; Mekking 1986; Bosman 1990 and Den Hartog 2002. (7) For instance: Rousseau 1930; Panhuysen 1933; Niermeyer 1935; Hardenberg 1962; Boeren 1967; Deeters 1970. (8) Panhuysen/Leupen 1990. For a list of medieval sources up to AD 923 see: Van Ommeren 1991. (9) Deeters 1970; Hackeng 2006. (10) Recently: Dierkens/Margue 2004, 880-890. (11) See Theuws 2005 on different models for the development of medieval Maastricht. (12) For a history of the discovery of the bridge see: Panhuysen 1996, 22-25 and Vos 2004, 9-12 (13) Goossens 1923. (14) Goossens 1923. (15) Bloemers 1973b. (16) See now Panhuysen 1996, 33-43. (17) Kessels 1942-1946. (18) For the present knowledge on the trajectory of the Roman road see Panhuysen 1996, 25-31; Theuws 2005, 108-110 and Dijkstra/Flamman 2004.

known by now the excavations made it necessary to reconsider the whole hypothesis.[19] Finally the Vrijthof square was thought to lie outside the limits of the Roman settlement. It was not expected to find many remains of Roman habitation.

In all reflections on the topography of the town of Maastricht the Vrijthof square was considered to be an open space from times immemorial. Thus, the excavators neither expected to find any remains of medieval buildings such as had been found in the town centre excavations in Dordrecht, which had started the year before.[20] The 'history' of the square or the meaning of the open space does not seem to have formed part of the research goals. It was a given fact. As we will see, the research strategy and excavation techniques employed were not appropriate to uncover the history and infrastructure of the square, for instance by tracing the different pavement levels that could have been present.[21] But we will also see that the excavators had to select priorities, for the time given to them by the town council of Maastricht to excavate the square before the building activities for the underground car park started was very short, too short. One of the expectations was that the Vrijthof excavations were going to increase the knowledge on the structure of the Servatius complex in the late Roman and Merovingian periods. Fifteen years before (1953-1954) the ROB had carried out excavations in the cloister garden (Pandhof) of the Saint-Servatius church and discovered an important cemetery in use from the third century until modern times.[22] The cemetery attracted international attention for being a cemetery with continuity in use from late Roman times into the early Middle Ages. From the contents of newspaper articles (based on interviews with the excavators) and some of the entries in the field technician's diaries it can be deduced that the excavator's expected new spectacular results regarding this period.[23] As we will see, their disappointment grew during the excavations.

Before the fieldwork started Bloemers tried to formulate some research objectives in order to determine where to excavate and what to expect. He contacted H. van Ommeren who was at the time studying the early history of Maastricht.[24] Van Ommeren wrote him a three-page letter in which he elaborated on three research problems.[25]

First, he drew attention to the medieval Hospital of Saint-Servatius that stood in the southeast corner of the Vrijthof square between the Bredestraat and Platielstraat. It had been demolished in 1821. Originally the Vrijthof square was smaller than it is now. Heylerhoff, who observed the demolition, indicated that impressive walls, foundations and wooden constructions were present and that sculptured stones were found.[26] Van Ommeren expected that not all remains of the Hospital were destroyed and that important information on it could still be obtained. The Hospital of Saint-Servatius is mentioned for the first time in 1171.[27]

Second, he pointed to the Roman road that according to a *communis opinio* of that moment crossed the square diagonally from northwest to southeast.

Third he pointed to various walls encircling cemeteries that extended onto the present square and to a short notice by J. Sprenger on old remains of walls on the square.[28] He also refers to a charter of 1223 in which the remains of a wall around the Vrijthof square is supposed to be mentioned.[29] And finally he refers to the highly interesting problem of the location of a wall (*novum murum*) encircling the abbey of Saint-Servatius and the *imperatoris palatium* built by duke Gislebertus in the first half of the tenth century.[30] It was at the time not known (and AD 2013 it is still not definitely known) where this wall was located. However, Hardenberg had already suggested in 1962 that it probably ran along the western limits of the Vrijthof square.[31] Certainly a hypothesis to test! Van Ommeren suggests that it might be interesting to analyze the various walls on the Vrijthof square to find out whether some of them were old.

These were questions by an historian interested in the Middle Ages. As we will see his plea found hardly any response by the excavators. Never is there any trace of an interest in the Saint-Servatius Hospital although it is one of the oldest if not the oldest in the Netherlands.

In the meantime it was clear that the town council was going to endorse the plan to build an underground parking space on the Vrijthof Square. This large project, which started as a private initiative, especially in financial terms, developed into a public undertaking because substantial financial support by the national government was only possible when the town of Maastricht was the owner of the new car park. Because of this change of plans and the investments demanded of the town, it took a lot of discussions before the town council agreed to build the underground parking space on November the 5th 1969. Today there would be no question about the necessity to carry out an extensive excavation. In those days it was entirely dependent on the good will of those responsible.[32] The State Archaeological Service (ROB, Bloemers) wrote a letter on October the 23rd 1967 to the Mayor and Alderman of the town stating that they learned from the press that an underground car park was planned on the Vrijthof square, and that it is not impossible that archaeological remains of great importance will appear when it is built.[33] In that case it would be necessary to make archaeological observations. The ROB also states that the realization of the car park can be carried out without delay and without endangering the archaeological interests. The town then asks the Minister of Culture to declare that all damage, such as delay of building activities, caused by the archaeological investigations, which they will allow to be carried out, is compensated by the national government to the town of Maastricht. It took the town council another two years to decide on the building of the car park. The estimated costs were 6.650.885 guilders (= € 3.023.130). Subsidies and tax reimbursement up to an amount of 3.380.000 guilders reduced the estimated costs of building the car park to 3.270.885 guilders (= € 1.486.766).[34] The car park was going to be rented out to the N.V. Ruyters Company in Sittard, which had originally taken the initiative to build it. On the fifth of March 1969 the town council took the first decision to build the car park. Bloemers started his preparations by writing the above-mentioned letter to van Ommeren on March 19th 1969.

Bloemers' considerations led to a first plan how to tackle the square, which he presents in a meeting with officials of the town of Maastricht on may 13th 1969 (the feast day of Saint Servatius! a coincidence?). The first line of the report on that meeting that was written by an employee of the town council states that the excavation is not a prelude to the building activities for the underground car park.[35] This was a highly political statement. The town authorities obviously did not want the public to relate the digging by archaeologists to the building of the car park for this was at that time still a matter of political debate. So the impression had to be avoided that the building of the car park had begun. We will see later that this political position by the town had great impact on the archaeologist's efforts to excavate the square in an acceptable way.

Next follows Bloemers' plan. The work was divided in three phases:

the first phase consisted of digging a trench of c. 40 m long and 5 m wide on the west side of the square. The trench was going to be c. 3 m deep until the undisturbed subsoil was reached. The indication of the depth of the archaeological layers is ambiguous; the archaeologists actually had no indications of the thickness of the archaeological layers. Misunderstandings followed later. The engineers of the town read '3 meters deep', the archaeologists read 'until the undisturbed subsoil'.

The second phase consisted of digging a trench in front of the ancient guardhouse (Hoofdwacht), which was at the time in use by the army. The trench was going to be c. 20 m long, 5 m wide and c. 3 m deep.

The third phase was not decided on in detail. The results of phases 1 and 2 would determine the nature of the third phase. Phase 2 will only start after phase 1 was finished including the refill of the trench. Both phases were estimated to last c. 2 months! One would start the excavations on may 19th.

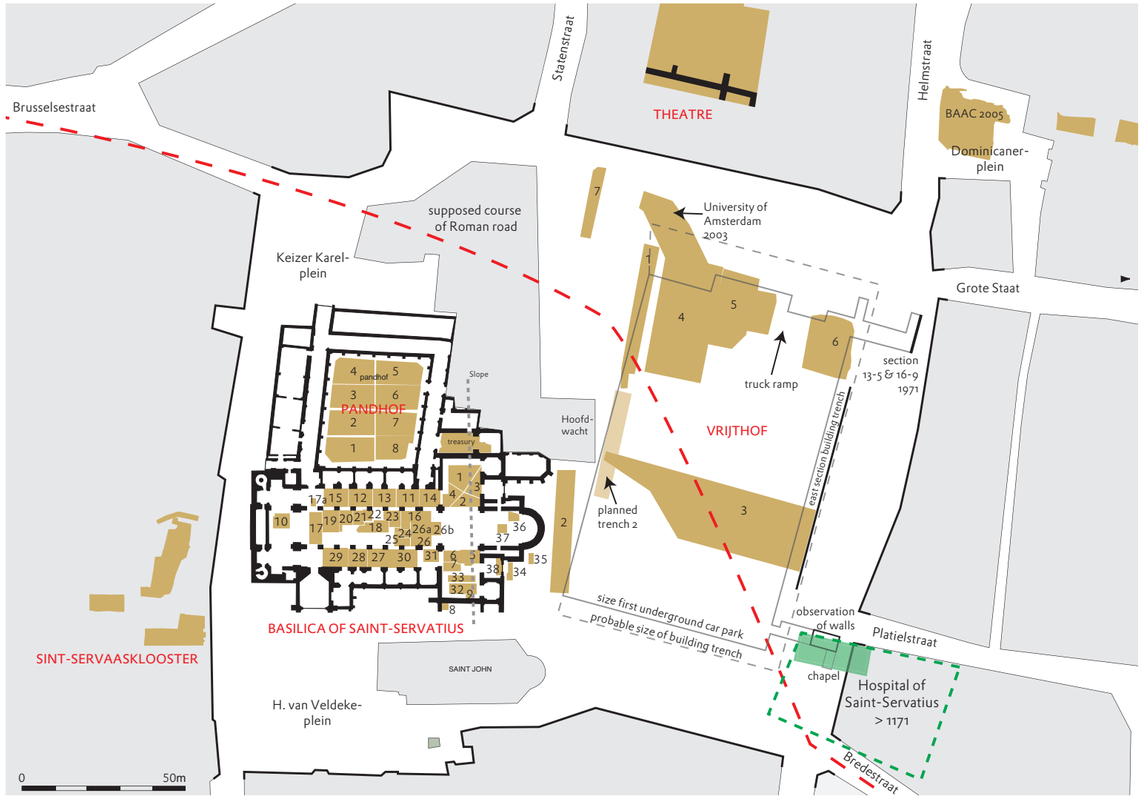
It is not clear from the documents we have, what the relation is between this excavation strategy and the problems mentioned above. The trenches 1 and 2 seemed to have been located in such a way that a Roman road crossing the Vrijthof diagonally could be located (fig. 3.2). Bloemers obviously hoped that the trenches were going to give insights into the composition of the archaeological layers on the square, which would help him to plan the third phase. I will call this plan: plan A. The trenches, however, were rather located in relation to the (financial and political) interests of the town authorities than to those of the archaeologists. The trenches hardly touch the square, so that it was clear to anyone that there was no relation between the archaeologist's activities and the building of the car park. It also meant that only a limited part of existing parking space on the square was sacrificed for archaeology. On the 13th of may it is estimated that c. 50 individual parking places are lost during the first phase.[36] The town authorities worried about other problems than the ROB. One of these was the scepsis under the population on the time it would take to build the underground parking place. It was feared that it was going to take a long time. As soon as the excavations started a photograph of the very first activities appeared in a local newspaper with a caption referring to the problem of how long the building of the car park would take. But before we start recalling the history of the excavation it is interesting to introduce some of the 'players' involved in order to understand, as far as is possible 35 years later, the context in which they carried out the excavation and took their decisions.

The 'players' and their responsibilities

In 1969 the state archaeological service (ROB) was in an early phase of transition.[37] In 1965 W. van Es had become its new director.[38] Up till then the ROB carried out relatively small excavations all over the Netherlands without much thematic connections between them.[39] This was going to change. Large-scale multi-year

(19) Bloemers 1973a [1975], 244-250. However, it is possible that the road had different trajectories in different periods. The late-Roman road followed a different course than the one of the first to third centuries (Panhuysen 1996; Theuws 2005b, 108-110). (20) Sarfatij 2008. (21) See for instance the complexity of the stratigraphy of the pavement levels of the Heumarkt in Cologne (Aten e.a. 1997, 369-379; Aten e.o. 1998, 95-103; Aten 2001, 623-642). (22) Glazema/Ypey 1956, (no page numbers), figures 44-92. The dates are now subject to debate. (23) The articles are clearly based on information provided by the ROB. De Tijd 17 mei 1969. In the article the following research goals were mentioned: the extent of the Roman settlement, the Roman road, a cemetery of the fourth and fifth centuries. It is said that the ROB expects the excavation to be of international importance. No mention is made in this article of the Hospital of Saint-Servatius. In an article in the Volkskrant of 28 September 1967 the cemetery east of the basilica of Saint-Servatius ('ellendigen kerkhof') is mentioned. Other articles appeared in Dagblad Cobouw and De Nieuwe Limburger. (24) Letter of J. Bloemers to H. van Ommeren 19 March 1969. Archive ROB, dossier Maastricht Vrijthof. Van Ommeren was employed as vice-archivist at the Municipal Archives in Deventer. He wanted to write a Phd-thesis on the subject. (25) Letter of H. van Ommeren to J. Bloemers 23 March 1969. Archive ROB, dossier Maastricht Vrijthof. (26) Van Heylerhoff 1825 en 1829. See chapter 2. (27) Hackeng 2006, 297-300, and nr 77. (28) Sprenger 1934, 35. (29) Doppler 1930, n. 96. Zie nu ook Hackeng 2006, nr 97 (page 313). It is however the question whether a wall around the Vrijthof square is meant. (30) The wall is mentioned by Jocundus in his Miracula sancti Servatii, c. 40-41. See Theuws 2005b, 100-101. (31) Hardenberg 1962, 37. (32) By now examples are known whereby the building of an underground car park is cancelled because of the importance of the archaeological remains present. (33) Archive ROB, dossier Maastricht Vrijthof. This was thus two years in advance. (34) De Nieuwe Limberger 19 februari 1969, 7. There is a calculation mistake in the newspaper. (35) 'Bespreking met de heer J. H. F. Bloemers van het Rijksinstituut voor het Oudheidkundig Bodemonderzoek op dinsdag, 13 mei 1969 te 11.45 uur, betreffende het verrichten van onderzoekswerkzaamheden op het Vrijthof' of 13 may 1969. Archive ROB, dossier Maastricht Vrijthof. (36) At the time no parking fee was paid. (37) Van Es 1972 [1974]. (38) Mank/Loeb 1972 [1974] added a list of ROB personnel from 1947 to 1971 to their list of excavations.

Fig. 3.2
Plan of the Vrijthof Square with indication of the excavation trenches (brown), the location of the underground car park, the Saint-Servatius Hospital (green), and the supposed course of the Roman road (red line).



projects were started such as the Dorestat excavations from 1967 on, the Rijswijk excavations also from 1967 on, the Dordrecht excavations from 1969 on and later there were others such as the excavations on the island of Texel, in het Grootslag and in Nijmegen. They were all rescue excavations and usually carried out under time pressure. This gigantic effort put at lot of strain on the ROB and its personnel, the more so because a lot of small rescue excavations were still carried out as well.[40] This situation caused a feverish atmosphere at the ROB and Van Es constantly complaints in the *Jaarverslagen* about the lack of personal (in 1965 the ROB had nine archaeologists including the director and eighth field technicians, in 1970 ten archaeologists including its director and nine field technicians) and proper facilities. In this period of expanding excavations it was difficult to keep up the task of archaeological heritage management. Lists of archaeological monuments were made per municipality, but as time went on this activity declined. One solution to the problem was the creation of provincial archaeologists, who are archaeologists employed by the state (ROB) but paid by the provincial government to perform tasks related to archaeology in that province. These tasks could be very diverse and did not only concern the archaeological heritage management related to the high speed of destruction of the cultural landscape at that time (building activities boomed, land re-allotment schemes etc.).[41] It was a part time task next to the tasks of the ROB itself.[42] Most archaeologists of the ROB usually directed more than one excavation at the time, often because they also had responsibility for a specific province, not necessarily the province in which their large-scale excavations were situated. Especially stressful were those situations in which archaeologists, involved in large scale excavations, were confronted with other large scale rescue excavations that did not really fit into their plans, but had to be carried out in view of their exceptional importance. Maastricht-Vrijthof was one of these and it became the responsibility of the provincial archaeologist of Limburg Tom Bloemers.

Tom Bloemers was 29 when the excavations on the Vrijthof started. He was employed at the ROB since two and a half years (at the age of 27) and got immediately involved in the large-scale excavations of the native Roman settlement of Rijswijk.[43] The last campaign there ended late in November 1969 when the Vrijthof excavations were already in full swing.[44] Next to Rijswijk and Maastricht-Vrijthof he had to deal with the excavations at Grubbenvorst.[45] Such was the task of a provincial archaeologist. In an interview on April 21st 2006 he looked back on that period. 'It was a madhouse' and he called it a 'traumatising experience', which was to influence the choices he made in his later career as professor of archaeology at the University of Amsterdam. These choices were directed at managing such situations, to further develop archaeological heritage management, and to develop the pre excavation strategies which would for instance lead to the creation of one of the first private archaeological companies in the Netherlands: RAAP.[46] He also stated that he considered himself not qualified for such a job in terms of the archaeological training he had, or rather he did not receive: no medieval archaeology, no town archaeology, no management of projects and negotiating out such large projects. The idea at the time of his employment at the ROB, was that he was going to study the Roman villas and villa landscape in Limburg, but he immediately was directed towards Rijswijk near The Hague. Next the Vrijthof excavations and later the Nijmegen excavations prevented him from fulfilling this task. Moreover, as part of the half time job as provincial archaeologist of Limburg he was, as of the middle of 1968, also charged with the task of curator of the archaeological collection at the Bonnefantenmuseum in Maastricht for one day a week. He was involved in preparing a new permanent exhibition, but found out that the administration of the collection was hardly up to date and that he had to make order into chaos. As provincial archaeologist he was confronted with large-scale intrusions in the relatively intact landscape as a consequence of new land re-allotment projects. Large areas had to be evaluated in short periods and municipal lists of archaeological monuments created. And worst of all, hardly any other archaeologist in the Netherlands or archaeological institute was interested in the far away province of Limburg, which was a province loaded with archaeology. It was a period of creating an archaeology of Limburg.[47] In those days he travelled through the country: on Monday he was in Rijswijk, on Tuesday and Wednesday in Limburg, returning late in the evening, on Thursday in Rijswijk again and on Friday he prepared the next week in Amersfoort. And all this, as he remembered very well, without all the nice motorways we have today! He did this until the first of January 1981. These stressful years left a lasting impression on him. It is no wonder that the archaeologists in charge of the Vrijthof excavation were hardly ever there.

The day-to-day management of the excavation at the Vrijthof Square was the task of Arie van Pernis, a field technician of the ROB. He was an old hand in 1969. He was employed at the ROB since 1947 and thus belonged to the diminishing group of employees that had been there since its first days. He had excavated many churches as well as the late Roman and early medieval cemetery in the cloister garden of the Saint-Servatius church. Van Pernis had developed great skills in excavating, but on the other hand also developed routines that were not to the advantage of archaeology. His daily reports are extremely short and hardly informative, and he did not produce much other information than the field drawings, probably believing that later anyone would understand what he had seen on the basis of his drawings. He ran the excavation from its start on May 19th 1969 until February 23rd 1970. His last daily report is short as usual with no reference at all to his departure from the excavation where he spent almost every weekday for eighth months. Another field technician assisted him at times. Herman Ter Schegget was there two weeks in August 1969, three weeks in September, and almost continuously since the end of October 1969 until the end of the excavation early in April 1970. He was one of the younger generation of field technicians recently employed at the ROB, in his case since the first of January 1968. At the time the ROB had eleven field technicians to run the excavations, against eleven archaeologists including its director.[48] His daily reports are more elaborate than those of Van Pernis. Strangely enough both technicians kept an excavation diary of their own, often commenting on the same observations. We had to read two parallel diaries in which we, however, did not

(39) There were some large excavations of course, but in comparison to the scale of excavations reached after 1968 they are still modest. (40) Van Es in the Jaarverslag ROB 1966, page 2: 'het nagestreefde evenwicht tussen de grotere min of meer planmatige onderzoeken en de meer incidentele 'nood'opgravingen werd over het algemeen bereikt' (the aimed-at balance between large, more or less planned researches (excavations are meant ft) and the rather incidental 'rescue' excavations was found) This remark is made in the year befor the large scale excavations at Dorestad and Rijswijk started. / Van Es in the *Jaarverslag ROB* 1967, page 3: 'Grote en langdurige opgravingen verschaffen naar verhouding meer informatie dan de kleine noodopgravingen die echter als aanvulling noodzakelijk blijven' (large and long-lasting excavations provide comparably more information than the small rescue excavations, which, however, remain necessary by way of supplement). Van Es in the Jaarverslag ROB 1968, page 2: 'Bij de opgravingen openbaart deze groeitendens zich vooral in de toenemende grootte van de projecten' (As regards the excavations this tendency to grow reveals itself in the expanding size of the projects). (41) Van Es in the Jaarverslag ROB 1965, page 2, signals shortly after his start as director: 'de snelheid en grondigheid waarmee in de huidige maatschappelijke situatie de archeologische documentatie verdwijnen en vernietigd worden' (the speed and thoroughness with which in the present society the archaeological documentation disappears and is destroyed). (42) In practice it meant doing two jobs for the price (wage) of one. (43) Bloemers 1977. (44) In 1977 he obtained the doctorate on the basis of a study of this settlement. (45) Starting these excavations, whatever could be found there, almost seems an irresponsible decision in view of the post-excavation work for Rijswijk and the work in Maastricht and the tasks as provincial archaeologist. The Vrijthof clearly should have been a priority. (46) Eickhoff 2005. (47) It resulted for instance in the creation of a project for research of the Palaeolitic period (Roebroeks 1988). (48) Next to these eleven 'official' archaeologists there were four (archaeology) assistants and three student assistants (students of archaeology).

find important contradictory comments. Herman ter Schegget philosophised more on the meaning of the excavated features and fortunately wrote down what he thought. In one case we can follow his thoughts on the direction of the Roman road changing his mind almost every day. In the final stages of the excavation Klaas Greving assisted Herman ter Schegget after Van Pernis left the excavation. Greving had been excavating in Rijswijk and was employed at the ROB since august 1966. It is difficult to evaluate his impact on the excavation for he hardly wrote entries in the excavation diary. His drawings of the Merovingian graves in trench 4 are however among the most detailed we have.

Next to these official players (Van Es, Bloemers, Van Pernis, Ter Schegget and Greving) there were a few volunteers. Mr Luickens assisted at the excavation from June 12th 1969 to September 30th and from January 12th to at least February 27th. His contribution was much valued by Ter Schegget in his report on October 1st. Titus Panhuysen, a student of art history and archaeology at the University of Nijmegen, and the later town archaeologist (from 1979 to 2004) and member of the Saint-Servatius project team worked on the excavation from the first to the 25th of July 1969 (trench 1) and another three days in August.[49] The excavation on the Vrijthof Square took place at the front door of the main guardhouse (Hoofdwacht) of Maastricht where lieutenant colonel Kessels had his office. He regularly visited the excavation in the presence of other NATO officers such as a French general on June 11th and according to Van Pernis an American colonel on June 19th. The next week miss Peggy Pendergast worked on the excavation. A short Internet search learned that the colonel was not a colonel but a lieutenant colonel and not an American but a Canadian.[50] It must have been James Francis Pendergast who retired in 1972 to become 'Assistant Director Operations, National Museum of Man (now Canadian Museum of Civilization) National Museums of Canada.[51] The week after his visit his daughter took part for one week in the excavations.

Hired workman, who had no experience in archaeology, formed the main work force on the excavations. Usually 5 to 10 of them were present, at the end of the excavation usually around 15. They were responsible for the heavy work of cleaning the levels after the dragline had lowered the surface in the trench by taking away a layer of archaeological deposits.

By the time the Vrijthof excavations started the ROB had developed an excavation routine, which allowed them to excavate vast settlement areas.[52] Usually it involved lowering a level mechanically with a dragline or hydraulic excavator, after which workmen clean the new level with shovels (see fig. 3.4). The new level is drawn at a scale 1:50. Then the features identified are shovelled through to search for finds. The machine comes in again which lowers the level anew by taking out 20 cm of archaeological strata and the process is repeated. We will see that in Maastricht sometimes up to 60 cm is taken out of the trench mechanically in this way to arrive at a new level. This routine was brought into practice by the field technicians. Needless to say that it is a very crude way or rather destructive way of excavating stratified deposits.[53] However, at that time the ROB often had no alternative ways of excavating, for all excavations were rescue excavations. They were often conducted under great time pressure and archaeologists were relatively powerless persons not able to command much sympathy and cooperation necessary to carry out excavations as they should have been carried out.[54] It is this routine that the field technicians brought to Maastricht.

This way of excavating had as a result that over time two worlds developed, that of the archaeologists and that of the field technicians, each with its own professional standards and codes of honour. Field technicians were present all day and they took many decisions as how to excavate the object. The archaeologists had their own strategies, which they had to communicate to the field technicians. That was usually done during the visits of the archaeologists of the excavation or on the basis of oral information over the phone. Van Es visited the excavation six times (May 30, June 12, August 21, October 9, November 6, January 15). Bloemers tried to visit the excavation at least one day a week. This went well until July 10, then starts a period in which there were several periods of two or more weeks that he did not visit the excavation. From September until mid December he is there again one day a week. He is absent from January 28 until February 23 when the lower levels and sections of trenches 3 and 4 are excavated and studied. In the week of February 23 when the excavation of the cemetery in trench 5 started he was there for three days.[55] After that date we have no information anymore on who was present at the excavation. In practice this meant that the field technicians took decisions on their own according to what was important to them. They had to evaluate the meaning of the observed features and how to excavate them. Several times they found the cleaned level not of interest and lowered it down without further action with the result that sometimes 60 cm of archaeological deposits have been removed mechanically. Often Van Pernis speaks about layers of raised soil (a way of telling that they were considered of little interest), which he subsequently took out. The sections show that these were often highly stratified archaeological layers. In fact the field technicians often had no idea what they were removing. The field technicians pride was found at another level. Their professional qualities were measured on the basis of how skilful the whole operation was conducted in a technical sense. A good example to illustrate this is by looking at what height the excavation levels were. An excavation level was usually planned at a pre-fixed height, for instance 50.50 meter above sea level. That this level may not have any archaeological relevance does not occur to them. Moreover this level has to reappear at this height in all excavation trenches irrespective of differences in natural heights or of (changing) thickness of archaeological layers. Moreover, the levels had to be really level. In trench 3 many levels differ only one or two centimetres over a distance of 30 meters or more. The field technicians obtained such a precision by putting up the levelling instrument in the trench at an early stage of lowering the surface with the help of a mechanical excavator or dragline. Constantly they must have measured the heights in order to indicate how much had to be removed in order to arrive at the pre-fixed level (fig. 3.3). This they did with great precision and the field technicians were considered successful and professional if they managed to create such level surfaces in the trenches. That this way of working had nothing to do with archaeological research and that their levels were often at totally random heights in relation to the complex stratigraphy in the trench never seemed to have been a matter of debate between archaeologists and field technicians. The employment of the recently developed large-scale excavation technique for settlement sites such as Dorestat in town centre research such as Maastricht-Vrijthof was a mistake. On the other hand we should not be too harsh on those who were responsible in the field. What other strategy should have been employed to excavate a square like this in three months?

The meagre quality of the excavation and documentation is only to a certain extent the result of what happened in the trenches. It is also determined by what happened at the negotiation table. Maastricht-Vrijthof will turn out too big a fish for the ROB to catch. In the next section I will describe shortly the history of the Vrijthof excavation from the start on May 19th in 1969 until the end on April 10th 1970. We will see how plans changed under the time pressure put on the excavations and how ad hoc decisions determined the course of the excavation and the quality of the results.

Fig. 3.3
The lowering of the excavation level in trench 4 with an hydraulic excavator. In the foreground workmen are cleaning the new excavation level with shovels. Height measurements were taken before cleaning to control the correct height of the new pre-fixed horizontal excavation level.



The history of the excavation

After Bloemers had unfolded his excavation plans to the engineers of the town Van Pernis started the excavation on May 19th by laying out trench 1 in the northwest corner of the square (fig. 3.2). On May 30th, when Van Es and Bloemers visit the excavation for the first time, he reports that the find of bones indicate that they had found the cemetery. The wording is significant: *the* cemetery. They were obviously searching for the late-Roman and Merovingian cemetery belonging to the *basilica* of Saint-Servatius. It means that from now on they had to lower the levels by hand. The hydraulic excavator was digging out more than two meters of stratified soil (!) in a southerly direction to more or less the same level (fig. 3.4). On June 5th he reported that the soil in the southern part of the trench is darker probably because of the many burials from the Middle Ages. He expected that the number of graves will increase when they approach the *basilica* of Saint-Servatius. On the 12th of June he reported the find of a foundation of a wall in the northernmost part of the trench. He adds that it cannot be a wall around the cemetery because there are burials to the north of it. In the southern part of the trench numerous medieval burials appear. On the 23rd of June Van Pernis starts with the preparations for digging out trench 2 of which he says that it will be located east of the apse of the church of Saint Servatius. Obviously a change of plans took place. Originally trench 2 was planned immediately south of trench 1 in front of the main guardhouse (Hoofdwacht) in order to check whether the Roman road crossed the Vrijthof square. In a letter by Bloemers to the town of Maastricht of the 25th of June 1969 he asks to be allowed to open up a second trench next to trench 1. However, he ended his letter by saying that if the location of the trench causes too much trouble (because of a loss of parking space) it could also be located east of the apse of the Saint-Servatius church. Of course it caused too much trouble and in a letter of July 4th the Mayer and aldermen were happy to grant him permission to excavate a trench further south.[56] On June 25th it is stated by Van Pernis that the burials in the southern part of trench 1 are at a lower level than those in the north and that they are older. The difference in height must have given him this

(49) Moreover Herman ter Schegget in an interview on the 6th of October 2009 indicated that he visited the excavation often on Thursday evenings. (50) http://billpend.tripod.com/index.html (20 March 2006). (51) He obtained an honorary doctorate from McGill University in Montreal and published on the archaeology of the native population in Eastern Ontario. (52) Van Es/Verwers 1978. (53) Moreover, these deposits were located on a slope. (54) In the official statements of those days there is often a reference to the good cooperation between archaeologists and authorities and building contractors etc. It was there to some extent, but we cannot deny the frustrations of archaeologists at the same time. (55) One period of absence was caused by his visit of the Congress of Roman Frontier studies in London in August-September. (56) ROB archive dossier Maastricht Vrijthof.

Fig. 3.4
Work in trench 1 at a relatively high level (compare fig. 3.6). An hydraulic excavator is taking out meters of anthropogenic deposits.

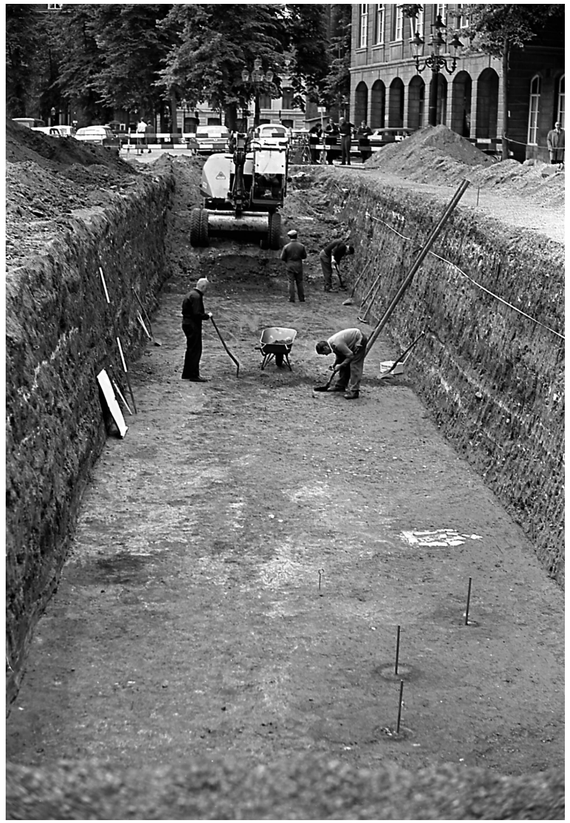


Fig. 3.6
Work in trench 1 at one of its deepest levels. Sections are made through the pits like the one in fig. 3.5. A person is standing in the pit next to the wheelbarrow indicating how deep they were. Note also the cosmetic propping up of the trench in the background.

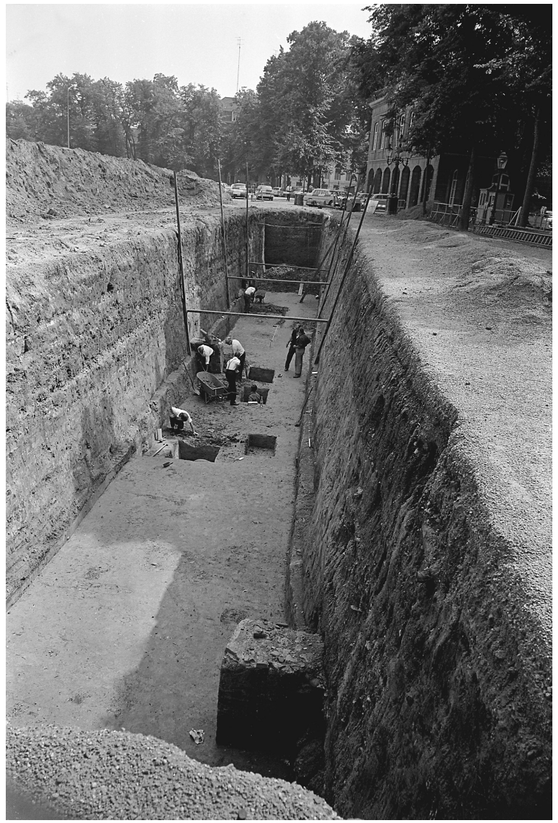


Fig. 3.5
One of the deep pits and its dark fill, found at the lowest levels of trench 1. Their function remains enigmatic. The triangular features in the walls of the pit might have been steps in order to be able to climb out of it. The clear straight walls suggest that the pit was not open for a long time.



impression. He probably did not consider the fact that they could lie on a slope. On the 10th of July the pavement stones were taken away east of the apse of the church at the location of trench 2. In the meantime the excavators suffered regularly of heavy rainfall, which obstructed the work in the deep and narrow trench 1 which at times collected water from the surroundings. At that time they were working on the lower levels in the trench where large deep pits appeared of which the function was guessed at (wells? cess pits?) (fig. 3.5). On July 23rd Van Pernis starts to draw the sections of trench 1. Then, on July 30th the authorities that inspect the working conditions on building sites appear in the field and explain that it is impossible to continue to work in this way. The trench is too deep and too narrow. Moreover, as can be seen on photographs the hydraulic excavator is standing on the edge of the trench. They want the archaeologists to strut the walls of the trench so that they cannot collapse. Van Pernis protests because in that way he cannot observe the vertical sections anymore. He provisionally puts up some struts, which, judging from the photographs, have a rather cosmetic than a practical effect (see fig. 3.6). On the same day (July 31) he makes an important discovery, the so-called foundation in the northern part of the trench is not a foundation, but a thick layer of gravel. He thinks that the gravel is related to a Roman road that runs east west. Without really realizing Van Pernis found the Roman road one was looking for and overthrew in one blow the ancient hypothesis of the route across the Vrijthof square. In the meantime the authorities are not satisfied with Van Pernis' cosmetic solution regarding the strutting of the walls of the trench. They demand beams every 1.5 meters. His answer to this demand is surprising. He starts working the next day at five o'clock in the morning when authorities are still asleep. On Monday August 11th he begins with opening up trench 2. On that day Ter Schegget arrives on the excavation to assist Van Pernis.

The following Wednesday Bloemers visited the excavation. The direction of the Roman road found in the northernmost part of trench 1 was discussed. I reproduce this discussion in some detail for its outcome was highly relevant in establishing the excavation strategy on the square itself. The Roman road exposed itself in the form of a number of superimposed layers of gravel and löss. Ter Schegget finds the idea that the Roman road crossed the square diagonally highly unlikely. He refers to several ditches visible in the northern part of trench 1. They are difficult to relate to the road. Ter Schegget concluded that the Roman road probably ran in a straight line in the direction of the Grote Staat, that is west east along the northern limit of the square. Next Friday he already starts to doubt this conclusion. A ditch that he brought in connection with the road that was visible in the east wall section of trench 1 was not present in the west section. Because of that he concluded that the ditch did not run across the trench, at right angles, which means that it did not run parallel with the northern limit of the square. He expected that on the west side of the trench the ditch was located further to the north at a point they could not see because the trench did not extent far enough to the

Fig. 3.7
The 'caves' dug in the northern part of trench 1 in order to study the remains of the Roman road. One can see the sloping up in northern direction (to the right) of the top layer of gravel.



north. He more or less reconstructed the point where the ditch should be on the west side (that is thus north of the trench) and connected this point with the so-called ditch in the east section. To his opinion this line indicated the direction of the Roman road. He thus changed his mind and concluded that the road did cross the Vrijthof square diagonally. The following Monday they start digging 'tunnels' or 'caves' in a northerly direction along the walls of trench 1 in order to investigate the roman road further to the north (fig. 3.7). There they found postholes underneath the layers of gravel of the road in a row parallel to the northern limit of the square. Because of this and because the slope of the road indicated a direction parallel to the northern limit of the road Ter Schegget started to doubt the new conclusion of last Friday on the direction of the Roman road, maybe it did have a west-east course after all. Then the authorities that inspect the working conditions on building sites appear again. They forbid the archaeologists to work in the trench in this way any longer. Again, their solution to this problem is working very early in the morning. On Thursday August 21 Van Es and Bloemers visit the excavation and inspect the sections with the remains of the Roman road. It was then that

Van Es suggested digging a new trench along the northern limit of the Vrijthof (I will call this plan B). On August 22nd Ter Schegget leaves the excavation to start working in Grubbenvorst. From that moment on Bloemers had to direct three excavations. The following week trench 1 was filled up and the discussion on the direction of the Roman road seems to stop, that is to say no thoughts on the subject were written down by Van Pernis. Judging from what was written down I have the impression that the hypothesis that the road ran along the northern limit of the square had prevailed over the hypothesis that it crossed the square diagonally and that for that reason Van Es proposed plan B. Later developments, however, do show that the old hypothesis was not discarded entirely and that a large part of the effort still seemed to be directed at finding a road on the square. In the meantime the excavation of trench 2 had begun.

After opening up trench 2 they soon found an 80 cm wide wall running in a northeast-southwest direction. This wall and a similar one a few meters further south will occupy them for a considerable amount of time. So do the skeletons and the graves that appear in great numbers. Another problem is that a thick layer of gravel is found. Digging down in this layer will mean that they have to strut the walls of the trenches, for this material is certainly going to collapse. Another thing that happened, which would have dramatic consequences, was that trench 1 was not filled with compact soil but with mud. Some measures were taken to compress the soil but these were not sufficient, as we will see. During September the excavation of trench 2 continued. They had to strut the trench intensively and at low altitudes in comparison to the lower surface in the trench so that work in this trench became strained (figs. 3.8 and 3.9). All this work continued in the expectation that at a certain date the real work on the square could start before the underground car park was built. New important developments took place on October 9th.

Fig. 3.8
Work in trench 2. The two walls related to the apse of the basilica of Saint-Servatius are clearly visible as well as the propping up of the trench.



On October 9th Van Es and Bloemers were again both in Maastricht to discuss the future of the excavation with the mayor and alderman De Vries. They presented them the plan for phase 3 (that is the phase after trenches 1 and 2 were finished). I will call this plan C. First of all a trench 50 m long and 20 m wide is going to be dug in an east-west direction across the square. In their daily reports Van Pernis and Ter Schegget give different indications as to its proposed location. Van Pernis says that it will be east-west in the southern part of the square, Ter Schegget is more precise in his indications: it will be oriented NNW-SSE and it will be located between the main guard house (Hoofdwacht) and a point between the Bredestraat and the Platielstraat.[57]

A second trench was to be excavated in the northern part of the square, immediately east to trench 1. Later trench 4 was located there. Why was there a change of plans (from plan B to plan C) and what did Van Es and Bloemers hope to achieve in digging these trenches? Before answering those questions it is important to realize that on October the 9th the archaeologists thought that they could already start digging these new trenches the week after. The only remaining point of concern was how to deal with the spoil from the trenches. However, the mayor and alderman wanted to have a meeting with the entire council of aldermen before they wanted to make a final decision. The next day came the message that no permission will be given to start the excavations on the square itself. The mayor and aldermen were afraid that digging on the square, before the final decision on the building of the underground car park had been taken, would meet with great protests from the shopkeepers around the square. Excavating meant that a lot of parking space would be lost (and thus there would be less customers for the neighbouring shops). To avoid this, the spoil heaps had to be removed at a cost of 50.000 guilders. The mayor and aldermen found this too expensive because there was still the risk that the town council decided not to built the car park at all. In that case all the soil had to be brought back to close the trenches again and the neighbourhood had suffered a lot of unrest. So the archaeologists had to wait until the decision to build the car park had been taken by the town council. This was bad news, because it would mean less time to excavate, and winter was approaching. Plan C had to wait. Why was plan C as it was?

Fig. 3.9
The work below the struts in trench 2.



First of all the trench in the southern part of the square with a location as indicated by Ter Schegget (NNW-SSE from the main guard house to a point between the Platielstraat and Bredestraat) was to some extent a sensible one, for several of the questions posed before the excavation started, could be tackled. It was possible to find a Roman road that crossed the Vrijthof square diagonally as well as the westernmost remains of the Saint-Servatius hospital.[58] Obviously the idea that the Roman road did cross the square diagonally had not been discarded entirely at that moment. However, the next day, when Bloemers and Van Pernis visited the engineers of the town they found out that a large sewer pipe also ran from the main guardhouse in a southeast direction.[59] The sewer pipe could not be closed off. In stead of reconsidering the whole southern part of plan C in view of the impossibility to dig the planned trench Bloemers and Van Pernis adapted the plan by moving the location of the trench to the north of the sewer system without reconsidering its enormous size. They more or less must have given up the idea to excavate remains of the Saint-Servatius hospital and its immediate surroundings. Reconsidering plan C would have meant that a solution should have been found for this problem. To dig a trench in the northern part of the square was certainly a wise decision, what was wrong was its exact location. To locate it immediately next to trench 1 was a mistake. At that time the archaeologists had no proper indications what to expect in the northern part of the square, in fact they had no indications what to expect at the entire square. In order to find out a new trench should have been located further to the east from trench 1. In a general sense each excavation trench gives two levels of information: one, the direct information from the trench itself, two, the indirect information on its immediate surroundings. Locating a trench next to trench 1 was to find out to some extent things already known from trench 1. We will see that the

(57) This means that it was located in such a way that it ran almost entirely over the supposed course of the Roman road. (58) The western end of the hospital probably did not reach as far to the west that it would come to lie in the building trench of the underground car park. However, the chapel of the hospital was situated in the northwest corner of the complex at the location of one of the entrances of the car park. (59) Probably the sewer system created at the beginning of the eighteenth century.

location of trench 4 immediately next to trench 1 was to have negative consequences for the excavation as a whole. In the end the amended plan C was a bad plan because the presence of the sewer system in the south should have led to a reconsideration of the excavation strategy in view of the original questions asked and trench 4 should have been located further to the east in order to have a greater coverage of the square. It is however possible to understand their decision to plan trench 3 as they did. Ter Schegget states that they are going to work in the trench with large material that is big digging machines such as draglines in a way they employed them while excavating Dorestat. These machines needed space to operate which means a large trench. Moreover they were going to dig without having to strut the walls of the trenches by creating trench walls with a slope of 45 degrees. Trenches 1 and 2 were almost 6 meters deep and they probably expected trench 3 to be as deep as that. In order to have a level of sufficient size at that depth an opening width of the trench of 20 meters was probably deemed necessary.[60] When the opening width of the trench was 20 meters and the walls had a slope of 45 degrees, a level at six meters deep would have a width of eighth meters. If the trench was going to be 50 meters long, 20 meters wide and 6 meters deep without sloping walls, 6000 cubic meters of soil had to be taken out. With sloping walls this would only be 4200 cubic meters. The question that should have been asked is whether a trench with a width of eighth meters was still necessary if its main purpose was to find a Roman road. The trench could have been smaller. Moreover we will see later that the sloping walls were hardly made and that they were more or less vertical except in the lower part of the trench, which means that they took much more soil out of trenches 3 and 4 than they had planned which of course took much more time and money than planned. When in the end the archaeologists ran out of time is was not only because they did not get enough time from the town council, it was also because of their planning and excavating trenches 3 and 4 as they did. Even after they were not satisfied with the results, they stuck to the original plan where they could have decided to narrow the trench and excavate only one half. We will also see that planning and excavating trench 4 as they did was disadvantageous in another sense. Nevertheless the disappointment among the archaeologists on the 10 of October because they were stopped, was great. The only thing to do is to continue the excavation of trench 2.

A new phase: excavations on the square

Then, at last, on the 5th of November the town council finally decided to build the underground car park. Excavations on the square would start the week after. On Wednesday November 12th the excavation of trench 3 starts, it measures 65 x 20 meters! First, the top one metre of soil is removed with a dragline, until a first excavation level at a height of 50.50 NAP meters, that is 1.30 m below the threshold of the ancient guard house (AD 1738). On Friday November 14th the excavations in trench 4 started (40 by 20 meters). The excavation of these trenches was in full swing when on Friday November 21st (one week after the excavations on the square had started) one of the engineers of the town came to the excavation telling that on Monday the 24th they would start creating a new sewer system to replace the old one that had played such an important role in planning the excavation. Moreover he told the archaeologists that as soon it was ready they would start digging out the building trench for the underground car park. Building the new sewer system would take no more than six weeks. As if there were no archaeologists at all present on the site! They were flabbergasted. What do you decide in such a situation? They amended their excavation strategy to meet the requirements of the town authorities. Van Pernis wrote in his diary dry and short: we started to dig out trench 4 to a level above the skeletons of the monastery of the 'Witte Vrouwen'. Ter Schegget's notes are more informative: '*Nadat de heer van Pernis, de heren van Es en Bloemers had gesproken werd besloten om voor 1 week een 2de dragline in te schakelen welke in put IV, welke het eerst bedreigd wordt, de bovengrond tot op de skeletten van het Witte Vrouwenklooster af te trekken. We offeren dus alle tussenliggende vlakken op. Dit is in put IV mogelijk omdat we via put I toch al een redelijk inzicht hebben in de bovengrond.*'[61]

This statement needs some comments. Trench 4 was threatened first because the plan was to create an exit in the northwestern corner of the square for the sand trucks that were going to remove the soil from the building pit for the underground car park. The soil extraction was going to start in the southeastern corner. Because of trench 3 and the large spoil heaps that developed on the square this plan could only be realized to some extent. The archaeologists not only came under an enormous time pressure, they also had to deal with all kind of other activities on the square such as building a new sewer system, moving of telephone and electricity cables and the logistics for moving the soil out of the building pit. It concerned 60.000 cubic meters, which were 18.000 truckloads to be removed in 2 to 3 months, which meant that day and night every 3.5 minutes a loaded truck left the site and an empty one entered. Not only trench 3 became an obstacle for the building contractor, trench 4 as well, because it was situated where the exit for the trucks was planned. Another element to comment on in this statement is that it is clear that the archaeologists were aware of the difference between the direct and indirect information a trench yielded.

In this situation a news paper article appeared in the regional journal the *Limburgs Dagblad* on the 21st of November which must have destroyed the last remains of what was left of a negotiation position for the archaeologists.[62] The heading said: '*Nog weinig resultaten op Vrijthof*' (Not much results yet on the Vrijthof). The first lines read: *'Het Vrijthof in Maastricht is nog zeer karig met het prijsgeven van geheimen, zo die er al mogen zijn. Het graafwerk door het Rijks Oudheidkundig Bodemonderzoek heeft tot nu toe, aldus drs. C. Bloemers, slechts teleurstellende resultaten opgeleverd. Uit de drie momenteel in bewerking zijnde bouwputten zijn op enkele kleine uitzonderingen na nog nergens vondsten gedaan waarvan de herkomst verder terug gaat dan omstreeks het jaar 1000.*'[63] It can be guessed that the mayor, aldermen and town council who read this, true or not, didn't worry too much about archaeology anymore. The article continues to mention the find of a sceatta, of various skeletons and the two walls outside the absis of the church of Saint Servatius. The choice of words in the article underlines a tenor of disappointment. Interesting is that it is stated that the ROB expects more of the trench opposite the police station (trench 4) if it could be made 12 meters longer in a northern direction.[64] Then it would be possible to find out what the direction of the Roman road was. It was then explicitly stated that it is expected that it ran in a straight line along the northern limit of the square via the Grote Staat and the Jodenstraat to the Meuse river.[65] This was stated in such a detail that it must have been Bloemers' information. It shows that the archaeologists had left the idea that the Roman road crossed the square diagonally. Knowing that, the location and size of trench 3 is surprising. What about the obvious disappointment of the archaeologists with the results obtained up till then? It is possible to imagine that it existed. In trench 1 and 2 hardly anything Roman or early medieval had been found up till then. In trench 3 and 4 they were excavating the higher levels A and B with mainly late medieval and early modern features. From all the things expected (Roman road, late Roman and Merovingian cemetery and hospital of Saint-Servatius) they hadn't seen much. Their disappointment did not disappear quickly. Trench 3 was not going to show anything else but medieval features. Trench 4 showed the (relatively meagre) remains of a Roman settlement along the road, but it had a surprise for them, which should not have been a surprise. On the 25th of November Van Pernis wrote in his diary that from now on they had a camera for themselves so that they could take lots of photographs. Up till then a photographer had to come to the excavation from Amersfoort.

Increasing time pressure

After the dramatic events around the 20th of November the excavation had nevertheless a 'business as usual' character. In both trenches 3 and 4 a routine developed of lowering levels, cleaning them, making a drawing, collecting finds and lower the level again (fig. 3.10). On the 28th of November the spoil heap south of trench 3 had to be moved further south in order to be able to dump new spoil next to the trench. Although by that time it was forbidden to park cars at the Vrijthof this was still done. The police had to break open several cars so that they could be moved. Some cars, however, could not be moved; they were partially covered with the spoil from trench 3! Incidents like these were the most exiting events at the time. Sometimes the field technicians are not satisfied at all with what they see at the levels, which were of course randomly selected in relation to the archaeological stratigraphy. The higher levels of the trenches are characterised as 'raised soil', which means: not interesting. What they were looking for were pits, walls and graves. Sometimes they judged a level not to be interesting and did not make a drawing of it, they immediately dug down to the next level. There are instances in which they lowered the level by up to 60 cm in a few days. On the 4th of December Ter Schegget remarks that level 4 in trench 3 is totally uninteresting like all previous levels. It concerns 'late medieval finds without shocking pits'. On the 8th of December Van Pernis mentions the find of a Frankish biconical pot in trench 4 at the place where they expected the west east Roman road. It didn't ring any bells with the excavators. They continued to lower the level in that trench until they reached the graves of the nuns of the Witte Vrouwen monastery. In the meantime they had the opportunity to inspect a section of the Roman road because a trench for a sewer pipe was dug across the street north of the Vrijthof, which was also the marked out route of the Roman road (trench 7). It is not until the early days of January when at level 6 in trench 4 features appeared that attracted the attention of the field technicians. They were traces of Roman habitation, a track that diverts from the Roman road in a southeast direction and Merovingian graves! The graves are located in the utmost northeast corner of the trench. If the trench had been 1.5 m smaller the cemetery would never have been discovered. Ter Schegget remarks (in translation) on the 7th of January that 'now they found in the last weeks of the excavation that for what mr Van Pernis, among others, started to excavate in may 1969'. It is clear that finding an ancient cemetery was one of the most important objectives, but at the same time the research strategy was not geared to this goal. It is also clear that after trenches 3 and 4 no new excavation trenches were planned at the square and they expected to leave the site within a few weeks. It would mean that a large part of the square was going to be dug away without any archaeological investigation. After the find of the Merovingian graves nothing happened although there was still a large part of the square behind the eastern section wall of trench 4 where a Merovingian cemetery was hidden. They continued as usual in trenches 3 and 4, there are no signs of activities to speed up the opening of a trench east of trench 4. There was a large spoil heap there. One would expect that negotiations with the town engineers to remove this spoil heap were taken up. There are no signs in the diaries that such initiatives were taken

(60) However, this calculation is not referred to in the written documentation. (61) Translation: After mr. Van Pernis had spoken to mr. Van Es and mr. Bloemers is was decided to rent another dragline for 1 week that could take out the topsoil in trench 4, which is threatened first, above the skeletons of the monastery of the 'Witte vrouwen'. We thus sacrifice all levels in between because we already have a reasonable insight into the nature of the topsoil because of trench 1.' (62) Limburgs Dagblad 21 November 1969. (63) Translation: The Vrijthof in Maastricht is very parsimonious in yielding up secrets, if there are any. The excavation by the ROB has, according to drs. C. (sic) Bloemers, provided only disappointing results. No finds, notwithstanding a few small exceptions, have been made that go back further in time than AD 1000 in the three trenches in which is worked. (64) This did not happen. (65) See Panhuysen 1996, 25 note 38.

Fig. 3.10
Lowering the excavation level in trench 3 with a dragline in the winter of 1969-1970. The photograph was taken from the basilica of Saint-Servatius.



although the time pressure on the archaeologists was now very high for they must have realized that they also had to excavate a Merovingian cemetery. At the 23rd of January Van Pernis spent his last day in Maastricht. He was transferred to another excavation and was replaced by K. Greving. From that day on only the diary of Ter Schegget is continued.[66] Work concentrated in trench 4 because the engineers of the town wanted to make the exit for the sand trucks in the northwest corner of the square where trench 4 was located. In other words they had to finish this trench as quickly as possible (fig. 3.11). Trench 4 was thus not only in the wrong place for archaeological reasons, it was also in the wrong place for technical reasons. The excavation of trench 4 started November 14th with the removal of topsoil; on November 19th it was known that the exit was going to be in the northwest corner of the square.[67] When the Steering Committee met again on January 21st Bloemers did not mention the possibility that they had to excavate the terrain east of trench 4. Instead he asked what possibilities there were to create an east-west section over the entire Vrijthof after the sewer system and telephone cables were removed from the site. He is answered that there will not be much time to do so and that Van Es had promised that the excavations would not delay the work of the building contractor. Bloemers was concentrating on an east-west section at the location of trench 3. Moreover, winter was asking its toll as well. Several times the levels were frozen up and the workmen tried to defrost them by blowing hot air under large sheets of plastic (fig. 3.12). These winter conditions slowed down the excavation as well. It was also on January the 21th that Ter Schegget wrote in his diary that the building contractor had to discard the original logistic plan to remove the soil from the building pit because they had dug trench 4 at the location of the exit. However, from that time on it is still business as usual: lowering the levels in trenches 3 and 4 and preparing and

(66) There are, however, two separate entries for the period February 10 to February 13 and a short note on February 23. It is not known who wrote the entries parallel to those of Ter Schegget. (67) Bloemers was member of the so-called 'Steering Committee underground car park' installed on November 13th. Its first meeting was on November 19th. At this meeting the logistics of the removal of the soil from the building pit were discussed. The ROB could have decided then that it was better to move trench 4 further east although they had started removing the topsoil. At that time this work had not progressed to such an extent that such a decision was

drawing the section walls. And then, after one and a half month after the discovery of the Merovingian cemetery, Ter Schegget mentions on Monday February 23rd trench 5, which is an eastern extension of trench 4. The aim of opening this trench was to excavate the Merovingian cemetery. The 23rd of February 1970 was a memorable day.

The Merovingian cemetery

In a meeting of the Steering Committee that very day (Monday February 23rd) Bloemers announced that the planned work had been finished just in time.[68] It was stated in the report that mr De Groot (a representative of the contractor who removed the soil from the building pit) and mr Bloemers still have contact on some minor affairs, which in the course of the work for the underground car park, could be carried out by the ROB without delaying the building of the car park. These minor affairs were the excavation of a Merovingian cemetery! Why did he not explicitly mention the highly important find of the Merovingian cemetery? Was it to avoid distress with the municipal authorities because excavating such a cemetery would cost some time and would probably generate a substantial financial claim of the town of Maastricht to the minister of cultural affairs? While Bloemers was in the meeting room on Monday morning, the archaeologists in the field made a few disappointing discoveries. First, trench 5 would have to remain small (15 by 12 meters only) because an excavator of the contractor dug out too much soil in the southern part of the planned trench. It was clear that he removed an important part of the burials there. Second they discovered that in the weekend before, the contractor did not make the exit in the northwest corner of the square, but in the middle of the northern limit. That was because they found out that the soil, with which trench 1 was refilled, was too unstable to use it as a driveway for trucks. Now the full consequences of the location of trench 4 became visible. If it had been located further to the east the archaeologists would have had a better overview over the northern part of the square and would have established the importance of the Merovingian cemetery much sooner. They would have had publicity sooner that could have helped them to negotiate on the further excavation of it. Moreover, they would already by this time have excavated a part of it. And finally the exit for the trucks could have been located in the undisturbed part of the square between trenches 1 and 4 in the northwest corner so that the area east of trench 4 would still be available in its entirety. At the start of the excavation of the cemetery it became clear that they would lose a large part of it. The location of trench 4 immediately next to trench 1 was by all means a mistake with great consequences. In the next few weeks the cemetery was excavated in a hurry under, it should

impossible. The dragline had spent 3,5 days in the trench at that moment at a cost of 756 guilders. (68) Report on the 'Vierde Vergadering Stuurgroep Ondergrondse Parkeergarage Vrijthof d.d. 23 februari 1970' ROB archive, dossier Maastricht Vrijthof.

Fig. 3.11
Archaeological acrobatics! The cleaning of the east section wall of trench 4. Notice the stratified deposits in the upper part of the section wall and the dark layer below (between the top of the ladder and the head of the man on it). Below the dark layer to the left and right of the man on the ladder one can see sections through two Merovingian graves (light brown rectangular fill).



Fig. 3.12
An attempt to defrost the excavation level with hot air.



Fig. 3.13
The excavation of the cemetery in full swing under harsh conditions. In the background an hydraulic excavator is digging out the building trench for the underground car park. Lorries driving up the ramp on top of the cemetery produce great quantities of exhaust gasses. The deep pit in the foreground is what remains of trench 4.



be said, very harsh conditions (fig. 3.13). In a separate section I will discuss the story of the excavation of the cemetery. It was national news on Friday February 27th. In trench 5 there were also interesting remains of the Roman settlement such as a complete stone cellar. On March 26 a trench (trench 6) to the east of the exit was opened up in which there were Merovingian graves as well.

In the week of March 30 to April 3rd work in this trench was finished, a section was drawn between trenches 3 and 2 and after the building trench was dug out to a depth of eighth meters the eastern section wall of the building trench was drawn as well. On Friday April 3rd 1970 the archaeologists left the site. They had been there for almost a year.

The costs of the excavation were 79.671,41 guilders (€ 36.214,28). That is without the subsidies obtained for employing the workmen and without the salaries of those working at the ROB (in those days costs meant costs to be paid to external parties). In order to have an indication on the size of this amount it is useful to know that the draglines cost on average 27,00 guilders (€ 12,50) per hour.[69] The excavation budget of the ROB in 1968 was 400.000 guilders.[70] The town of Maastricht paid ten thousand guilders, so that the ROB spends almost 70.000 guilders of its 1969-1970 budget of 800.000 guilders. Johan Cruijff, top soccer player of those days and the best-paid player in Holland at that time had a yearly income of 90.000 guilders (€ 40.909) in 1973.[71] A few other, now well-known, players (Keizer, Suurbier, Neeskens, Mulder, Krol) earned 50.000 guilders a year, the rest much less. The cost of building the underground car park was 6.650.885 guilders (€ 3.023.130). That is exclusive the salaries of all the employees of the town involved in the building of the car park. The excavation costs were 1.2% of the costs of building the underground car park. The town of Maastricht spend 10.000 guilders, that is 0.15% of the total budget on archaeology.

How to evaluate the excavation strategy used and the decision making process? Judging old excavations is always a hazardous undertaking. Such an evaluation has to take place against the background of contemporary practices and external conditions. I tried to describe them as far as it is possible on the basis of the available evidence and to imagine the conditions under which the excavation took place.

In general it can be stated that the Vrijthof excavation was a failure. It failed to bring to the surface in a proper way the important evidence hidden in the subsoil of the square. First of all an enormous amount of historical evidence was lost, removed from the square with the sand trucks of the building contractor. A large part of the Merovingian cemetery was dug away, we have no information on the medieval hospital of Saint Servatius, and we have insufficient evidence on the history of the square in the Middle Ages. A complete early medieval settlement in the lower layers of the excavation is lost. Secondly the available documentation is meagre in comparison to the quality of the documentation of other excavations.

More time should have been available to excavate the square. The three to four months available was far too short to investigate such an important historical place. It is not only one of the most beautiful squares of the Netherlands; it is also one of the most important historical ones, even in an international perspective. Now, 30 years later, there is a nice case for comparison. The excavations of the Heumarkt in Cologne, a comparable site of almost exact dimensions took three years from May 1996 to April 1999. Taking so much time was impossible in 1969/1970, but even then three to four months was way to short. On the other hand the organization of the ROB was such that excavations of the nature and size of Maastricht-Vrijthof couldn't be managed next to the tasks they had already given themselves by starting large-scale multi-year excavation projects. The Vrijthof excavation seems to have been an unwelcome guest. The impression is that it did not figure high on their list of priorities, moreover it took some time before the Vrijthof sparked off any enthusiasm with the archaeologists involved. The written communication between town and ROB does not suggest that the ROB wanted to make a case out of this situation. They rather adapted. The system led to a situation in which field technicians took a lot of decisions instead of being taken by archaeologists. The archaeologists in charge were also responsible for the excavation strategy. At first, they had no alternative, but to wait and dig trenches 1 and 2 at the western limits of the square. A limited parking space was more important than the history of the town. The strategy to tackle the square was not geared to understanding its full history. The location of the trenches, their size and the excavation techniques used were never going to provide a reasonable insight into the complexities of the archaeological record present on the site. Large parts of the square would remain untouched such as the southern part and the whole northeast part. The Merovingian cemetery in the northeast corner therefore had to be excavated in a hurry without making too much fuss about it.

Why no efforts were made to try to investigate these parts in an early stage for instance by reducing trench 3 to half its width and dig another one further south or north is not clear. In the end it can be said that an important archaeological site was lost to a high degree as the consequence of a complex combination of factors relating to perceptions, politics, practices and problems encountered by authorities and archaeologists. For both of them archaeology on this scale was new. Both of them learned a lot of these excavations.

So, in the end, looking back in time we can establish what went wrong, who were responsible and what should have been done, but can we blame anybody? Probably not, because excavating in a town on this scale was new and the Vrijthof excavation was an important experience in the development of Dutch archaeology. Writing in 2013 with new *mores* in the archaeological world since the introduction of a commercialized archaeology in the Netherlands as part of a law that should provide for a better protection of archaeological monuments I wonder whether we would do better now unless archaeologists would have managed to convince the town council that building an underground car park in this place is a very bad idea from an archaeological perspective.

The excavation of trench 3 (12 November 1969 – 16 February 1970)

In this section I describe the excavation of trench 3 in order to show the daily practice of excavating the Vrijthof square. This practice determines the quality of the excavated data. On November 12th 1969 the opening up of trench 3 started. The trench was going to be 65 by 20 meters and was oriented east west across the Vrijthof square (fig. 3.2). One of the goals was to create an east-west section of the square. The southern wall section of the trench was going to serve as such. At the location of trench 3 there were still a functioning sewer system, which was going to be removed as well as gas- and water pipes and telephone cables. The gas- and water pipes were removed the next day. It took a long time before the telephone cables were taken away which hindered the archaeologists in the southwest corner of the trench. The trench was opened up by removing one metre of soil from the trench with the help of a dragline with a clamshell with teeth in front. As a consequence there were hardly any possibilities to make observations. On the 17th of November the first level at 50.50 m+ NAP was cleaned with the help of a clamshell with a knife especially designed for archaeology, which allows creating a smooth level if the dragline driver is an experienced person. It is remarked that the person working at the excavation became quite experienced in making level levels. On the 19th of November level A was drawn. It was 1.30 meters below the surface of the square, which means that the top 1.30 meters were removed without any observation. Ter Schegget remarks that there was not much 'shocking' to be seen except the limits of the cemetery for the poor people west of the *basilica* of Saint-Servatius. On November 20th work on level A had already finished and one started digging down to level B at 50.00 m+ NAP. This means that 50 cm of soil was taken out with the dragline. At that depth they were digging through stratified layers related to the raising of the square in late medieval and modern times. At level B large pits and some ditches were visible. It is said that there are many differences in colour between the various layers, which are usually 10 to 15 cm thick. The field technicians were aware of the fact that they are digging through layers of raised anthropogenic soil. There are no signs of an attempt to undertake action to date these or establish their nature. At level B a ditch c. 50 cm wide, is observed in the eastern part of the trench. The sewer pipe was dug through this ditch. It is supposed that it is the boundary of the cemetery for the poor people. On the 25th of November the level is lowered again to level C, which is at 49.50 m+ NAP. Again 50 cm of soil was taken out of the trench with the dragline. At level C a large pit is seen in the southeast part. For the rest only layers of raised soil were observed. Van Pernis mentions waist of stones, which he thinks originates of a roof. He states that the level looks very 'gloomy' with lots of fragments of limestone and other stones. They do not seem to be very interested in what they see. Two days later, at November 27th they finish the work at level C. They decide to work a bit faster and they do that by digging down immediately to 49.00 m + NAP, that is they took out 50 cm of soil out of the trench for the third time in a row to arrive at level 2. The numbering of the levels, as we will see, is related to a prefixed system of creating levels for the whole Vrijthof square. Level 1, situated between levels C and 2 should have been created at 49.30 m+ NAP. In the meantime they had dug out 2.80 meters of soil from the trench. On the 2nd of December they decide not to draw level 2, only photographs are made. They are still digging in layers of raised soil. A day later level 2 is finished. On the 4th of December the dragline digs down a new level at 48.60 m+ NAP. They skip level 3, which means that another 40 cm of soil is taken out. Of level 4 it is said by Ter Schegget that 'it is, like all previous levels, totally uninteresting. It shows late medieval finds without 'shocking pits'. Only once and a while there is a pit, (like a big one reappearing at all levels), for the rest horizontal layers and outcropping layers appeared. In the southern part of the trench they find a very smelly cesspit. On the 5th of December they still work in trench 3, but then they concentrate a few days on trench 4 and leave trench 3 until the 11th of December (fig. 3.14).

By this time it is clear that the excavation strategy consists of creating levels at every 20 cm from 49.00 m+ NAP on (which is level 2). It means level 3 will be at 48.80, level 4 at 48.60, level 5 at 48.40, level 6 at 48.20 etc. These levels are created without any reference to the stratigraphy in the trench. The chance that they will analyze the surface of specific layers, that is the surface of the square at a specific moment in time, is non-existent in this way.

(69) Entry of 25 November 1969 by Van Pernis in his diary, (70) Toebosch 2003, 160. (71) M. de Galan, 2006: De trots van de wereld. Michels, Cruijff en het gouden Ajax van 1964-1974, Amsterdam, amounts cited in a review of the book in NRC Handelsblad 17 March 2006 page 29.

There is no sign at all that they try to understand the stratigraphy before digging down for instance by making test pits or taking out the fill of more recent features like the cess-pit. The field technicians applied a rigid excavation strategy, which might be useful to excavate large settlement sites, in those days, but not to excavate a highly stratified site as the Vrijthof Square.

On December 11th Van Pernis states that they continued to work at level 4 but that there is little variation in the colour of the level because they were in the middle of a raised layer! Considerations such as these did not ring any bells and did not lead to a re-evaluation of the excavation strategy used. A few days later (December 15th) they start to dig down to level 6, for level 5 has not been drawn, probably because there is in their view nothing to be seen. Level 6 is at 48.20 m+ NAP. Again 40 cm of soil had been taken out without much ado, they arrived at 3.60 meters below the surface of the square. On the 16th level 6 was already finished on the 17th level 7 was created at 48.00 m+ NAP. The raised soil was mentioned again. On the 22nd level 9 (at 47.60 m+ NAP) was created, level 8 has been skipped, again 40 cm of soil had been taken out of the trench. Van Pernis mentioned a few pits that become visible. After December 24th work in trench 3 was stopped until January 14th when some minor activities took place. Then again work in the trench stopped until January 27th. Work started that day by taking out 50 cm of soil. This was necessary because of the frost in the soil. Ter Schegget remarked that this was a welcome action (in contrast to the normal procedure) because time was limited. In the western part of the trench the level was lowered until 47.20 m+ NAP in the eastern part until 47.00 m+ NAP that is as he states 'according to the scheme level 12'. At that level the fill of some pits were visible but the level was still too dark to be able to interpret them. Next level 13 was skipped and the trench was lowered 40 cm to arrive at level 14 at 46.60 m+ NAP, that is 5.20 meters below the surface of the square. There is no sign in the field technicians' diary that they hoped to find a relation with the hospital of Saint-Servatius situated just south of trench 3. At level 14 Ter Schegget speaks of a sensation. He found pits with a diameter of 70 cm! The pits were so deep that they rented a small hydraulic excavator to take out half the fill so that a section of the fill could be studied. Such a pit was excavated from level 12 downwards; it was 2.30 meters deep. After the fill had been taken out by the small excavator it was searched through for sherds and other finds. The plan was to excavate the remaining part of the pits according to their stratigraphy. Ter Schegget could not find a configuration in the pits. He hoped to be able to reconstruct the plans of buildings. On February 3rd level 15 was created at 46.40 m+ NAP. Not all large pits were visible again. Some pits have a core; an indication that they might be postholes, in one pit burned loam was found. Other large pits could be wells and, to their surprise, a few graves were found. The 6th of February level 16 (46.20 m+ NAP) was created. The southern part of the trench was now 'relatively clean', which means that no archaeological features were present anymore. One of the basic elements of the excavation strategy was to determine when they had reached the undisturbed subsoil. The diaries are full of references to this search and the relief at the moment they had found it in a trench. Usually the density of archaeological features diminished so that they could start with the '*afwerken*' (finishing) of the trench. This means that a section is made over the remaining individual features of which sometimes already a large part had been removed while lowering the levels in the trench. At level 16 another two skeletons were found. On the 9th of February Ter Schegget remarks that in the northern part of the trench more archaeological features are visible than in the southern part. One can only conclude that at the Vrijthof, north of trench 3 innumerable traces of habitation or other activities were present that have not been excavated. We know now that these are the remains of a settlement from the second half of the seventh and beginning (first half) of the eighth century, which is thus contemporary with the Vrijthof cemetery. On the 10th of February the trench was partly filled with water, which was pumped out to continue studying level 16. This was finished on February 16th, more skeletons were found. The level is lowered again. Level 17 is skipped and level 18 at 45.80 m+ NAP is the last one made for they are now certainly at the level of the undisturbed subsoil. They were now 6.00 meters below the height of the threshold of the main guardhouse (Hoofdwacht) and the square in general, at a level that must have been only a little lower than the early medieval surface! Creating this last level means that while the trench was full of settlement traces 40 cm of soil was taken out of the trench and thus also of all these traces. The standard procedure was to dig out the features before lowering the surface in the trench. Because there are no find numbers of level 16 except from two graves it means that this has not been done at level 16. In view of the speed developed, it is unlikely that the features were excavated well. Now it became clear that the medieval surface sloped down in an easterly direction and that the area to the east of the Vrijthof must have been lower than the area of the square itself. To the south the traces of habitation were less intensive, it is said, although the (11th?)12th century hospital stood there. To the north intensive traces of habitation must have been there at a slightly higher location. Even further to the north the remains of the Merovingian cemetery were present (which they knew, but had not started excavating yet). It must have been clear to the excavators that the area between trenches 3 and 4 must have been highly interesting, in fact the whole northern part of the Vrijthof was of great importance to archaeology. It was going to be destroyed while digging out the soil for the building pit for the underground car park. Finally, from February 12 to the 16th the pits at level 18 and the southern wall section of the trench were studied and drawn under bad conditions, for snow sometimes prevented the visibility of the section, and the cold must have had its impact on those working six meters below the surface. One of the last remarks on trench 3 is that they did not find any Roman traces, only medieval ones and that they were found at a much lower height than the Roman road.

Fig. 3.14
Lowering the excavation level in trench 4 with a dragline in the winter of 1969-1970. The photograph was taken from the basilica of Saint-Servatius.



The excavation of the cemetery in trenches 4 to 6

The Merovingian cemetery, found in the north-eastern corner of the Vrijthof square, forms one of the core elements of this volume on the Saint-Servatius complex. For that reason it is deemed necessary to deal with the excavation of the graves in more detail. What follows is an account of the excavation practices and the problems the excavators encountered. The story is told on the basis of the short entries in the excavation diaries and interview with Tom Bloemers. The entries in the diaries are in Dutch and will be cited literally, translations are given in footnotes.

The excavation on the Vrijthof Square started on may 19th 1969. Although graves had been discovered already in trench 1, which were considered to be of late medieval date, it was not before December 8th that the first indication for the presence of early medieval graves was found in trench 4. Trench 4 was opened up since November the 14th by digging out the top layers until level 1 situated at a height of 49,30 meters. As said before Van Pernis and Ter Schegget wrote their own daily reports, often on the same observations. I will use the entries of both.[72] On the 24th of November Ter Schegget wrote: '*Nadat de heer van Pernis, de heren van Es en Bloemers had gesproken werd besloten om voor 1 week een 2de dragline in te schakelen, welke in put IV, welke het eerst bedreigd wordt, de bovengrond tot op de skeletten van het Witte Vrouwenklooster af te trekken. We offeren dus alle tussenliggende vlakken op*'.[73] On December 4th he wrote: '*De dragline in put IV is begonnen om het vlak tot op de skeletten vrij te graven*'.[74] The next day he wrote: '*De dragline is in put IV verder gegaan op zoek naar de 14de eeuwse?? skeletten. Dit blijkt toch wel een probleem te zijn met zo'n grote kraan met een gewicht van 32 ton.*'[75] The question marks indicate that Ter Schegget is not wholly convinced of the date of the skeletons. What other date for the skeletons he had in mind is not clear.

On December 8th Van Pernis made the following observation: '*Voortzetting van ontgraving put 4, waar we de skeletten van het Witte Vrouwe Kloosterkerkhof naderen. Op de plaats waar we de Romeinse westoost weg verwachten een Frankische pot (dubb. konisch.)*.[76] To what extent this rings a bell with the excavators is not known for the

(72) I will quote their remarks in Dutch for their exact use of language is important, the flavour of which will be partly lost in translation. Translations are given in footnotes. (73) 'After mr Van Pernis had spoken to mr Van Es and mr Bloemers it was decided to rent another dragline for one week, which in trench IV, that is threatened first, has to remove all topsoil above the skeletons of the Witte Vrouwen monastery. We thus sacrifice all higher lying levels'. (74) 'The dragline started to dig down to the level with the skeletons'.

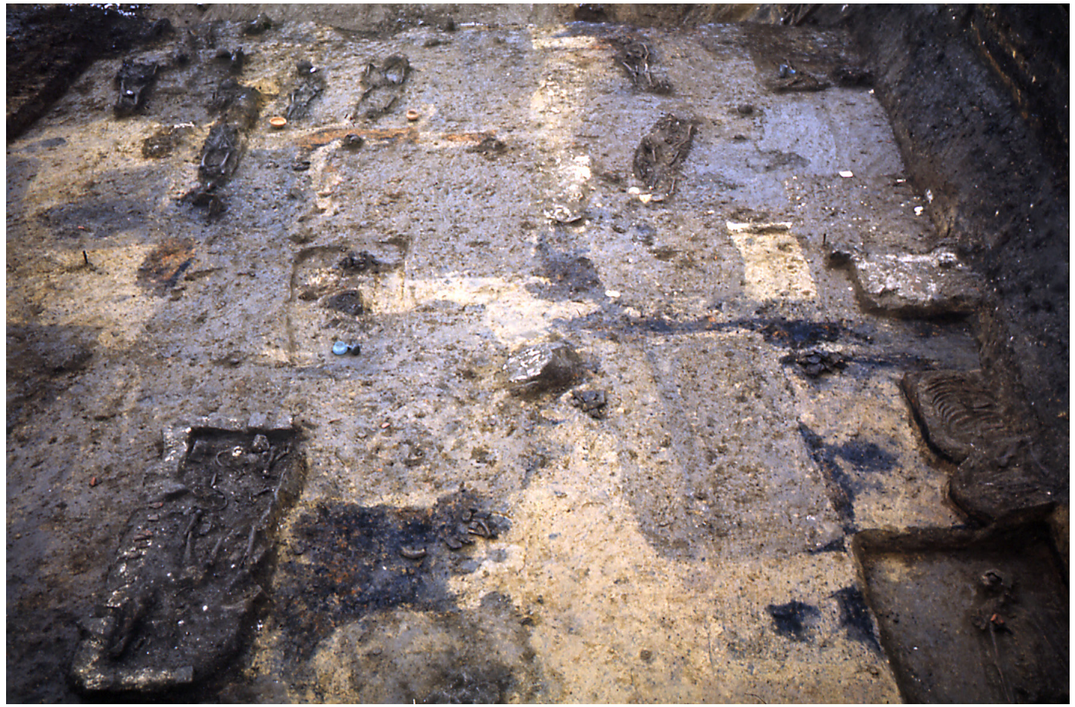
next day (December 9th) Van Pernis noted: '*Voortzetting van ontgraving van put 4, tot op de begravingen van Witte Vrouwen Klooster*'.[77] Obviously Van Pernis is convinced that the graves are late medieval. Ter Schegget added a few details in his report: '*In de noordwest hoek van de put komen verschillende grafkuilen al goed uit. Hier en daar komen reeds skeletdelen te voorschijn.*'[78] On Friday December 12th the excavation of the skeletons in trench 4 started, Van Pernis: '*Begonnen met het uitprepareren van de skeletten in put 4 noordelijk deel*', Ter Schegget: '*Begonnen met de uitprepareren van de skeletten in put 4. Met deze zeer nauwkeurige werkzaamheden zijn we de hele dag bezig geweest.*'.[79] After the weekend on Monday the 15th of December this work continues, Van Pernis: '*Voortzetting van ontgraving skeletten, waarbij een grote voorraadspot?*'.[80] This pot however was not related to the graves. After that day Ter Schegget does not mention the graves in trench 4 anymore. On the 24th of December he left the excavation for a holiday until the 5th of January. On the 23rd of December Van Pernis wrote: '*Voortzetting put 4 tot op vlak 3, waarin de skeletten van het Nonnenklooster.*'[81] On December the 29th he states that they started to lower the level in trench 4 and remarks: '*Verschillende ophogingsverkleuringen en beeindiging van nonnenklooster begraafplaats.*'[82] That no more graves appeared must have been a relief for him, for excavating graves was a very time consuming activity and time was the only thing they did not have. Until then they had excavated graves that according to them belonged to a cemetery of nuns that they already found in trench 1 of which they now established the eastern limit in trench 4. At that time they had not found early medieval graves although the find of a biconical pot should have been an early warning. Van Pernis went home to celebrate New Year on December the 31st to return already on January the 2nd. On January the 6th he noted: '*Voortzetting van put 4 vlak 6. In dit vlak talrijke verkleuringen en in het noordwestelijk deel een vermoedelijk Merovingisch graf met bijgave in de vorm van een flesje.*'[83] The next day he wrote: '*In het N.O.deel verschillende vermoedelijk merovingische begravingen, welke oostwest georiënteerd zijn. Een graf met verscheidenen kralen (glas) en een bronzen gesp.*'[84] It is however Ter Schegget's note in his diary on the 7th of January that expresses the state of mind of the excavators best: '*Ten tweede hebben we de rand gevonden van een nieuw grafveldje en gezien de diepte der niveaus en ook i.v.m. de vondsten in deze graven (n.l. bronzen gordelbeslag en gespen alsmede een uit glazen kralen vervaardigd bidsnoer) zouden deze Merovingisch kunnen zijn. En waarvoor de heer van Pernis, dan gedeeltelijk, in mei '69 is begonnen, hebben we nu in de laatste weken van de opgraving gevonden. Over pech gesproken!*'[85] The state of the mind of the excavators referred to their expectations at the start of the excavations. They probably hoped to find important new evidence on late Roman and Merovingian Maastricht in the surroundings of the *basilica* of Saint-Servatius. Until then they had found nothing from this period. The Merovingian cemetery was discovered! Clearly the excavators had in mind that after finishing the work in trenches 3 and 4 the excavation would stop. Now they found a Merovingian cemetery in what they thought would be the last weeks of the excavation.[86] Ter Schegget considered it bad luck that they found the cemetery so late. Ter Schegget does not mention the graves anymore until Friday January the 23rd when he states that during that week a third field technician, K. Greving, had made drawings of the Merovingian skeletons and had collected the finds. It was this week that Van Pernis spent his last week at the excavation. Van Pernis refers to the Merovingian graves on January 12th and on the 13th stating that they left the graves in situ while lowering the excavation level in trench 4. On January 21st he mentions the find of a Merovingian pot in the eastern wall of trench 4. His report on the 23rd of January just states that they lowered the excavation level in trench 4 to level 12. He made no reference at all to his departure from the excavation. Neither in the diary of Ter Schegget, nor in that of Van Pernis is any reference as to the plans how to tackle the problem of the Merovingian cemetery hidden behind the eastern wall of trench 4. Moreover in trench 4 they also found a highly interesting rectangular building that too extended beyond the eastern wall. Reasons enough to consider another excavation trench to the east of trench 4! On February the 2nd Ter Schegget states that on February 11th the building contractor will start digging out of the building trench for the underground car park by first removing all the soil dug out of the excavation trenches lying all over the Vrijthof square. After that they will start digging out the subsoil of the square. On the 23rd of January Ter Schegget mentions for the first time a trench 5: '*Omdat het transportbedrijf "Langen" in het weekend een uitrit voor de grindtransportauto's midden in de bouwput "Vrijthof" heeft gelegd zijn we voorlopig met put V in het oosten begrensd door deze uitrit.*'[87]

That it took a month to start the excavation of the cemetery is most probably due to the presence of spoil heaps on the location of trench 5. Then at last, one month later, during which work in trenches 3 and 4 continued, on Monday February 23rd the excavation of the cemetery starts under dramatic conditions. It is not clear why the ROB took so much time to start the excavation of the cemetery. When the excavators arrive on the scene they find out that the building contractor dug away part of the cemetery in the night of Friday the 20th! Ter Schegget: '*Van put V, dat is de oostelijke uitbreiding van put IV, hebben we de eerste 2 m bovengrond met de J.C.B. afgehaald. Hierna is de dragline gekomen en deze heeft verdiept tot boven de skeletten. Helaas is het gedeelte waar we vlak 1 op kunnen aanleggen niet groter dan 11 x 14 m. Afgelopen vrijdagnacht namelijk heeft een kraan van het grondtransportbedrijf ± 10 m in zuidelijke richting weggetrokken en is hier 0.30 m dieper gegaan dan ons eerste vlak.*'[88] This excavation strategy raises a number of questions. The topsoil was first removed with a hydraulic excavator, later a dragline was used to dig just above the skeletons. How did they discover the upper skeletons? Shouldn't we expect that using the dragline destroyed a number of them? Do we have a clear image of the upper horizon of youngest graves of the cemetery? On February the 24th the excavation of the cemetery starts. Then the diary of Ter Schegget almost exclusively deals with this excavation. The entries are too long to quote them at length. I will give those relating to the early stages of the excavation for they are of special relevance to evaluate the extent of the cemetery and the method of excavation. On the 24th ter Schegget wrote: '*In put V hebben we het eerste vlak geschaafd, maar nog niet getekend. Na nog 1x tekenen zal het wel duidelijker worden.*'[89] Ter Schegget probably meant was that they did not get a clear impression of the outlines of the various graves and that after cleaning the surface yet another time this will probably improve. Does this mean that not many skeletal remains were visible at first? On Wednesday February 25th he wrote: '*In put V hebben we het verlaagde gedeelte geschaafd, maar niet getekend. Het was te nat om enige aftekening in te zien. Wel hebben we hier een sarcofaag gevonden, van het gelijke type als die van de Pandhof. Put V vlak 1 hebben we geschaafd en getekend. Vele grafkuilen tekenden zich af vooral in het noordelijke gedeelte. In het zuidelijke gedeelte van vlak 1 zijn we nog te hoog om duidelijk de grafkuilen te onderscheiden. Er zijn zeer veel graven in vlak 1 en we zitten "raak" wat het grafveld betreft. 's Middags zijn we begonnen met het verdiepen van de grafkuilen en het vrijmaken van de skeletten. Deze hebben we ook schaal 1:20 getekend en wel op vlak 2. Er komen veel fraaie vondsten te voorschijn en het lijkt alsof dit gedeelte vroeger is dan de eerste graven die in de 2de helft van de 7de eeuw werden gedateerd.*'[90] The lowered part of the first line is probably the southern part of the trench that was dug away to some extent by the building contractor. A sarcophagus was found there, maybe the driver of the excavator stopped digging at the level where he found the stone sarcophagus. It is important to note the method of excavation. When the presence of a skeleton was established (probably because the upper part of a skull was visible) it was cleaned by taking away the surrounding soil. To what extent observations were made on the construction of the grave is not known. The skeletons, which were visible at level one and were subsequently cleaned, must have been in pits that should have been visible at level one too. However, the field drawing of level one does not show many skeletons. That is because they drew the skeletons, as stated, on the field drawing of level 2. At level 2, however, also the grave pits of a lower lying horizon of graves must have been visible after the removal of the surrounding soil. The drawing of level 2 is thus a bit confusing: it shows graves of different horizons: skeletons of level 1 and grave pits of a lower lying level. This has some consequences for the reconstruction of the different layers of graves (see below). Several slides show the situation described here at level 2.[91] See for instance slide 21582 (fig. 3.15). Many skeletons lie on top of small plateaus above level 2 and must thus have been related to grave pits observed at level 1. It is curious that at level 2 itself hardly any skeletons are visible.

On February 26th Ter Schegget philosophizes on the possibility to excavate the cemetery on the other (eastern) side of the exit for the sand trucks. On Friday the 27th the excavation is filmed for a news flash that evening.[92] Then, on March 3rd, Ter Schegget falls ill and only returns on March 16th. The one field technician that remained in the field made no daily entries in the diary. After his return Ter Schegget mentions that drawings were made of levels 2 and 3 in trench 5 and many finds were collected from the graves. He also mentions the discovery of a stone wall, that later appeared to belong to a Roman cellar. And finally he states that at level 2 a beautiful limestone sarcophagus with thin walls and no lid was found. However, no such sarcophagus appears on the

(75) 'In trench IV the dragline continued the search for the 14th century?? skeletons. This is obviously a problem with such a large crane with a weight of 32 tons.' (76) 'Continuation of the digging out of trench 4, where we approach the skeletons of the cemetery of the nuns of the Witte Vrouwen monastery. At the location where we expect the Roman west-east road a Frankish pot (biconical)'. (77) 'Continuation of the digging out of trench 4, until the graves of the Witte Vrouwen monastery'. (78) 'In the north-western corner of the trench several graves appear clearly. In some places skeletal remains already appear.' (79) Van Pernis: 'Start of the excavation of the skeletons in trench 4 northern part'.Ter Schegget 'Start with the excavation of the skeletons in trench 4. This very detailed work took all day.' (80) 'Continuation of the excavation of the skeletons, during which a large storage pot was found?. (81) 'Continuation trench 4 until level 3 on which the skeletons of the nunnery [are].' (82) 'Several layers of raised soil and the end of the cemetery of the nunnery.' (83) 'Continuation of trench 4 level 6. On this level numerous discolorations and in the north-western part a probably Merovingian grave with a grave find in the form of a small bottle.' (84) 'In the north-eastern part several probably Merovingian graves, which are oriented east-west. One grave with several beads (glass) and a bronze buckle.' (85) 'Secondly we found the limit of a new small cemetery and in view of the depth of the level and also the finds in these graves (such as a bronze belt fitting and buckles as well as a rosary of glass beads) they could be Merovingian. And now we found in the last weeks of the excavation that for which mr Van Pernis, partly, started to excavate in may '69. Speaking about bad luck!' (86) Remember: at the 7th of January they had not found the settlement traces in trench 3 yet. (87) 'Because in the weekend the transport company "Langen" created an exit for the lorries in the middle of the building trench 'Vrijthof" trench V will be limited in the east by this exit.' (88) 'Of trench V, that is the eastern extension of trench IV, we removed the top two meters of soil with the J.C.B. After that the dragline came in and lowered the level to above the skeletons. Unfortunately the area where we can create level 1 is not larger than 11 by 14 meters. Last Friday night an excavator of the transport company that removes the soil took away [soil] from c. 10 meters in a southerly direction and dug 0.30 metre deeper than our first level.' (89) 'In trench V we cleaned the first level but did not make a drawing. After another time of drawing it will be more clear.' (90) 'In trench V we cleaned the lowered part, but did not make a drawing. It was too wet to see any features. We did found a sarcophagus here of the same type as those of the Pandhof. We cleaned trench V level 1 and made a drawing of it. Many grave pits were visible especially in the northern part. In the southern part of trench 1 we are still at a too high level in order to be able to distinguish the grave pits clearly. There are many graves at level 1 and we clearly 'hit' the cemetery. In the afternoon we started with digging out grave pits and the cleaning of the skeletons. We made drawings of these on a scale 1:20 at level 2. Many beautiful finds appear and it seems that this part is earlier than the first graves that were dated in the second half of the seventh century.' (91) For instance slides 21663, 21582. (92) The film with a length of 54 seconds is still extant and probably very informative. However, it is in a bad condition and can only be viewed after restoration for which we had no financial means. It is in the archive of 'Beeld en Geluid' nr K37718. See http://www.beeldengeluid.nl/home.jsp (18 March 2006).

Fig. 3.15
Trench 5, level 2. One can see skeletons on low platforms related to level 1 and light brown discolorations of graves below in which no skeletons can be observed yet. They are at a lower level.



field drawings of trench 5. There are however photographs of two different sarcophagi. The rectangular one is probably the one meant here. After that no daily entries in the diary appear anymore, just general weekly overviews. In the week of 16 to 20 March level 3 in trench 5 is finished and work at level 4 started. Ter Schegget states that according to him they did not find the southern limit of the cemetery.[93] In the week of 23 to 27 March they finished the work on the cemetery at level 4 in trench 5 and continued to work on the Roman cellar. In this same week they started excavating in trench 6. Ter Schegget states that the highest lying graves in this trench are located at a greater depth than those in trench 5. He concludes on the basis of this evidence that the original surface is sloping down to the east. In the week of March 30 to April 3rd work in trench 6 was finished. The week after, the finds were transported to Amersfoort and the excavation quarters dismantled. It was not possible anymore to excavate the cemetery at the location of the exit for the sand trucks. That part of the cemetery disappeared with the subsoil on the sand trucks to a depot outside the town, where according to the field technicians something of an antiques market developed. As we will show in one of the next sections important parts of the cemetery were thus destroyed.

(93) Some notes by him will be discussed in the section on the limits and conservation of the cemetery.

4 The documentation and methods of analyses of the Vrijthof archaeological data

The excavators produced a varied corpus of documentation that formed the basis of our present analysis of the cemetery and stratigraphy of the Vrijthof Square. Moreover we interviewed J.H.F. Bloemers on April 21st 2006 and H. Ter Schegget and K. Greving on March 15 2010. The primary documentation available consists of texts, photographs, drawings and finds.[1] After the excavation various persons and institutions were involved in post-excavation work such as restoration, archiving and exhibiting finds. They produced documents that are useful to some extent.

Excavation documentation and finds

The excavation documentation consists of various reports, letters, drawings, lists, and so on.

First, there is a ROB dossier on the excavation containing correspondence with third parties, newspaper clippings, internal reports and accounts of the committee of the Town of Maastricht supervising the building of the underground car park of which Bloemers was a member for the duration of the excavation.

Second, there are the reports produced by the field technicians. They were written on a daily basis by Van Pernis from May 19 1969 to January 23 1970, by Ter Schegget from August 11 to August 22 1969, September 17 to October 10 1969, October 27 to December 24 1969 and January 5 to April 4 1970. The original hand written notebooks were available as well as a type written version made later. The information included a list of persons present, names of guests, weather conditions, the number of hours the digging machines were working and information on the features and finds made. The reports by Van Pernis are very short and hardly informative. Those by Ter Schegget contain more information and reflections on what was found.

Third, there are lists with short descriptions of both black and white photographs and slides made during the excavation.

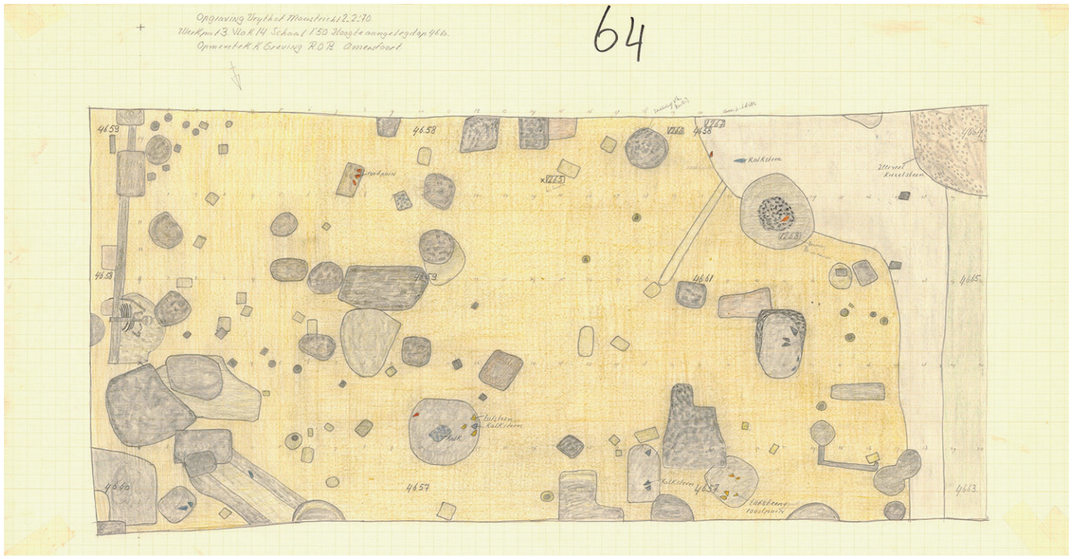
Fourth, there were lists of finds found in features and while creating the excavation levels with the digging machines and shovels. They have the form of small notebooks. Seven of them were present. For each find a find number, the date, the trench number, the layer and section are mentioned. Find numbers 1 to 1856 were created.

Fifth, many drawings were made during the excavation, first and foremost of the excavation levels and section walls of the trenches. These were made on millimetre paper on A0 format with pencil. Later the lines were overdrawn with ink although this was not done on all drawings. Most drawings were coloured with colour pencils (fig. 4.1). They are usually at scale 1:50, some details are at scale 1:20. The drawings of the excavation levels of the cemetery in trenches 5 and 6 and the Merovingian graves in trench 4 are at scale 1:20. The sections were drawn on scale 1:20. There are not many notes on the drawings as to the nature of the recorded features (see also figures in chapter 5).[2] Feature numbers were not given and a list of features was not made.[3] Find numbers were placed in or next to the recorded features. Grave finds are often described with a single word. Find numbers in graves without text indication are related to skeletal remains and other stray finds (intrusions) in the fill of the grave. These find numbers are thus used to indicate the grave as a whole.

Thirteen separate drawings of skeletons and related finds were made. These drawings indicate the location of the finds in relation to the body, and are very informative because, next to the location

(1) This documentation as far as it is available in digital way (digitized drawings and scans) and the documentation we produced will be deposited in EDNA: http://www.edna.nl/. (2) Neither are there many notes in the daily reports. (3) It was not customary to do this at that time. (4) In chapter 2 Panhuysen described the Vrijthof excavation as 'the beginning of a dark period of local 'treasure hunting' and illegal trading of archaeological objects from Maastricht'. (5) We did not include in this study

Fig. 4.1
The field drawing of level 14 in trench 3. The original scale was 1:50. The north is below. This drawing is by K. Greving who coloured the features much darker than Van Pernis did.



in the grave, they reveal the position in which the objects were encountered during excavation. Unfortunately these drawings do not cover all the graves with skeletal remains and finds. The location of the finds in the grave was identified on the basis of the field drawings.

Many sections of the walls of excavation trenches were drawn at scale 1:20, again on millimetre paper of A0 format with pencil and coloured in with colour pencils. Often several sheets are glued together. No layer numbers were given, and notes on the layers observed are scarce. The field drawings were all scanned (300 dpi), on the basis of which those of levels relevant for our research were digitized (AutoCad) and transported to Adobe Illustrator. The sections were digitized in Adobe Illustrator. The separate grave drawings (see the grave catalogue) were produced with the Adobe Illustrator documents.

Sixth, prints of black and white photographs and slides made during the excavation were available. These have all been scanned and used in the analyses (see below). Some of them are used in this publication. Many overview photographs of excavation levels and a selection of individual graves were taken. Only a few photographs were made of details of graves such as the location of beads. Some ensembles of beads were taken from the grave as a block. Photographs of these blocks of sand, loam and finds were taken after the excavation.

Seventh there are the finds themselves. The excavation and post excavation history of the finds is one of moving, insufficient care and theft. We could describe this soap at length but it does not add much to our analyses and we decided to work with the evidence we have. That consists of the extant finds, the finds that are lost but were drawn at an early stage by Ypey at the ROB or of which photographs exist and the finds of private persons ascribed to the Vrijthof excavation in Maastricht which were reported to the ROB and described and drawn by Ypey.[4] Finds which are lost (or rather that could not be examined by us) and of which there is no further information are mentioned as such in the catalogue. At present the finds and skeletal remains are deposited in the Provincial Depot for Archaeological finds in Limburg (Centre Céramique, Maastricht) where they are well taken care off.[5]

Post-excavation documentation

Ypey produced a post-excavation dossier. It contains drawings and photographs of finds probably made during the process of restoration and conservation. It also contains information on and drawings of the finds 'made in the spoil heaps' of the excavation and a number of drawings of objects that are now missing (see the grave catalogue).

the Merovingian finds that are described in general as 'found in Maastricht'. We will publish these separately for their origin is highly enigmatic. They need not originate from Maastricht at all. Some of these are in the National Museum of Antiquities in Leiden.

Various persons and institutions produced finds lists for different purposes. There is a booklet with finds that were present in the Bonnefantenmuseum in Maastricht. There is a list of finds in showcases, probably in the Bonnefantenmuseum. Some showcases seem to have been opened and a number of objects were stolen. 'Showcase III' and a 'large showcase' were not opened: all the objects in them are marked as 'present'. There is a list of finds per box in which the finds were stored (Bonnefantenmuseum). There is another finds list by the Bonnefantenmuseum that is dated August 25 1986 with finds present/absent, and there is a list of missing finds.

It is this corpus of excavation and post-excavation documentation we had to rely on in our analyses. The drawings and the finds provided the bulk of the information for our analyses of the cemetery, the other structures, and the stratigraphy of the Vrijthof Square.

The present analysis of the cemetery and stratigraphy

At an early stage of the analyses we decided to work from the bottom up and try to describe features in a 'neutral' way, that is: as little as possible influenced by preconceptions on the chronology and topography of cemeteries, buildings and infrastructure in this quarter of the town of Maastricht.[6] We tried to work independent of existing historical interpretations in order to provide 'independent' archaeological descriptions, dates and relations between features. We also tried not to work as archaeologists who add to the 'great history of the town of Maastricht' and 'prove' its mythical religious history.

Units, contexts and structures

From the beginning we decided to work with three descriptive levels: *units*, *contexts* and *structures*. The unit is the smallest observable archaeological element, for instance layers of the fill of a pit and the pit itself, an interface in Harris' terms.[7] In principle we started by numbering, describing and naming (that is interpreting) units. Units are in principle the elements from which finds were or should have been recovered. Different descriptive parameters were used for different types of units (layers and walls for instance). Next we used combinations of units to describe contexts. Contexts were numbered, described and named (that is interpreted). Contexts are for instance graves, postholes with various fills, pits, floors, walls. Regarding the graves, we skipped the description of units and started with describing the contexts immediately. Describing units in graves turned out to be a too time consuming activity in relation to the benefits.[8] This was different for the analyses of the section walls and the architectural remains where we started with the identification of units. After the identification of units and contexts, structures (such as buildings and cemeteries) were defined on the basis of a combination of contexts. Evidently, an interpretative element is implied from the onset of analysis. This interpretative aspect gained in importance with the definition of the larger elements (contexts and structures).

During the work process it was decided to amend this system in relation to the analyses of the building remains. A new level was introduced between context and structure: *the element*. An element is an ensemble of contexts that is still not a structure (building). For instance it turned out that several parts of a single wall were found in different trenches, and that these parts were each defined as a context. Several of these parts of walls (contexts) were then defined as an element (a wall) that together with other elements (other walls) or contexts formed a structure (a building).

In order to describe units, contexts, elements and structures databases were designed and created. This turned out to be a painstaking and time consuming process in the early stages of the project both in an archaeological and technical sense, and we were and are not really satisfied with the result.[9] At the same time a grave finds database was created. Again the result was not entirely to our satisfaction. Creating this complicated finds database was the result of fundamental decisions. We were worried to some extent by the sacrosanct belief in seriation, the underlying classifications of objects and the resulting typo-chronological schemes developed in German and French archaeology. The underlying classifications of objects on the basis of which the typo-chronology schemes were produced were developed with type defining criteria of which it was (often inexplicitly) thought that they had chronological significance. We can explain this by taking pots as an example. In the system developed by Siegmund the relation between various measurements of pots (height, belly diameter, etc.) dominated the classification and thus typo-chronology of pots. From an ethnographic perspective in archaeology it was astonishing that neither colour nor absolute size mattered.[10] The groups of pots (from the Vrijthof) created according to Siegmund's classification criteria showed internal variation to such a degree that the necessity of another approach became obvious.[11] Moreover, another typo-chronological system considered decoration more important as defining criterium, which resulted in another classification scheme and typo-chronology.[12] These observations made us decide to record a wide range of variables (the entries in the find database) that made it possible to create various groups of pots (and other categories of finds) on the basis of different (combinations of) criteria, and not to ascribe the pots exclusively to one (Siegmund) type. In this way we would also able to analyse the combination of elements, for instance the relation between colour and size, decoration motives and colour, form and decoration, etc. It was also decided to do research into the meaning of typo-chronological systems in relation to the many dimensions of the relation between material culture (the grave goods to be) and persons. This resulted in the dissertation of M. Kars (2011). The creation of the database and the entry of all the data did cost a lot of our time.

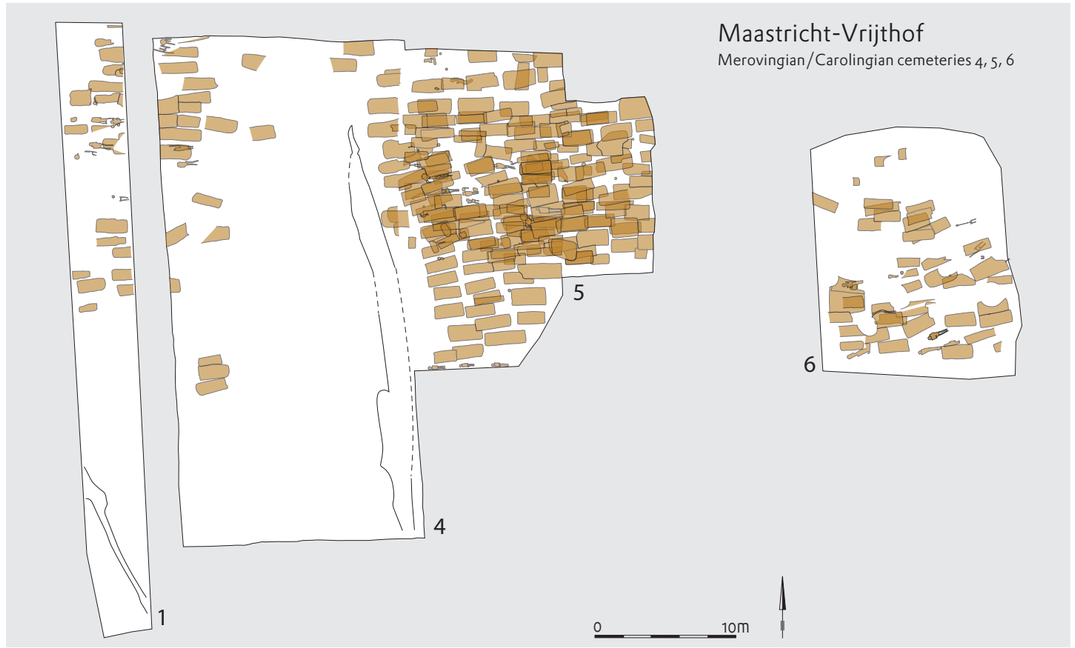
In the meantime we started collecting the primary documentation, the finds and skeletal remains. This also took much more time than estimated. At the time the project started it was not self-evident that all this material was to be handed over to archaeologists at another institution or that finds and skeletal material could immediately be found. The skeletal material of the Vrijthof excavation could not be found and we were already at peace with the thought that we would never be able to study it. After two years, that is half way the project period, it turned up! Working on it became a stressful experience. After obtaining the necessary documentation the analytical work could start. It is important to realize that we worked on the basis of drawings and documentation and not on the basis of own observations. We tried to describe the units, contexts, elements and structures in a form that refers to what was recorded on paper rather than that it is described as 'being present'.

Creating plans of graves and the cemetery

One of the first jobs was to create plans of individual graves and the cemetery as a whole. At an early stage it was decided not to include trench 2 into the analyses of the Vrijthof cemetery but to include it into the Servatius cemetery on the hill (Pandhof excavation 1953/54 and Saint-Servatius Church excavation 1981-1989).
First the relevant drawings of excavation levels were digitized in AutoCAD.[13] All features indicated on the drawings were digitized including find numbers and remarks made by the excavators. Next the levels of each trench were brought in relation to each other vertically and horizontally on the basis of the local measuring system of the excavation.[14] Each level was given a different colour in the AutoCAD files. By switching levels on and off the features on different levels could thus easily be compared. One could observe which graves appeared on more than one level and on how many levels. Of course it turned out that drawings of graves at various levels did not overlap each other exactly. Information from various levels had to be collected or compressed in a single drawing in order to create a plan of a grave. We call this the 'composite drawing' of a grave. Creating these composite drawings is an interpretative activity. For the Vrijthof cemetery this was done by Theuws and Smal. Creating composite drawings means switching all the time between computer screen (with the digitized excavation drawings) and original drawings that contained information not digitized such as colour differences.[15] The available photographs of the excavation levels, graves and details of graves were consulted as well. Notes were made on the decisions taken while making the composite drawing in order to make this interpretative exercise transparent and available for project-members. It frequently appeared that observations on different levels were not easy to combine. Moreover notes were made on characteristic elements of the graves, the skeletal remains recorded, the find numbers assigned to the grave and above all the stratigraphic relations with other graves and contexts. All this information was put in the graves/context database. In the course of time a new plan of the cemetery was created on the basis of the composite plans of graves and other contexts important for interpreting the cemetery such as the Roman cellar and later dug in pits. Another important element was that each grave was assigned to the excavation level on which it was first recorded. Many graves were observed at one level only, others at two or more. Graves observed at level 1 in trench 5 but dug in deep and reappearing on the drawings of levels 2, 3 and 4 as well, were thus assigned to level 1. However many graves were observed only later at levels 2, 3 or 4. This does of course not mean that graves observed at level 4 only could not have been dug from level 1 in the past. If this is not visible anymore, it might be due to the recurrent burying on the site at later times. At first sight this seems to suggest that graves at level 1 were younger than those at level 4 but this is neither true.[16] The comprehensive plan of the cemetery thus shows all graves (fig. 4.2) in an almost undecipherable way, but it is possible to separate the graves observed at various levels and various chronological phases (see chapters 11 and 12). Using the information on levels and stratigraphic relations a Harris matrix was created in which we show the vertical distribution of graves and their relations (fig. 11.1).[17] After the creation of the individual composite plans, the comprehensive cemetery plan and the Harris matrix various analytical problems presented itself for the cemetery site was located on a slope along the Roman road and had been subject to various interventions in the subsoil which may have led to a certain level-

(6) Neutral is put between brackets for it is an established fact that 'neutral' archaeology does not exist as such. We are all to some extent influenced by conceptions, societal influences, past narratives, power relations, etc. (7) Harris 1979. (8) For instance: on the basis of the available documentation it was not useful to describe various elements of the fill of the grave or various elements of the fill of containers. Moreover it was often difficult to establish the difference between the fill of the grave pit and those of containers. (9) The contexts database of the cemetery and its description will be archived in EDNA (see note 1). Moreover research by D. Small on grave structures in the context of an MA in archaeology laid bare the problems involved. The database was later adjusted in the context of a new project on Merovingian cemeteries (the Anastasis project), but our dissatisfaction still exists. (10) See for instance Miller 1985. (11) See also fig. 6.41 in Theuws/Van Haperen 2012 with pots of type Kwt 2.43. (12) Müssemeier/Nieveler/Plum/Pöppelmann 2003. (13) Thus excavation levels 3, 4, 5 and 6 of trench 1, excavation levels 3, 6 and 7 (+ details) of trench 4, excavation levels 1, 2, 3, and 4 of trench 5 and excavation levels 1 and 2 of trench 6, and excavation levels 9, 12, 14, 15 and 16 of trench 3 were digitized. All other levels that did not contain information on graves were not digitized in AutoCAD. Later all levels from trenches 1, 3, 4, 5 and 6 were digitized in Adobe Illustrator. (14) Later the trenches were geo-referenced to the national ordnance survey system. (15) The drawings were unfortunately not scanned at that time. (16) See chapter 12. (17) We tried to rearrange the graves in such a way that contemporary graves were at the same height in the Harris matrix but this proved impossible to do because of the many graves that cannot be dated accurately.

Fig. 4.2
A plan of all graves in trenches 1, 4, 5 and 6. Scale 1 to 400.



ling of the terrain (see chapters 5 and 6 for a detailed discussion of these problems). This levelling probably affected the higher lying parts along the road. This makes it very difficult to reconstruct the topographical development of the cemetery (see chapter 11). Finally the composite drawings and the comprehensive plan were imported in Adobe Illustrator to create nice illustrations for this book (see the grave catalogue). A map (available on different scales) was made with just outlines of contexts so that the distribution of various finds, observations on grave structures and buried persons over the cemetery and the topo-chronological development of the cemetery can be presented.

The analysis of the excavation sections

Available documentation

The analysis of the excavation sections (M. Dijkstra/F.Theuws) contributes to an understanding of the environmental development of the Vrijthof Square and to insights in the chronological sequence of various forms of human activities at this location. Twenty field drawings of the trench walls (sections) were available. They are for the majority drawn at a scale of 1:20, and are coloured. The drawings cover 401.5 meters of trench walls, and an additional 8.30 meters is covered with a number of drawings of details. The height of the majority of the drawn sections measure 5.5 to 6 meters. For each excavation trench a number of section drawings are available (fig.5.3):

Trench 1

Of the four trench walls in trench 1, three drawings were available (drawing nrs. 18, 21 en 9428). Two detail drawings (nrs. 19 and 20) were made of the northern part of the east-west section, which contained the successive layers of gravel of the Roman road and parallel ditches, 2½ month after the trench was dug. One of the drawings is at scale 1:10.

Trench 2

All the four walls of this trench were drawn (drawing nrs. 50-53). A drawing of a part of a bank left standing 'in the middle of the southern part of the trench' (nr. 31) is also available. The exact location of this section is not indicated, but it can almost certainly be reconstructed at 7.30 meters north of the southern section on the basis of the layers of the east-west section.

Trench 3

Of this trench only the southern wall section was drawn. This drawing ends where a bundle of electricity cables was located (nearby the angle in the south-western corner). This drawing was elongated with a length of nearly 18 meters in the last week of the excavation. The expansion of the building pit offered the opportunity to draw a west-east section. This drawing was archived in four separate drawings (nr. 67A-D). The drawn section was mirrored thereafter, and connected to the existing drawing of the southern section in trench 3. The exactness of this connection is uncertain; it was not recorded on the overview of drawn trench walls on the excavation plan. A photograph taken during the week the last section was drawn offers a good indication of the section. Because of time restraints, only major differences were recorded of the most recent raised layers.[18] The bottom part of the section was dug in an angle of 45° due to safety considerations. The pits present in this lower part of the section were therefore cut through in an oblique angle, which made it difficult to decide from which layer they were dug in or which layer their base reached (see also chapter 5).[19]

Trench 4

Of this trench two drawings of sections are available: those of the eastern and northern trench walls (drawing nrs. 81-82). Three pencil drawings of the southern part of the eastern section (82B, D en F) also remain; they appear to be first drafts according to the daily excavation reports. They are significant for the understanding of the sequence of the gravel layers (gravel paths) and the absolute level of the top of the interface of a number of large pits. The southern part of the eastern section was 'cleaned' for a second time, and on the final drawing this part shows three differences with the three drafts: the layer of the 'second gravel path' (chapter 5) is not divided in two layers anymore, and the interface of the most southern large pit at this level (context 449) is on the final drawing older than the second gravel path, in contrast to the two sketches where the interface is even younger than the first layer of gravel. Also, this large pit moved to the south approximately 60 cm, apparently due to the second analysis of this part of the section.[20]

Trenches 5 and 6

Drawings of sections are not available for these two trenches. This was certainly related to time constraints since the final date of the Vrijthof excavation was coming in sight and the Merovingian cemetery, discovered in these trenches, still had to be excavated (see chapter 3).

Trench 7

This trench (identified as trench 5 during the excavation)[21] is in fact a trench for a modern sewer system of which the western wall is drawn (nr. 9430).

Eastern wall of the building pit

The drawing of the eastern wall of the building pit comprised 65 meters (drawing nr. 93). It was drawn during the last week of the excavation, after the building pit for the car parking reached a depth of eight meters below street level. The southern limit of the drawing was determined by the commencement of disturbed ground. The vertical scale is 1:20, the horizontal scale 1:100. The archaeologists did not clean the pit wall completely; the layers were only thoroughly examined at seven points, on the basis of which the parts in between these points were reconstructed. The upper 3.5 meters of modern raised layers were not recorded. The goal of this drawing was to determine the course of the lower '*komlaag*' (see chapter 5).[22] The position of this section can be established with the recorded intersection with the southern section of trench 3 (fig. 5.2).

The interpretation of the excavation sections

In line with the common practice at that time, the layers and features were not numbered on the field drawings of the levels and sections. Only find- and (soil) sample numbers were indicated on the field drawings of the Vrijthof excavation. The descriptions of the layers and features on these drawings are restricted to general definitions. These relate to colour and texture and the most distinct 'additions'. Examples of these descriptions are: 'grey ground', 'dark ground with relatively much gravel', 'yellow loess', 'white loess', 'marl sand', 'dirty yellow sand', and 'brown yellow dirty loamy clay'. It is however not completely clear what was meant with '*löss*' (loess) and '*leem*' (loamy clay). A general distinction is made between aeolian 'loess' and other loamy clays, not deposited by the wind.[23] The excavators did not distinguish between different loamy clays, neither did they between loess rich with chalk, loess and loamy clay loess, probably because one expected to deal only with the geological young variant (the loamy clay loess), but also because standardised descriptions were not commonly used among archaeologists. Moreover, the geological analysis of the site was not executed due to the already mentioned time constraints.[24]

The colours and descriptions given to the distinctive layers made it possible to identify the layers which were without descriptions. Only the distinction between sand and marl layers was difficult to make; they were both coloured yellow.

The lower, natural, layers were not analysed by geologists. One was predominantly in search of the '*vaste grond*',[25] what provided the excavators some grip on the excavation since traces of human activity could be presumed absent in these soils. The physical geographers O.S. Kuyl (State Geological Service, Geological department Heerlen) and J.N.B. Poelman (Service for Soil Survey, Wageningen) visited the excavations on a few occasions. They made comments on the lower layers of the southern section of trench 3. A. van der Werff took four diatom-samples.[26] The layer rich with humus at the bottom of the depression was sampled for pollen analysis, which however did not provide reliable data.[27] Together with the results of better documented excavations and observations in the immediate surroundings of the Vrijthof, a reasonable complete picture of the nature of the layers can be reconstructed, for which especially the results of the recent excavation

(18) Daily excavation report Ter Schegget 13-02-1970. (19) Daily excavation report Ter Schegget 12-02-1970. (20) The daily reports do not refer to this pit specifically. (21) Daily report Van Pernis 16-12-1969. (22) With *'komlaag'* they probably meant a deposit in a depression. (23) De Bakker 19902, 167. (24) Personal comment J.H.F. Bloemers, november 2, 2004. (25) *'Vaste grond'* is undisturbed non-anthropogenic soil. (26) Personal comment J.H.F. Bloemers, 2 november 2004; A note was made on the drawing of the section. (27) Zagwijn 1971 (unpublished report).

at the Vrijthof square provided indispensable information (see chapter 5).[28]

Additional information for the interpretation of the section drawings

Apart from the drawings, photographs of the sections are also available. These appeared in a number of cases to be very informative, and added to the interpretation of the layers on the basis of the drawings. They showed that especially Van Pernis systematically coloured everything to light including the very dark fill of deep pits.

The field drawings of the levels made it possible to identify and interpret a number of features identified in the sections. The relation between the drawings of the levels and the drawings of the sections was not always obvious because the levels and sections were interpreted and drawn separately, thus without comparing them during the excavation.

The daily reports include a number of general descriptions of the sections. These were mainly written down when Bloemers joined the excavation. These descriptions refer to a number of specific issues concerning the interpretation of the sections. These descriptions can be found in the following reports:trench 1: 13-08-1969; trench 2: 08-12-1969; trench 3: 13/20-02-1970; trench 4: 06/09/13/15/20/21/23-01-1970 + 10-02-1970 (bottom layers).

The dating of the sequence of layers depends on the dating of their finds. A total of 15.000 find numbers, a number much higher than expected at the start of the project, were separated in various categories and recorded in a database by M. Dijkstra, who continued and completed the first analysis by W. Dijkman. This exercise produced the first complete list of finds after the excavation of the square in 1969/70. For the first time a complete overview of the distribution of Roman, medieval and post-medieval finds was available for the Vrijthof Square. The majority of the finds were Roman, dating to the first-third century AD, of which it was known that they originated from the *vicus* along the Roman road. The Roman finds were not studied in detail for the Servatius project, but the find numbers and their contents are sorted out and available now for further research.

The find numbers dating to the early Middle Ages were relatively well represented. These finds indicate that there was habitation at the Vrijthof square, next to the already known use of this location as burial ground (see chapter 5).

Connecting the dated finds with the identified units (the smallest identified features in the sections) provided a more detailed insight in the development of the stratigraphy. The post-Roman finds recorded during the excavation of the levels were also combined with the stratigraphy of the sections, foremost because the sections alone did not always contain significant numbers of finds. Trench 2, located adjacent to the outer wall of the church apse, is not included in the analysis. It rather belongs to the Servatius cemetery and its surroundings.

The chronological phasing of the excavation sections

An important tool for establishing the sequential order of layers and features is the construction of a so-called 'Harris-matrix' (after E.C. Harris who developed this method for the relative ordering of archaeological layered features in 1973). De main principles of a Harris-matrix are:

1. A unit number is assigned to the smallest identifiable features.
2. A unit is younger than, older than, or contemporary with other units.
3. A unit number is only assigned once. The parts of one layer divided by younger features receive different unit numbers for interpretative and practical reasons.[29]
4. Each layer or structure has its own surface (*layer interface*), with a similar unit number to the associated layer or structure, because they form one stratigraphic unit.[30]
5. The boundary of a pit, ditch, demolished wall, or another archaeological structure is assigned a separate unit number (a *feature interface*) because it forms an isolated 'layer'. They can be part of a phase (of considerable time) other than the phase of the fill of pits, use of walls, etc. Feature interfaces are represented with a lozenge-shaped symbol in the matrices.
6. If layers are separated after their formation, they can be considered stratigraphically similar.
7. If layers were separated during their formation, they are not stratigraphically similar (for example two deposition layers at each side of a wall). They can, however, be contemporary and thus be dated to the same phase.
8. Only the direct stratigraphic relation between two units is indicated in the Harris-matrix: that is only the first connection beneath, above, or similar to the unit in question.
9. Unit numbers which are only identified as 'similar to' can 'float' in the matrix. Their relation older/younger than, is only defined on the basis of the units they are similar to.

A unit can also be 'probably similar' to another unit. These relations are indicated with an 'equals' symbol.

For practical reasons it was decided to number the layers/features from top to bottom, thus from young to old, in the Harris-matrix. It compares more easily to future excavations in the surroundings, since these will incorporate the production of a Harris-matrix in the excavation process and will thus start numbering the layers from top to bottom. Individual sets of unit numbers were assigned to the layers and features of each trench. These sets are:

Eastern wall building pit:	1-1000
Trench 1:	1001-2000
Trench 2:	2001-3000
Trench 3:	3001-4000
Trench 4:	4001-5000
Trench 7:	7001-8000

The numbers between square brackets in the texts refer to the unit numbers in the various sections. The Harris-Matrix does not include datable finds; it only serves the construction of a sequence of units. Difficulties encountered with the set up of Harris-matrices some time after the excavation finished concern specific stratigraphic problems or inconsistencies that were overlooked during the excavation. Inconsistencies (units without connections) in the Harris-matrix are the result.[31]

The drawings of the sections were, however, of reasonable good quality and the layers were to a great extent horizontal, what made the set up of the matrices relatively unproblematic compared to other 'old' excavations. Nonetheless, the number of layers and features was high what made it an overall extensive exercise. Crucial issues with regard to for example the identification of the heights from which important features (foundations or pits) were dug down were to some degree discussed during the excavation. These considerations, and the comparisons with the drawings of the excavation levels, were included in the final decisions regarding the sequential order of layers and features as recorded in the Harris-matrix. The connections between the layers in the different matrices were the least obvious.

The identification of the units

The original drawings of the sections were duplicated and used as 'work copies' in order to assign unit numbers to the smallest identifiable features.[32] The units were numbered stratigraphically, so that the sequences could easily be identified in the Harris-matrix. The layers were sporadically not completely indicated on the field drawings; this was because the division between layers could not always be observed or because of negligence. These interruptions were reconstructed and completed on the 'work copies' of the sections, in such a way that it did not corrupt the stratigraphy. Each unit was recorded in a database, which contains information about location, the substance composition of the layer, the unit type, context and structure, date, phase, height NAP, thickness, and the relations with other units and finds.

Relation of the units with the finds

Of the 1855 find numbers, 124 (6.7%) could be linked to a layer in the section drawings and provided a *terminus post quem* date for the associated layer. The remainder of the find numbers are for the majority linked to the excavation levels, which were as good as possible, linked to layers identified in the section drawings. For the finds from raised layers present over a considerable surface this was rather unproblematic. Finds from layers and features not connected to the trench walls, could be assigned a specific date range on the basis of dated features below and above them. The relation between datable finds and the identified units in the sections provides a first chronological interpretation of the stratigraphy.

Units, contexts and structures

The units which are similar or which imply a set of associated and contemporary actions, such as graves, a raised surface of a road or a posthole with fill of pit and post pipe, are identified as contexts, to which context numbers are assigned. Multiple context numbers combined can form structures (with structure numbers). Examples are buildings, composed of walls with different context and unit numbers, or various construction phases of a road, etc. Both contexts and structures can be present in more than one excavation trench, and are dated according to the available date ranges for the units and/or structures.[33] The context numbers were only assigned to the sections after a series of context numbers was assigned to the cemetery.

Phasing

A chronological phasing of the environmental development and the sequence of observed human activities can eventually be established on the basis of the available stratigraphy, the datable finds, and the identified contexts and structures. The phases are constructed from the bottom of the matrix to top. Developments within a phase are identified as sub-phases. Inserting a phase in the Harris-matrix is possible through horizontal lines, primarily where the dating of units or contexts is considerably certain. As a phase contains more or less units, a replacement of units to the top or the bottom will occur. It must be taken into account that the final phasing of units with a relatively broad date range in between two clearly dated units remains uncertain.

Analysis of the grave goods/finds

The analyses of the finds from graves by Kars was basically carried out starting from three sources: the finds themselves and the find numbers indicated on them, the list of finds created during the excavation and the assignment of find numbers to contexts by Theuws and Smal.

The first task in the analysis of the finds was their description on the basis of relevant variables which were at first extracted from the works of Siegmund (1998), the Franken AG (2003) and Legoux, Perin and Vallet (2004). Where possible, these variables were supplemented with information from other publications (see chapter 10 for a detailed discussion on the theoretical and methodological backgrounds of the classification and dating of the finds and grave goods). The variables that define the characteristics of each find groups were found in all of these publications and became the entries in the finds database, which was under construction during the first stage of the finds analysis. The

(28) Dijkstra/Flamman 2004. (29) However, if the identified parts are clearly similar (belong to the same layer) a similar number can be assigned to them (see for example Harris 1979, figs. 32 en 33. (30) It was proposed to number these *layer interfaces* separately, but this would cause unnecessary duplications of the matrix. Considering the contemporary use of the surface of different layers is in our view only useful in a later, interpretative, stage of the investigation. (31) Harris 1979, 91. (32) At the time the project started no usable scans were available. (33) Harris 1979, 87.

finds database consists of general categories of find groups such as pottery, glass, weaponry, jewellery etc., further specified with sub categories such as biconical pots and dishes for pottery and seaxes and lances for weaponry (table 4.1). For each sub category a database form is available. This form consists of entries that are considered to be relevant variables for the description and classification of the finds. The eventually assigned types (Siegmund, Legoux/Perin?Vallet, Franken AG, etc.) and associated dates can also be entered in these forms of sub categories. It was decided to create a manual alongside the database, because the desc riptions of the variables were not always possible to interpret unambiguously. The database was also designed as an instrument for educating students and as a tool for archaeologists outside the projects working with Merovingian finds. This required a clear-cut manual of all the identified variables for each sub category of finds.
Figure 4.3 shows an example of a find of which a number of the descriptive variables (and thus database entries) are explained and illustrated in an unambiguous way.[34] This extended and richly illustrated manual is a 'side effect' of the analysis of the Vrijthof finds and will be made available for students and as a publication at one point.

Eventually, all the finds were included in the database and entered according to the defined criteria. The description and typo-chronological analysis of the finds resulted in a descriptive catalogue of finds. It appeared that some of the recorded finds were missing from the available collection. Some of these finds were drawn and/or photographed and incorporated in the Ypey-archive; these reproductions made it possible to describe and analyse the finds and, when the find number was recorded, to assign them to a grave. Some references to specific finds were found in the documentation for which unfortunately no images were available. These were entered into the database and assigned to a grave but could not be described more precisely than 'beads', 'pot', etc., and could thus not be dated.

The initial dating of the individual graves was accomplished by comparison of the dates of the find per graves (see chapter 11 and the introduction to the grave catalogue). Later the dating of graves was compared with the few 14C dates and with their stratigraphic relations to other dated graves (see chapter 14). Altogether, the find analysis resulted in a descriptive chapter of all the finds per sub category. These descriptions were based on the characteristics that were entered in the database, but in this section comparisons were made with similar finds from other cemeteries, the association of finds within a single grave were discussed, the identification of the grave goods assemblage as feminine, masculine or neutral was made, and specific characteristics and discussions in the available literature were referred to. Next to this extended discussion of the finds, the key characteristics, type assignations and date ranges of each find number were included in the grave catalogue in which also the drawings and photographs of each find are depicted. Where relevant, the photographs and drawings are also used in the descriptive discussion of the finds.

All finds were drawn by hand on calque paper sheet on the basis of the original object by B. Donker. Later these drawings were scanned (.jpeg files). Because we soon learned that next to the typological description of objects their 'quality' was also important, for instance to understand the difference between the Vrijthof cemetery and the Servatius cemetery, we decided that next to making drawings of each object it was necessary to make photographs of them all (.tiff files). This was done by A. Dekker. Differences in the quality of pots for instance that are difficult to measure can thus be shown. Finally more detailed analyses of a selected series objects were made in order to define the position of the Maastricht finds in general distribution patterns of Merovingian material culture.

Apart from the descriptive discussion of the finds, L. Van Wersch carried out scientific analyses of the glass vessels and Chr. Brandenburg analysed the textile remains on the objects. Both contributions are included in the chapter on the finds.

Analysing the skeletal remains

The skeletal remains of the Vrijthof excavation were found only two years after the project had started in the store rooms of the ROB. They came to us in small oblong wooden boxes made especially for them. The quality of the bone material was better than expected. The bone material was analysed by R. Panhuysen and L. Smits using the current methods in osteo-archaeological research. The results were brought together in a separate database. The basic results on individuals are mentioned in the catalogue. A more detailed analysis of the skeletal material will be published along with the material from the Pandhof and Basilica excavations.[35]

New documentation produced by the RCE and the Saint Servatius project

The new digital documentation produced by the RCE and the Saint Servatius project will be deposited in EDNA (Electronisch Depot Nederlandse Archeologie www.EDNA.nl). The non-digital documentation will be handed over to the Provincial Depot for Archaeological finds in the Province of Limburg.

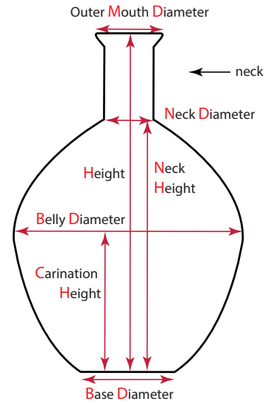
RCE
- Scans of all field drawings
- Scans of all prints of black and white photographs and colour slides

(34) A separate set of variables was defined for decoration. For the paste only very crude entries were created, like 'fine ware', 'coarse ware' etc. (35) See also R. Panhuysen 2005.

Table 4.1
Table with the classes and subclasses of grave finds in the grave finds database. New subclasses can be added.

Class	Sub class
Animal bone	Animal bone
Belt and Strap fittings	Back plate
	Belt stud
	Counter plate
	Plate buckle
	Plate various
	Simple buckle
	Slotted plate
	Strap end
	Strap loop
Bucket	Bucket
Coin	Coin
Copper-alloy bowl	Bowl
Dress accessories	Belt pendant / Purse contents
	Bracelet
	Brooch: bow
	Brooch: disc
	Brooch: equal armed
	Brooch: miscellaneous early
	Brooch: rectangular (late)
	Earring
	Finger ring
	Necklace element: bead
	Necklace element: coin
	Necklace element: metal elements
	Necklace element: pendant
	Pin
Glass vessel	Beaker
	Bottle
	Dish / Bowl
	Drinking horn
	Glass fragment
	Jar
	Jug
	Palm cup
	Stemmed glass
Horse gear	Horse bit
	Spur
	Stirrup spur
Indeterminate fragments	Indeterminate fragments
Miscellaneous object	Miscellaneous object
Mount	Mount
Pottery vessel	Beaker
	Bottle
	Dish / Bowl
	Fragment
	Jar
	Jug
	Plate
	Pot
Rivet / nail	Nail
	Rivet
Scabbard	Scabbard
Seed / nut	Seed / nut
Shell	Shell
Stone	Stone
Unidentifiable object	Unidentifiable object
Utensils	Comb
	Comb case
	Fire steel
	Key
	Shears
	Spindle whorl
	Tweezers
Weaponry	Ango
	Arrow
	Axe / Francisca
	Chopper
	Knife / Seax: foldable knife
	Knife / Seax: knife / Seax
	Lance
	Shield boss
	Shield grip
	Sword

Fig. 4.3
An example of a drawing in the manual of the finds database with indications of the measurements to be taken from a pottery bottle.



Saint Servatius project
- Digitized field drawings (AutoCAD)
- Plans of graves and cemeteries (Adobe Illustrator CS5 and CS6)
- Explanatory texts on selected photographs made in the field (MS Word)
- Maps on paper with indication of the areas of excavation levels photographed
- Ink drawings of finds on transparent paper
- Scans of drawings of objects (.jpeg)
- Digital photographs of objects (.tiff)
- Various lists with observations in daily reports (presence, number of people employed, dates of excavation etc.) (MS Excel)
- A grave finds database (Ms Acces)
- A context/graves database (MS Acces)
- A skeletal material database (MS acces)
- A manual for the finds database (MS Word)
- A manual for the context/graves database (MS Word)
- Various finds databases of finds from other units and contexts than graves (MS Excel)

For this book were made:
- A catalogue of graves and grave finds (MS Word)
- A series of folders per grave containing a plan of the context/grave and scans of drawings of finds and digital photographs of finds
- Texts and illustrations for the book of the Vrijthof cemetery.

5 The stratigraphic sequence and history of depositions on the Vrijthof Square

Introduction

The old centre of Maastricht is located on the west bank of the Meuse River at the place where a tributary, the Jeker River, discharges into the Meuse (fig. 1.10). The town developed in a landscape of old river terraces formed in the Pleistocene period.[1] The present course of the Meuse was created in the Holocene period when the river cut itself into the older terraces. About 500 meters to the west of the Meuse the landscape rises up because of the presence of higher lying terraces traditionally indicated as the Caberg Terrace 3 (fig. 5.1, C3). The Saint-Servatius church was built on the easternmost spur of this terrace. It was thus in a prominent position overlooking the valley of the Meuse. Further to the west are other high-lying terraces but they are not relevant for a discussion of the location of the Vrijthof Square. The subsoil of the town of Maastricht was formed in a complicated process of sedimentation, erosion and re-sedimentation of material by the Meuse and the Jeker Rivers, as well as material washed down from the higher lying terraces. New modern geological research carried out in the context of the excavations at the Dominikanerplein and Maasmarkt show this complicated process.[2] It is not possible to provide such detailed information about the Vrijthof area because the notes on the field drawings regarding the non-anthropogenic layers are too meagre to allow any definitive identification of those layers. However, some general information can be extracted.

The natural environment

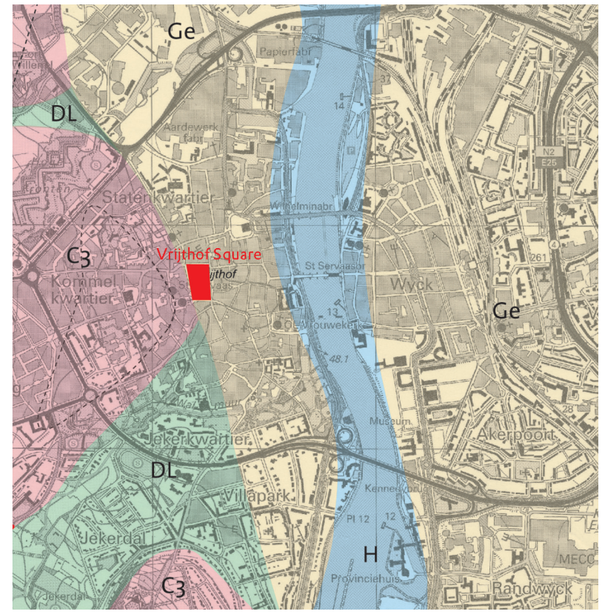
To understand the original landscape in the Vrijthof Square environs it is important to know that the square was located on the transition of the higher lying terraces and the Pleistocene river plain (in geomorphological terms: the Geistingen terrace).[3] To the west were the higher lying terraces to the east the Pleistocene river terrace (fig. 5.1). Originally the site could have been part of the river plain. The river plain was located at a height of c. 44 to 46 meters +NAP.[4] The top of the natural soil in trenches 1 and 4 is about 46.90 m +NAP.[5]

For the interpretation of the depositions on the Vrijthof Square it is useful to have a look at the observations made during the excavations at the 'Entre Deux' site c. 100 meters to the northeast of the square.[6] This site was beyond doubt located on the Pleistocene river plain (Terrace of Geistingen). This terrace had a certain natural relief due to the presence of ancient stream gullies with gravel banks in between. After the river cut itself into the deposits of this terrace during the Holocene further to the east, the Geistingen river plain came to lie about six meters higher than the Meuse River.[7] Only at times of (very) high water the old plain was flooded and the river left sediments especially in the old gullies. Because of this they silted up gradually. At the 'Entre Deux' site an old stream gully was present which was probably oriented from southwest to northeast. In several locations the eastern slope or bank of the gully and the various layers of its fill were observed. To the east of the gully was a gravel bank. At the time of the excavation the top of this bank was at 45.50 m +NAP. On top of the bank were modern layers. It was not possible to establish how much sediment originally was deposited on the gravel bank. In the gully löss was redeposited.[8] Further to the west, that is on the downward slope of the gully the gravel was at 44.00 m +NAP. The deepest part of the gully is expected to be three to four meters further west, it will not have been much deeper than 44.00 m +NAP.[9] At that point the top of the natural sediments in the gully is at c. 45.90 + to c. 46.30 m +NAP.[10] The sediments in the gully are about 2.50 meters thick.[11] The presence of soil formation in the top of the depositions in the gully and on the gravel bank indicate that the observed top of these layers formed more or less the natural surface for a long time and that not much of the sediments disappeared or were reworked in later times.[12] The deposits were dated to the early Holocene period, that is at the time the height difference between the Meuse River and the Geistingen river plain were not yet very large. The Roman and medieval surface may thus at the place of the old gully have been at a height of about 46.00/46.50 m +NAP. Two Merovingian graves were found at the location of the gully. The skeletons were found at a height of 45.94 m +NAP and 46.14 m +NAP. When we accept that the graves were at least 50 cm deep the original surface will have been at about 46.50/60 m +NAP, a figure that corresponds well with the geological observations. This is also the height of the top of a layer of black homogeneous material observed at the site.

We discussed this old gully and its fill because such a gully was probably present in the easternmost part of the Vrijthof Square. After the excavation, when the building pit for the car park was dug out the archaeologists had the opportunity to draw a large part of its eastern wall (fig. 5.2, see for its location fig. 3.2 and 5.3). The top of the gravel [0021] was observed at c. 43.25 m +NAP. This is about 50/70 cm lower than the gravel at the bottom of the gully in the Entre-Deux site. On top of the gravel was a layer of 'yellow lösss' [0020] with a thickness of 2 m.[13] In the northern part of the section a series of alternating layers of 'white lösss' and 'gravel' [0010-0016] were indicated. At the time of the excavation the top of these layers was at c. 46.30 m +NAP. A large part of these layers disappeared due to erosion because the greater part of the section shows the presence of a depression filled with various layers (from 20-25 meters on in southern direction it reaches the yellow löss). This depression was probably part of a gully as will be argued below. The section cuts the fill of the gully almost lengthwise. The depression was filled up with several layers, from bottom to top: 'brown, löss like' and 'black layer, lighter than further south' [0009]; then: 'light-grey' [0008], then: 'dark grey' [0007], then: 'mortar layer with fine gravel' [0006] and 'fairly light brown material with lumps of mortar'[14] [0005], then: 'brown/black' [0004], 'black' and brown/grey' [0003], then: ' black layer', 'very black' and 'black soil' [0002]. On top of this layer are the raised layers of the Modern Period [0001].

We can compare these layers to those in the eastern part of trench 3 (fig. 5.42 A). The oldest features of habitation in the trench can be dated to the late fifth/sixth century (graves) and to the seventh/early eight century (habitation).[15] The skeletons were observed at levels 14, 15 and 16.They must have been dug in from a higher level. The settlement remains were first observed at level 12.[16] The layers in which they were dug in must therefore have been present before the graves were dug. In view of their qualifications on the field drawings they are most likely to be natural layers. The highest layer is qualified as 'red-brown (clean) sandy loam?' [3065].[17] The red-brown colour indicates that soil formation had taken place and that this layer was at the surface for a long time.[18] Other layers had similar characteristics indicating that periods of sedimentation

Fig. 5.1
Map of the geological formations in Maastricht (extract from the Geomorphological map of the Netherlands scale 1:50.000). Ge = Geistingen terrace, C3 = Caberg 3 terrace, H = Holocene river bed, DL = gullies and river beds of tributaries to the Meuse.



(1) Felder/Bosch 1989; Tebbens 1999; Arts 2007, 29-36 (chapter by Tebbens). (2) Arts 2007; Jansen/Spitzers in prep. (3) Van den Berg 1989. (4) Arts 2007, (5) The average winter water level in the Meuse River was before the canalization of the Meuse River (1880-1920) 42.95 m +NAP. The summer level was 41.55 m +NAP (Panhuysen 1996, 15). (6) The site was excavated in 2005. Arts 2007. (7) Arts 2007, 103. (8) Arts 2007, 49-64 (with micromorphological research by L. Kooistra). (9) This is because in the east section of trenches 2005-MADP-B the bottom of the gully is also at 44.00 m +NAP (see note 8). (10) Section E-E' of trenches 2005-MADP-B (Arts 2007, appendix 4.6). (11) East section of trenches 2005-MADP-B (Arts 2007, 57, fig. 6.10, 6.11). (12) Arts 2007, 63-64. (13) The indications given are quotes from the remarks on the field drawing. (14) Mortar (specie is mentioned in Dutch on the field drawing), probably means a lot of chalk. (15) See below. Except for one enigmatic feature observed at level 18 that will be discussed below. (16) However, the features at level 12 (located in a black layer) do not correlate well with those at deeper levels dating to the (Late) Merovingian period. (17) Dutch: roodbruine (schoon) zavel? (18) Compare Arts 2007, 55 about the s observed at the 'Entre Deux' site. (19) The observed natural layers in the east part of the section wall were from bottom to top: [3077] white lösss + some phosphate; [3075] light brown; [3074] brown blue lösss and light sandy, this layer is indicated as Layer III; [3073] light green, indicated as Layer II; [3072] white lösss indicated as Layer I; [3071] brown yellow blue with some marl (probably chalk was meant); [3070] white lösss; [3069] marl; [3068] brown red plus marl fragments (again chalk was probably meant); [3065] red brown (clean) sandy clay?. From Layers I/III soil samples were taken.

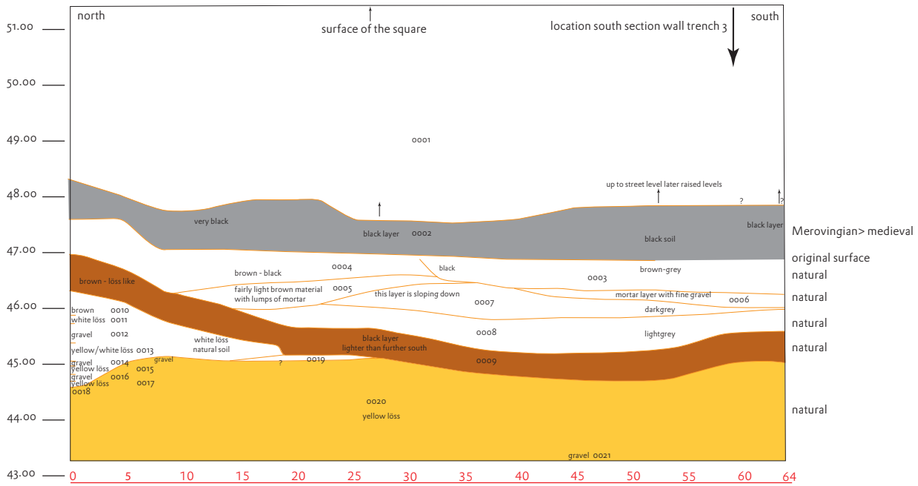


Fig. 5.2
The drawing of the section of the east wall of the building trench. The horizontal scale is 1:500, the vertical scale is 1:100.

and (long) periods of stability with a vegetation alternated.[19] The top of the natural layers was at c. 46.40 m +NAP (in the west) to 46.80 +NAP (in the east) which is more or less the same height of the surface as in the 'Entre Deux site'. On top of those layers were two dark layers dating from the Merovingian period to the Late Middle Ages [3053 and 3045]. The top of those was at about 47.80 m +NAP.

Now we can compare the layers from the east section of the building pit with those in trench 3. It is best to make this comparison where the two sections meet. This is indicated with an arrow in figure 5.2. The bottom of the depression is at 45.00 m +NAP. The layers between the bottom and the black layer form the natural sedimentation in the depression. The top of these layers is at 46.90 m +NAP which is identical to the top of the natural layers in trench 3. The black layer [0002] is identical to the two black layers on top of the natural layers in trench 3. We can thus conclude that in this part of the Vrijthof Square the original surface was at c. 46.80/46.90 +NAP. If these layers were deposited at the same time as those on the 'Entre Deux' site this surface must have been formed already in early Holocene times.

The depression at the east side of the Vrijthof Square seems to be a long phenomenon almost oriented north-north-east to south-south-west along the eastern limit of the Vrijthof. This depression was likely related to the one found at the Entre-Deux site which had more or less the same orientation. It probably continued to the northeast because in the Marktmaas excavations to the east of the Market square the slope of a gully located at the site of the Market square was observed.[20] It is possible that the curved course of the northern part of the thirteenth century town wall and moat followed the course of this gully. It must have been an ancient gully formed by the Meuse River in the Geistingen river valley. This gully was already entirely filled up in the early Middle Ages because the surface was at more or less the same height as the surface in the western part of trench 3. Further north the gully was probably still visible in the field in early medieval times.[21] The information provided by Heylerhoff on the muddy conditions at the site of the Saint-Servatius hospital[22] suggests that the old gully extended further south at least until the southeast corner of the Vrijthof and beyond (fig. 5.3).

How were the natural conditions on the other parts of the Vrijthof Square? The east wall sections of trenches 1 and 4 and the south wall section of trench 3 can inform us on that (fig. 5.5, 5.6 and 5.42).

The top of the natural layers in trench 4 is both in the north and south at about 46.90 m +NAP. In trench 1 this value is more or less the same: 46.90 m +NAP.[23] The top layer in trench 4 is characterized as 'red brown löss', this is the same indication as the top natural layer in trench 3 which was at the same height. In trench 4 an alternation of light and darker (red brown) layers of löss were recorded suggesting again periods of flooding and periods of stability.[24] The natural layers in trench 1 were not studied.

(20) Jansen/Spitzers, in prep. (21) This is suggested by the situation at the location of the Marktmaas excavations (Jansen/Spitzers, in prep.) (22) See chapter 2. (23) There is a small problem in trench 1. Over the entire length of the section the top of the natural layers is at about 46.90 m +NAP. However in the northernmost part it goes up to 47.40 m +NAP, to sink down to 46.90 m +NAP again. There is no good explanation for this observation unless digging for the road resulted in this lower part north of the Roman ditches. (24) The natural layers recorded in trench 4 from bottom to top were: [4169] white löss (top c. 45.80 m +NAP, which is comparable to the white löss in the east section of the building pit, see fig 5.2); [4167] brown red lösss with blue inclusions; ([4165] not characterized but obviously having a lighter than the previous one; [4162] blue grey with shells; [4153] not characterized but ed in the same way as the brown red löss; [4152] red brown löss. These indications do not match exactly those that can be seen on the photographs of the section (see below). (25) The bluish color noticed in one of the layers [4167] is probably caused by the formation



Fig. 5.3
The location of the Pleistocene gully along the east side of the Vrijthof Square. The red lines indicate the sections that were drawn by the excavators.

Conclusions

The natural layers observed at the Vrijthof Square are interpreted as river sediments deposited on top of the gravels of the Geistingen terrace river plain.[25] Some of the depositions took place in an ancient gully located along the eastern limits of the square. Others were deposited on flat parts of the old river plain. The sedimentation probably dated (in view of the identical heights) to the early Holocene period, like the deposits on the 'Entre Deux' site. This means that inundations resulting in sedimentation had probably not taken place after the early Holocene period. The top of the natural layers is at all locations at the Vrijthof Square more or less identical: c. 46.90 m +NAP. The Vrijthof area was a relatively flat area at the beginning of the Roman period when the first occupation at the site takes place.

To the north of the Vrijthof the height of the natural layers as observed in the 'Theatre' site excavations was from 46.30 m +NAP to 46.60 m +NAP.[26] This is somewhat lower than the Vrijthof Square but this was attributed by the excavators to medieval digging. So the area to the north of the Vrijthof Square must have had an identical original height, which means that a large area including the Vrijthof Square, the Theatre site and the Entre-Deux site formed one large relatively flat area.

An impression of the difference in height with the Mechelen/Caberg terrace[27] to the west can be obtained by comparing the height of the graves from the Merovingian period at the Sint-Servaasklooster site (see for its location fig. 5.3) with the original surface at the Vrijthof Square (46.90 m +NAP). They are at a height of c. 57.30 m +NAP. It is not likely that much sedimentation took place at the Caberg/Mechelen terrace since early Roman times so the original surface from which these graves were dug down (c. 57.80 m +NAP) is about eleven meters above the original surface of the square.

What about the possibilities for habitation at the Vrijthof Square site?

It was suggested by Panhuysen and Leupen that the area just described was too low and marshy for habitation to be possible.[28] It was also stated that the square was raised to its present level in the tenth/eleventh century. Both statements seem to be wrong.[29] One of the arguments for the marshy conditions was the presumed presence of layers of chalk gyttja (Dutch: *moeraskalk*) formed in depressions.[30] However such layers were not observed to such extend that it could be concluded that the Vrijthof Square was a swampy area. One thin layer covered by later sediments was observed in trench 3 indicated as 'marl'. In the east section of the building pit a layer indicated as 'mortar layer with fine gravel'

of vivianite (ferrous phosphate, Fe2PO4), as has been observed in many alluvial soils. The presence of molluscs is a common phenomenon in alluvial deposits. When found in 'living' positions, they usually indicate the presence of basal units of palaeochannel infills. Death assemblages however, can indicate dead channel areas. The bits and pieces of molluscs found in the Vrijthof excavation could point to a re-deposition of material, derived from a former channel nearby. The same explanation goes for the reddish brown organic remains. (26) Hulst 1994, 10. At some places it reached even 46.70 m +NAP. (27) It is indicated as such because new research indicates that Caberg terrace is not an sufficient indication anymore (Arts 2007, 31 note 22, 32) (28) Panhuysen/Leupen 1990, 438 see also their maps figs. 2, 3 and 4. (29) The raised layers of the square will be discussed below. (30) See Panhuysen 1996, map fig. 5.

[0006] was present at the same height.[31] In Roman times the chalk gyttja was not at the surface anymore. The shells observed in other layers do not allow the conclusion that chalk gyttja was present. If habitation along the lower lying west bank of the Meuse River was possible (at a height of 45.80 m +NAP and higher) why not on the flat plain to the west of it at a height of 46.90 m +NAP? Moreover the presence of traces of habitation dating to the late seventh and early eight century (postholes and wells) in trenches 3 and 4 indicate that habitation was possible. Moreover it is not likely that the earliest burials on the Vrijthof Square dating to the fifth/sixth century took place in a swamp. It can thus be concluded that the area of the Vrijthof Square was well suited for habitation and burial. The first human presence in the area dates to the early Roman period.[32] The Romans build a road from Tongres in the direction of Cologne. They decided to cross the Meuse River at a place where Maastricht is now located. However, before they reached the Meuse they had to bring their road down from the plateau in the west to the river plain and overcome the height difference of c. eleven meters, although they might have used a gully to descend.

The Roman road: a long term infrastructural element

The Roman and medieval development of the Vrijthof Square area was to a large degree determined by the creation of a Roman road. It ran along the northern limits of the present square.[33] This road connected northern France, the Channel coast and the lower Seine valley with the Rhine valley. It functioned as such long into the Middle Ages. It was indicated as a Chaussée Brunehaut like many other Roman roads that were still used in the Middle Ages.[34] The exact course in Maastricht was not known before the excavations on the Vrijthof Square started.[35] Because of the importance of the road as a structuring topographical element it is apt to discuss its history first. What follows is mainly based on the results of the Amsterdam University excavations in 2003 and their presentation in a Dutch language site report one year later.[36] The excavation trench was situated north of trenches 1 and 4 of the 1969/1970 excavations (see fig. 3.2).[37] A number of short sections provided invaluable information on the stratigraphic sequence of road surfaces and intermediate layers. These sections were combined with that of the east wall of trench 1 and the northern part of trench 7 (fig. 5.4).[38] Seven successive phases of Roman road construction could be identified. They are indicated in yellow in figure 5.4. The figures in the layers indicate phases, the letters sub-phases. The related ditches are marked in blue.

Phases 1 and 2

In the earliest phases all features of the road occupied a wide zone (fig. 5.4).[39] On the central axe of this zone the metalled road itself was located flanked by a wide bank to the south of it. Only the southern limits of the metalled road were observed. To the south ditches defined the width of the bank. It is expected that to the north a similar configuration of bank and ditches was present. The width of the road cannot be established on the basis of field observations. However, if the central axe of the road did not shift over time, the road must have been c. seven to eight meters wide in the first two phases.

It is difficult to date the construction of the first road on the basis of the finds of the 2003 and 1969/1970 excavations. Bloemers suggested a date before AD 69, probably already in the first half of the first century.[40] New research shows that the road was conceived by Agrippa in Augustan times.[41] The first phases of the road observed in the Vrijthof excavations could date to that period too.

Phase 3

In this phase the metalled part of the road was wider than in the previous phases (fig. 5.4). Its total width could have been eleven metres. To the south of it a bank was present. A novelty was the creation of a parallel auxiliary path along the southern limit of the bank. This is the most likely interpretation of a layer of gravel observed in the east section of trench 1 that is brought in relation to the features of phase 3 in the 2003 excavation. A related layer of gravel was observed in trench 7. Posts could have marked the northern limit of the path. In trench 1 traces of such posts were observed. Further south and at a somewhat lower level was a ditch (3a in figure 5.4) that defined the southern limit of the road zone. In the bank between the metalled road and the auxiliary path two grey layers of dirt (pottery, charcoal, animal bones) were observed (figure 5.4: wl 3a and 3b).[42] The fill of a small ditch separated both layers (3c). This ditch probably was a local feature (drainage?) rather than a boundary ditch of the road zone. Layer wl 3b covers the first layer of dirt, the fill of ditch 3c and probably also the gravel of the auxiliary path. The path did not function for a long time.

The pottery and glass vessel fragments from layers wl 3a and 3b and the fill of ditch 3c date to the years around AD 100.[43]

Phase 4

In phase 4 the metalled road was enlarged again in several subsequent construction phases. It cannot be established whether the entire surface of gravel metalling was used as a road. If that was the case the road would have been more or less 20 metres wide. It is also possible that the central axe of the road was moved to the south. There are no indications for an auxiliary path. Layers of gravel in the east section of trench 1 above the layer of gravel of the auxiliary path of phase 3 were assigned to later phases than phase 4. Several ditches of which the fills were observed at level 11 in trench 4 belong to this phase. Each time they dug a new ditch next to the previous one instead of cleaning out the original ditch. It is difficult to date this phase on the basis of recovered finds.

Phase 5

In this phase the width of the gravel metalling of the road was again enlarged. Several sub-phases of construction could be observed. In 2003 a layer of iron slag was observed (figure 5.4, 5d with a brown colour). A similar layer, although at a lower level was observed in 1969. Most likely both layers are identical. This means that iron slag was used to metal the southern bank. The southern part of it, as observed in the east section of trench 1, can be considered an auxiliary path alike the one in phase 3. We can observe that the oldest layers related to habitation in the east section of trench 1 belong to this phase, if the correlation of the layers with iron slag in the 1969 and 2003 excavations is correct. This means that habitation in this part of the vicus is relatively late (no sooner than the second century). No ditches that limit the road zone to the south were observed. The zone with the ditches was now occupied.
The pottery from the top layers of phase 5 was not much younger than c. AD 150. If phase 3 dates to c. AD 100 the construction of phases 4 and 5 must date to the first half of the second century. At this time habitation developed to the south of the road (see below).

Phase 6

In this phase the surface level of the road was raised again (fig. 5.4). The section in trench 7 shows that a considerable layer of gravel was deposited near the centre of the road. A part of the deposits of phase 5 may have been removed or reworked in order to improve drainage. The area of the auxiliary path was also raised considerably. This brought the surface level of the path at a level comparable to that of the main road. This time ditches were dug along the limits of the main road (fig. 5.4, 6a, 6c). They thus separated the main road from the auxiliary path. Further south ditches were dug too (6b and 6d), but these were dug through the raised layers of phase 6 and may thus be younger than this phase.

Phase 6 can more or less be dated on the basis of finds from ditch 6a. They date to the middle of the second century. Finds from ditch 6d date to c. AD 180-200.[44] It is safe to say that the construction of the road in phase 6 dates to c. the middle of the second century.

Phase 7

The remains of this phase were only observed in the section of trench 7. Near the core of the road a thin layer of grey loam was recorded. The gravel that belonged to this phase seems to have the same brownish colour as the gravel of phase 6. It contains some Roman building debris. The gravel of phase 7 was reworked while constructing the road in phase 9.[45]

It is not possible to date this phase on the basis of finds. On the basis of the brown colour it is suggested that this phase dates to the Roman period. It is possible that the top layers of phase 6 belong to phase 7 and that the ditches 6b and 6d belong to phase 7 too. The date of the finds from ditch 6d to the period AD 180-200 would fit this interpretation. In that case the ditches related to the boundaries of the road zone were situated further south again in comparison to those of phase 6. Could this be related to the abandonment of the inhabited area?

Only two late Roman pottery shards were discovered in the 2003 excavation. The Roman finds from the habitation area have not been studied thoroughly but they neither seem to date to the late Roman period (see below). It is thus not expected that road construction continued into the late Roman period. However, it is possible that in late Roman times the surface level of the area to the south of the habitation zone was raised by new sedimentation.[46] Road construction or rather road improvements could have taken place in late Roman times, but if so they left no traces in the soil. The most likely date for the construction of the road of phase 7 is the second half of the second century.[47]

Phase 9

Layers of raised soil and gravel with a grey colour were deposited on top of the layers of phase 7 in trench 7 and those of phase 6 in the 2003 excavation. They belong to phase 9. In trench 7 a regular sequence of layers of raised soil and gravel characterise the various construction phases (9 to 13). In the 2003 excavation the image is less clear probably because of a mixing of layers by carts wheels that sank down into the soft surface of the road. It is likely that during the construction of the road of phase 9 the top of the existing road at the location of trench 7 (the high lying core of the road) was disturbed. To what relative depth the disturbance reached is difficult to establish. It is not expected that it reached down to such a depth that all evidence of construction phases of the late Roman period were destroyed. In the 2003 excavation traces of

(31) Maybe this layer [0006] was related to a layer described as 'fairly light brown material with lumps of mortar' [0005]. It is not clear what 'mortar' exactly means. Was it really manmade mortar or rather chalk? Could they be layers dating to the Roman period? If finds would have been made that date these layers to the Roman period it might have been indicated on the drawing. For the moment we do not date these layers to the Roman period. (32) At level 18 in trench 3 a feature is indicated that looks like a filled in ditch. It was given a brown color. The postholes of the Merovingian settlement cut into the fill. In the section this 'ditch' cannot be seen at the height of level 18. Somewhat lower a depression ('light brown') into the natural white lösss can be seen, but this feature could not have been observed at level 18. The ditch does not seem to be an anthropogenic element but the combination of lines of outcropping layers. Unfortunately the field drawings provide no information on the layers in which the Merovingian features were dug in in order to make a comparison with the layers indicated in the section. (33) Bloemers 1973a; Panhuysen 1996, 21-22.

(34) Rouche 1985. (35) See chapter 3. (36) Dijkstra/Flamman 2004. It was published in a limited edition. (37) The southern part of the trench was disturbed recently. (38) What follows is a summary of the results presented in the site report. For details one has to turn to this report. (39) It is possible that an older road was present but the road itself was not observed. This possible 'phase 0' could be presented by the oldest ditch, which for lack of evidence of a road is for the time being included in phase 1 (Dijkstra/Flamman 2004, 27). (40) Bloemers 1973a, 250. (41) Panhuysen 1996, 21. (42) wl means 'waste layer'. (43) Dijkstra/Flamman 2004, 52. (44) Dijkstra/Flamman 2004, 54. (45) In the site report phase 8 is the burial ground to the south of the road. (46) See below the description of the sections in trenches 1 and 4. The date of the filling in of the area cannot be established accurately but seems to be older than the Merovingian graves, thus before c. 525. (47) Again: this is supported by the date of the finds in ditch 6d.

cartwheels in the top of phase 6 layers were ascribed to activities in phase 9. This means that it is not likely that a thick layer of gravel from an intermediate phase between phases 6 and 9, which would date to the Late Roman period, had disappeared. The conclusion is that it is unlikely that road construction took place in the late Roman period. Until the construction of phase 9, the surface of the Roman road from phases 6/7 was the surface in use.

Phase 9 is dated on the basis of pottery finds from the layer of gravel directly on top of the youngest Roman road. It dates to the tenth to thirteenth century.[48] A construction date for phase 9 at the end of this period, possibly even the late thirteenth century was suggested.[49] The youngest pottery shards from the layer on top of those of phase 9 and the gravel of the road of phase 10 dated to the fifteenth and first half of the sixteenth century. This means that between phase 6/7 (second half second century) and phase 9 (later thirteenth century) a time gap of c. 1050 years was present. In this period (almost the entire Middle Ages) the top of phases 6/7 formed the (Roman) surface of the road.

Phases 10-13

Phases 10 to 13 are dated to the Modern Period and relate to the raising of the surface of the Vrijthof Square with almost three metres. They are not of interest to our present research goals and will not be discussed.[50]

The history of depositions to the south of the road and on the Vrijthof Square

In the previous section the creation and subsequent built up of the various levels of the Roman road were discussed. By c. AD 200 2.5 metres of gravel and raised soil had been deposited to create the road. This feature forms the starting point for all other recorded activities in this part of the town since Roman times for they were clearly related to the presence of the road. Some of the elements discussed below were already referred to but now a more detailed description will be given of these features. It was decided to present the features while discussing the data on which their reconstruction was based, instead of presenting a clear cut summarized image of which the reader cannot check the validity because of the complexity of the relations between horizontal excavation levels and sections in a sloping terrain. Thus, in what follows the most important sections and excavation levels in trenches 1, 4, 5, 6 and finally 3 are presented. In the course of this presentation of data the nature of the features will be discussed.

A problematic aspect is the interpretative value of the pottery finds recovered during the excavation for the dating of features. See table 5.1 for the number of pottery shards per period recovered during the Vrijthof excavations. Their number is low for such an excavation and there is a relatively small amount of medieval pottery.[51] This can have various reasons. One will certainly be the nature of the excavation techniques. The levels in the trenches were lowered mechanically in layers of 10 to 20 cm, at times even 60 cm. The layers containing pottery from the early and Central Middle Ages could thus have been dug away unrecorded. This however cannot be the only explanation. The levels in various trenches were not located at identical positions in relation to layers from these periods because layers were often slightly sloping down. Thus at times levels were located in layers that must be dated to the early and central Middle Ages and a lot of pottery should have been found when present. The excavation techniques were not exclusively responsible for the low number of finds from the period 750-1300. Moreover, in trench 1 the lower parts of the early medieval deep pits were dug out relatively careful. Trowels were used as can be seen on the photographs. Yet not many finds were recovered from these pits and the majority that was found dates to the Roman period and is thus residual material.[52] In other pits in trench 4 residual material from a Merovingian settlement next to that from the Roman habitation may have been present in younger pits. But if no younger material is present this cannot be established. So we have to conclude that the low numbers of pottery from Carolingian times and the central Middle Ages reflects to some extent the pattern of deposition in the Vrijthof Square area. We have to use the pottery shards with care when dating features. Often only a few shards per feature are available (see appendix 5.1).

The east wall section of trench 1 will be presented first. It gives the opportunity to introduce the most salient features present on the Vrijthof Square with the exception of the Merovingian cemetery and some early medieval features which appear on stage when discussing the east wall section of trench 4. Next the features found at various levels in trench 1 will be presented followed by those in trenches 4, 5 and 6. After having done so, the sequence of activities from the Roman period to the early Modern Period immediately to the south of the Roman road will be dealt with. In a separate section the south wall section and features of trench 3 will be presented. This will inform us on the activities further south on the square. The chapter concludes with a general section on the history of depositions on the Vrijthof Square. This history of depositions is further interpreted in chapter 14.

Trench 1: east wall section

The stratigraphy of the east wall of trench 1 was first recorded. It is also one of the most informative sections.[53] Its height is between five and six meters (fig. 5.5).[54] Along the bottom of the section is a red line with figures at one-metre intervals, which we use to indicate the location of elements of the section. This line, in exactly the same position, will also be used to describe the position of features at various levels in trenches 1, 4 and 5 and the east wall section of trench 4.

Table 5.1
The distribution of the pottery shards recovered during the Vrijthof Square excavations over the different periods. Note the very low number of shards for the Carolingian/Ottonian period.

Period	Number of pottery shards
middle Roman (0-300)	9.047
late Roman (300-450)	27
Merovingian (450-750)	1.086
Carolingian/Ottonian (750-1000)	190
central medieval (1000-1300)	393
late medieval (1300-1500)	1.197
modern (1500-1800)	678
Total	12.618

Basically there are five groups of layers in this section: 1. the layers of the Roman road, 2. the layers related to Roman habitation (*vicus*) along the road, 3. the layers of an unknown date situated between the Roman *vicus* layers and the early medieval ones, 4. a medieval black layer containing graves, 5. the post-medieval layers related to the raising of the surface of the square.

Layers of the Roman road and ditches (fig. 5.5, A yellow and blue)

The various layers of the Roman road and the ditches have been discussed in the section on the Roman road above.

Layers of the Roman vicus (fig. 5.5, A, dark blue)

South of the Roman road (in the drawing to the right) and on top of the oldest ditches bordering the road zone a sequence of layers was related to habitation along the road. The package seems to consist of three types of layers characterised by different colours and contents. Three layers [1278, 1224, 1203/1358] were very black and red and contained a large amount of debris related to fire (charcoal and burned loam). These layers are indicated in a darker shade of blue. It is not exactly clear what these recurring layers relating to fire mean. It is possible that this part of the *vicus* burned down several times. It is also possible that in this part of the *vicus* craft activities took place related to the working of iron or is it just debris of cleaned out hearths? Iron slags were found in the layers of the Roman road in phase 5 dated to c. AD 130-150.[55] However iron slags are not mentioned as such on the drawings of trench 1. The lowest of these layers is also the thickest one. This layer lies on top of the fill of the older ditches along the road and is the first one related to activities in the *vicus*. The stratigraphy suggests that it should be brought in connection to phase 5 of the Roman road.[56] There is no information on the contents of the other two layers that are indicated in a similar way on the drawing of the section.

Next there were four or five relatively thin layers with a (light) grey colour [a.o. 1268, 1382, 1216, 1381]. The layers are indicated with a light shade of blue. Some of these layers were situated between the layers of gravel of the road and continued in a southerly direction. The excavators of the 2003 excavation interpreted these as layers with material washed down from the road in a southerly direction where the surface was somewhat lower. If this interpretation is correct it is difficult to see how these layers could be formed when buildings were present on the site. We will see later that indications for the presence of buildings in trench 1 are meagre which is an indication that in this part of the *vicus* no buildings were present.[57] These layers could nevertheless indicate that there was no continuous habitation in this part of the *vicus*. Periods of habitation may have followed periods of abandonment of the site. However we do not know how fast these layers were formed. The periods in which they came into being might be very short.

Finally there were many layers with a light (yellow) colour probably consisting of relatively clean löss. These layers could be washed down material, but it is also possible that they were man-made in order to raise the terrain to create a new building level in the *vicus*. The order of deposition of the dark, grey and light coloured layers does not allow a clear-cut reconstruction of the habitation history of the *vicus* in this location. In trench 4, just behind this section, remains of Roman houses were visible at levels 7 to 10, which is in that trench from 48.00 to 47.40 m +NAP.

Just south of the road this package was about 1.20 meters thick (at c. one meter on the red line). Further to the south the package becomes thinner, from c. eight meters on it is sloping down until c. thirteen meters. From that point on the top of the Roman layers was at c. 47.12 m +NAP. It is suggested that the width of the build up zone south of the road does not extend further south than at c. 10 meters on the red line. The top of the package of Roman layers was not necessarily the youngest surface level in Roman times. The surface level could have been reworked in later times. How much higher the surface level was when the vicus was abandoned (c. AD 200) cannot be established. If we use the surface level of the road in phases 6 and 7 for comparison we have to conclude that not much of the Roman layers was destroyed in medieval times. This means that in Roman times there were three different levels important to those who lived there: the level of the Roman road (highest), the habitation level in the *vicus* (somewhat lower) and the level of the area behind the build up zone which was an area

(48) Dijkstra/Flamman 2004, 39. (49) Dijkstra/Flamman 2004, 39. A construction date at the time of the creation of the large building to the north of the road (Hulst 1994, 14: beginning or first half of the eleventh century) cannot be substantiated on the basis of the observations in the 1969/1970 and 2003 excavations. Actually not a single observation in the sections and levels of both excavations can be related to these building activities! (50) See for more information: Dijkstra/Flamman 2004. (51) There are for instance only c. 190 shards from the pottery production centre of Andenne dating to the central Middle Ages. (52) This proves that pottery, even small shards, was collected.

(53) The west, north and south wall sections were drawn too but these add no new information to that of the east wall section. The section was drawn by Van Pernis. Later Ter Schegget redrew the northern part with the remains of the Roman road and vicus. We integrated the Ter Schegget drawing into that by Van Pernis. (54) The original field drawings can be inspected at: www.edna.nl. (55) See above. (56) See above. (57) However, immediately to the east (behind) the section are the remains of Roman buildings in trench 4.

of backyards as we will see later (lowest). The difference in height between the build up area and the backyard area grew during the Roman period as a consequence of the raising of the soil in the build up area.

Late Roman layers (natural)

On top of the Roman layers related to habitation along the road was a series of layers of relatively clean soil. In figure 5.5, B they are indicated in pink. The package was relatively thin on top of the layers of the *vicus* but thick in the backyard area (up to 1.6 meters). The whole area was thus more or less levelled after the deposition of these layers. The whole package consisted of four to five layers. Most of them were found over the entire length of the section indicating that the levelling took place over a large area. The layering suggests that the deposition of the package did not occur at one single moment. The relatively clean nature of all layers and the absence of thin dark layers of organic material suggest that no soil formation took place in the layers.[58] Thus no long intervals were present between the deposition of the different layers. It cannot be established how long the period in which the levelling took place lasted. Moreover there is a regular sequence of layers of light and darker coloured material. The light coloured (yellow on the field drawing) top layer [layers 1156 to 1161, 1163 1165 to 1167] is characterized as 'löss' and 'dirty löss', the lowest layer in the southern part [1233 to 1235] as 'sand' and 'sandy'. Some finds were recovered from these layers, which led the excavators to date the layers to the Roman period.[59] It is difficult to date the deposition of these layers. It must have happened some time after the abandonment of the *vicus* but before the burials appeared in this part of the site. ^{14}C-dates of some graves in trench 1 suggest that they date to the (very) late seventh and the eighth century. We will see, when discussing the east wall section of trench 4, that the layers must even be earlier because Merovingian graves were also cut into these layers. The deposition of the raised layers and the levelling must thus have taken place some time between AD 200 and c. 575 at the latest.[60]

Are these layers anthropogenic? If so, we are confronted with a major human effort to level the area …. for what? No other activities from that period can be identified.[61] The layers are most likely to be natural deposits consisting of washed down sand and löss (colluvium) from the higher lying plateau to the west. This colluvium might be related to an abandonment of fields in late Roman times to the west that became vulnerable to erosion. The finds in the layers may have been washed down with the soil and do not date the deposition. That the backyards were filled up more than the habitation area was probably due to the water seeking the lowest lying area.

The top of the raised layers is not necessarily the surface level before the burial activities started. These activities might have destroyed the top layer of the raised soil in the northern part of the section.

The black layer with burials and deep pits

On top of the layers of raised soil (colluvium) was a layer of black soil [1141, 1143, 1145, 1146, 1147, 1148, 1151, 1153, 1154, 1155?] that was present over the entire length of the section (figure 5.5, C). It is somewhat thicker in the southern part of the section although the top of the layer (indicated in red) was somewhat higher in the north than in the south. This means that the area was levelled out again to some extent but was not yet perfectly level. The north was higher than the south. The layer contained a lot of human bones in the northern part. It can be seen that the graves present in trench 1 (indicated in an orange colour) were in this layer and 'hang' under it. They were not dug from a higher level through this layer. It must be concluded that the grave pits were dug in from this layer. It is difficult to establish from which height within the layer they were dug in. It must have been difficult to observe the difference between the fill of the graves and the soil of the black layer. The layers on top of this black layer date to the Modern Period (see below). Thus the top of the black layer, or a level somewhat higher, because the upper part of the layer may have been dug away later, must have been the surface level of the area during the *entire* Middle Ages. This layer was thus immediately below the surface of the Vrijthof Square during the Middle Ages. This explains why the top of the burials could not be observed in this layer. The upper part of this layer was certainly reworked in the period after the burial activities stopped. Unfortunately we cannot establish now at what point in time this was.[62]

This layer is also related to another type of features: a series of deep pits (in figure 5.5, C they are marked in green). All but one were dug down from the black layer. Remarks on the field drawings made by the excavators show that they were eager to find out the relation between the layer and the pits. This means that the deep pits have to be dated to the Middle Ages too. In one case the excavators characterize a pit as a cesspit, probably because of the (organic?) contents of the pit. The descriptions of the contents of the pits are however meagre. The pits, which are usually round and sometimes rectangular, have diameters from c. one up to three meters. Most of them have steep slopes and the walls do not seem to have been eroded, which indicates that they were not open for a long time. Some have steps cut into their walls probably to facilitate the digger to climb out of the deep pit (fig. 5.17). Some have a depth of more than three meters. On the drawing of the section a fairly homogeneous fill was recorded, although occasionally the presence of some layers was indicated. Stones and marl were sometimes found in the uppermost fill of a pit. The finds in the pits will be discussed later. One pit, which is less deep (the northernmost one [1095]), seems to have been dug from a higher level through the black layer. It is possible that it is a pit of younger date but it is also possible that the observation was not correct.

No other features can be seen on the section drawing related to this black layer. No postholes, no wells, no 'waste pits' less deep than the ones discussed or other features such as sunken huts. They should have been visible below the layer because it is relatively thin (15 to 30 cm). Even when we add ten to twenty centimetres some features should still have been visible when present because they would have been dug down into the lower lying layers. For now we are hesitant to date the layer, for more information on this layer will become available when discussing the east section of trench 4. It certainly postdates the late Roman period and predates the Modern Period.

Late and post-medieval layers

On top of the black layer is a series of layers most of which are present over the entire length of the section (fig 5.5, D marked in black and grey). There is a regular pattern of alternating dark and light layers. Some of the dark layers contain gravel, marl or brick rubble indicating that they are surfaces of the square some time in the modern period. The light layers are often indicated as 'marl-sand' indicating that they are layers of fine marl deposited to level the square. In the bottom levels of this package a series of small pits with remains of a fire were present (indicated in fig. 5.5, D with a dark grey fill). They are scattered over the northern part of trenches 1 and 4, in the western part of trench 3 and the 2003 excavation. They are interpreted as remains of (camp) fires related to temporary encampment on the site.[63] They are related to phase 10 which dates to c. AD 1400-1550. The whole package is c. 3.0 meters thick. This means that since the late Middle Ages the Vrijthof Square was raised c. 3 meters up to a level c. 51.80 m +NAP.[64] The height of the doorstep (51.87 m +NAP) of the present Hoofdwacht (Main Guard House) dated to 1738, located just south of trench 1 is more or less equal to the modern height of the square.[65] This means that the raising of the surface of the square (fig. 5.4, phases 11-13) must have been completed before that date. In late medieval times the surface level in the south of trench 1 was at 48.55 m +NAP.

Trench 4: east wall section

In trench 4 eleven levels were shovelled, cleaned and drawn. Levels A and B were situated in the layers on top of the black layer. They date to the Late Middle Ages and Modern period. Level 3 was located in the black layer (in the north) or in the brown layer on top.[66]

The stratigraphy of the east wall section of trench 4 is very much alike that of trench 1 although differences occur. The analysis of this section was hampered by the differences that can be seen between the field drawings and the photographs made of the section. We already knew that the field technician Van Pernis usually colours layers and features very light.[67] In this section we will see examples of almost black layers coloured light. At times we felt the need to give alternative interpretations of the layers observed in this section. In order to be able to follow our arguments we present a number of figures in which both the photographs and field drawings of parts of the section are presented.

Basically there were six groups of layers: 1. the layers related to the Roman road, 2. the layers related to Roman habitation (*vicus*) along the road, 3. the layers of unknown date situated between the layers of the Roman *vicus* and the early medieval ones, 4. the Merovingian graves, 5. the medieval black layer, 6. the post-medieval layers related to the raising of the surface of the square. New are the Merovingian graves but also two different layers of gravel. They belong to two north-south oriented narrow bands of gravel observed in the trench. Unfortunately the southern part of the section runs lengthwise through these bands. Because of this it is difficult to establish the relation between a. these bands and the black layer with graves and b. the relation between the black layer and several deep pits and two dug in structures.

Layers related to the Roman road and ditches (fig. 5.6, A yellow and blue)

In this section the lowest anthropogenic layer is related to the road.[68] On the field drawing the layer was given a very light colour and it was described as washed down löss. Only one ditch parallel to the layers of gravel of the road was observed. More ditches were present but they were not indicated in the section. It is remarkable that no distinction was made between the fill of this ditch and the layer on top of it. This suggests that the whole layer of löss might have been deposited in a short period for instance in a period of heavy rainfall. No layers of gravel of the road itself were recorded because that part of the section was dug away in later (early medieval) times and this section is situated a bit further south than that in trench 1. The southern limit of the gravel metalling of the road and auxiliary path must have been situated just inside trench 4.[69]

Layers of the Roman vicus (fig. 5.6, A, dark blue)

On top of the washed down löss is a sequence of layers, similar to that in trench 1, related to Roman habitation along the road. However in this case a large feature [4136 to 4139] was dug before the deposition of these layers started. The feature, situated at 3 meters, was dug through the layer with washed down löss. Its

(58) Thin dark layers were recorded on the field drawing at the location of the Roman vicus. (59) This is indicated on the field drawing. (60) For the date of the abandonment of the vicus see below. (61) Only 27 pottery shards dating to the late Roman period were recovered during the excavations. (62) This is because the graves did not contain any finds that can be dated and we have not enough ^{14}C dates to establish the total period of burial. (63) Dijkstra/Flamman 2004, 43-44. (64) It was suggested by other scholars that this happened already in the tenth century (Panhuysen/Leupen 1990, 438). (65) Dijkstra/Flamman 2004, 59. (66) The dates are based on the finds recovered from those layers, see below. (67) This was also the case when he colored the levels. At times quite black layers were colored light. Differences in the colors of the layers between trenches might also be due to the fact that three different field technicians were making the drawings, each one having their own interpretation on the importance of color differences. (68) The natural layers below it were discussed in a previous section.

layered fill consists of löss with different colours of which it is said that it washed in, probably because of a fine-layered structure of the deposits. This feature is not a ditch related to the Roman road but a pit belonging to the oldest phase of activities in the *vicus*. This pit, and another one next to it were clearly observed at level 11, but not at level 10 (see below).

On top of that feature is a layer [1126, 1128] that can be followed over quite some distance. On the field drawing it was indicated as 'brown blue with charcoal', on the photograph (fig. 5.7) it rather looks grey. It might be the same layer as the one in trench 1 but less rich in fire debris. One wonders whether the layer in trench 4 is related to the Roman *vicus*. On top of that layer are layers indicated as 'layered löss' [4123] and 'washed down löss' [4120] separated from the first mentioned layer by a thin black (charcoal rich?) layer [4125]. On the photograph they have a yellow colour. This löss can be considered colluvium washed down from the plateau to the west.[70] On top of the colluvium were the layers of the Roman *vicus*. As in trench 1 the package of Roman layers consisted of three types of layers: dark layers with charcoal and burned loam, thin grey layers and layers with light coloured material, probably (washed down) löss. In this package only two dark layers [4111 and 4087] with debris related to fire could be identified with certainty. The thick one at the bottom of the package in trench 1 seems to be missing. Again it is not possible to relate these layers to either a destruction of the *vicus* by fire, to craft activities or whether it was household debris

Next to the layers with fire debris were the thin grey layers, which were coloured somewhat darker on the field drawings of this section compared to those in the section of trench 1. Three to five of these layers were present. It was not possible to relate the individual layers of trench 1 to those of trench 4.[71] In between the dark and grey layers were yellow/brown layers of löss. It was indicated that some of the löss layers consisted of washed down soil. It is difficult to understand this colluvium in relation to the habitation. Was it deposited at the time of habitation? Was it colluvium or are the layers of an anthropogenic origin?

The top of the Roman layers slopes down towards the south, gently from zero to seven/eight meters on the red line, more abrupt from seven/eight meters to fifteen meters. From fifteen meters on the top of the Roman layers is at c. 47.20 m +NAP. The same relief was observed in trench 1. The build up zone must have been between c. zero and ten meters. The rest of the area was a backyard zone.

Late Roman layers (natural) (fig. 5.6, B pink)

On top of the Roman layers were layers that look different in various locations. First of all there are layers designated as löss again (see also figs. 5.8 and 5.9, layers [4084, 4085, 4043, 4072, 4076, 4077]). The field drawing of the northern part of the section shows layers on top of the Roman layers but older than the Merovingian graves such as layer 4073 with find 1175: a complete biconical pot (fig. 5.6, C). This layer must be part of a Merovingian grave.[72] The same goes for a layer to the left (north) of grave context 322 [4075]. The fine sequence of layers in between graves contexts 314 and 68 is difficult to see on the photograph. Instead a brown/grey amass of material is visible. It is neither possible to observe the top charcoal rich layer [4089] to the right of grave 68 (see fig. 5.8). The soil in that location seems to be related to Merovingian graves. So the nature of the layers on top of the Roman layers in the northern part of the section is difficult to evaluate. Perhaps no deposition of late Roman colluvium took place in the northern part of the section or it was dug away entirely in Merovingian times.

More problems come up further south because the field drawing and the photographs do not really match (fig. 5.9). The field drawing shows the presence of four layers immediately to the north of context 497 [4043, 4072, 4076, 4077]. This context was dug into these layers and is thus younger. One layer was characterized as 'brown-green löss' [4077]. To the south of context 497 is another pit (context 496) and further south are two layers of gravel [4038 and 4145] and a layer in between [4144] (fig. 5.9 and 5.10). The layer in between is coloured quite light and one might be inclined to bring it into relation with the layers to the north of context 497.[73] However the field drawing is quite misleading. The layer in between is not light but almost black. Moreover the layers to the north of context 497 look like natural layers of löss on the photograph. They are interpreted as natural depositions (colluvium). Further to the south the late Roman colluvium was dug away in the Middle Ages. The top of the colluvium may have been reworked in (early) medieval times. It might have been at a higher location than we can observe now (48.20 m +NAP). This would have been the surface level when burial began in Merovingian times.

The layers with colluvium levelled out the terrain. The lower lying back yard area was after deposition at more or less the same height as the former built up area. The deposition of these layers must have taken place before the Merovingian grave pits, visible in the section, were dug out. Two of them belong to the earlier phases of the cemetery dating to the first half and middle of the sixth century.[74] The deposition of these layers thus took place certainly before c. 575 and after c. 200 AD at which time the Roman *vicus* seems to have been abandoned.

(69) In the drawing of the north section wall (fig. 5.12) layers of gravel belonging to the Roman road were observed, perhaps because the section wall had been cut back a bit. (70) It is not identical to the colluvium of late Roman date mentioned when discussing the east section wall of trench 1. (71) In the analyses the sections were projected onto each other several times, but height differences (the terrain is sloping down a bit to the east and south) make such identifications of thin layers difficult. (72) On the drawings of the levels more Merovingian graves were indicated in that part of the trench than the four graves indicated in the drawing of the section. (73) We did this for some time when analyzing the field drawings but had to abandon the thought after studying the photographs. (74) The dating of the early graves is often based on a single or few objects in the grave. These objects often have a wide dating range. It is therefore not possible to give more exact dates. See chapter 12.

Fig. 5.7
Trench 4. East wall section. Photograph and drawing of 0 to 6 meters.



Fig. 5.8
Trench 4. East wall section. Photograph and drawing of 4.5 to 10.5 meters.

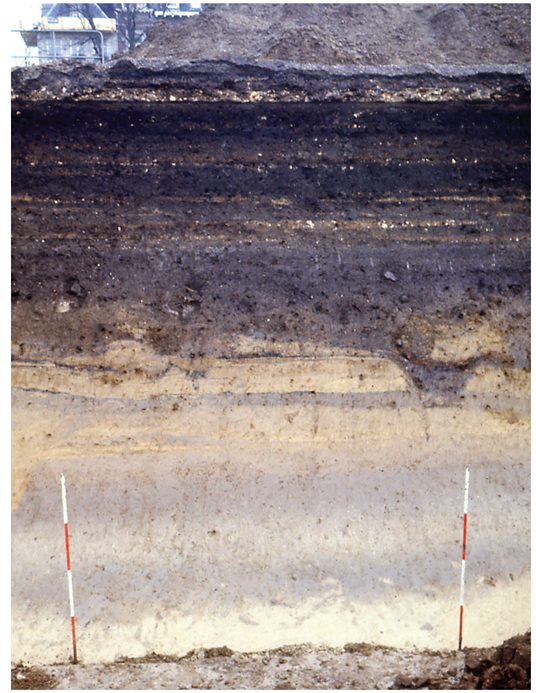
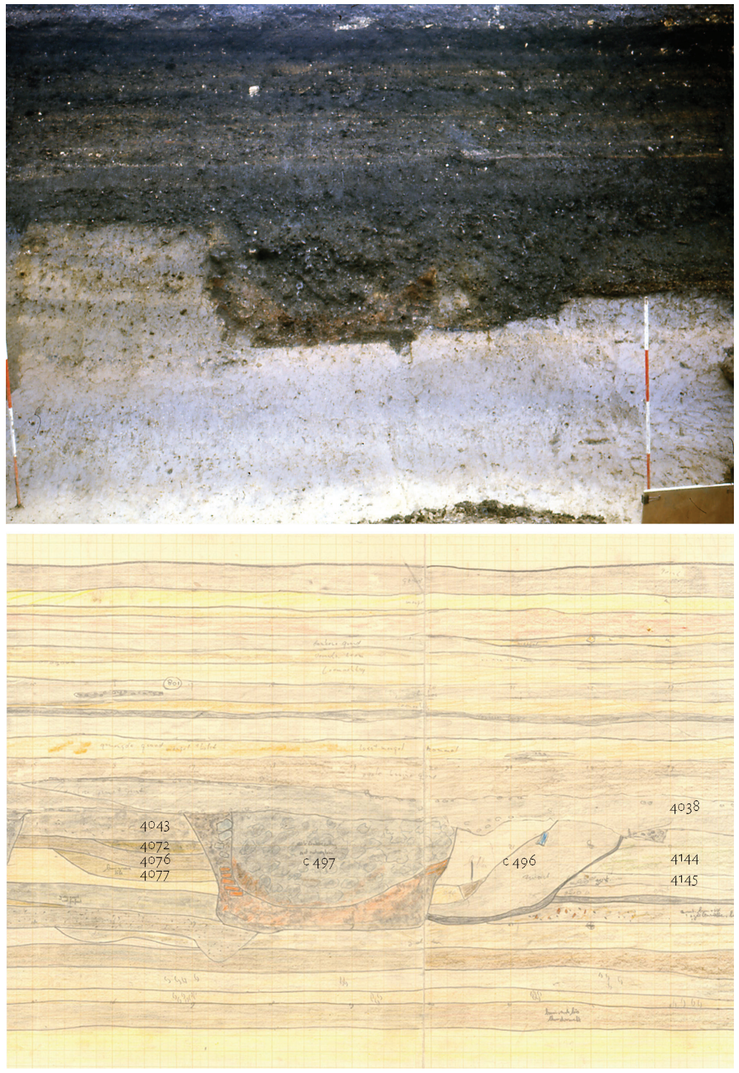


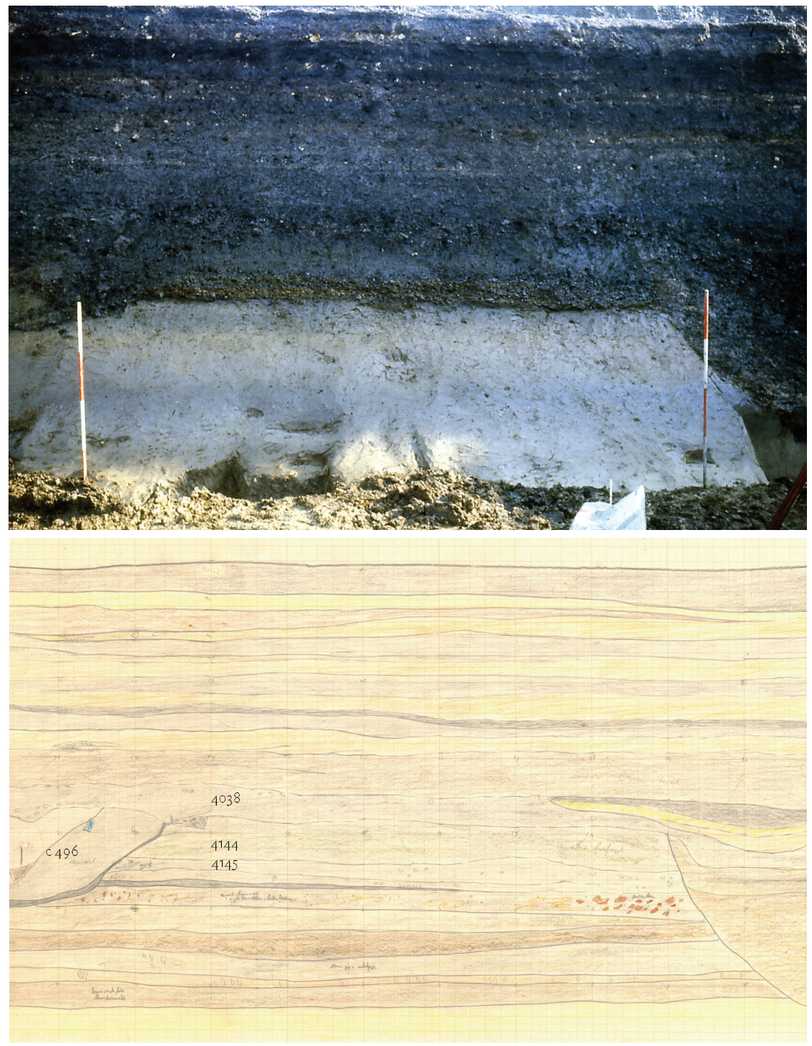
Fig. 5.9
Trench 4. East wall section. Photograph and drawing of 12 to 21 meters.



The Merovingian cemetery (fig. 5.6, C orange)
The section shows four Merovingian graves (C 311/312, 314, 68, 322) that were dug into the late Roman natural layers and the Roman *vicus* layers.[75] In the fill of the graves small red/orange coloured spots indicate that remains of burned loam, originating from the Roman layers, was present. Unfortunately it is not possible to see from which level they were dug in because on top of the graves the black layer with younger graves is present. If we accept that the graves were 50 to 70 cm deep the original Merovingian surface was somewhere in the middle of the layer on top of the graves. More than four graves were observed in that part of the trench against the trench wall, so more than four graves should have been visible in the section.

The black layer with burials and deep pits (fig. 5.6, C red and green) In this section the black layer with related burials and deep pits was also present [4039]. It is between 30 and 60 cm thick. The excavators drew quite sharp lines between the Merovingian graves and this layer indicating that two different types of soil were present in the fill of the Merovingian graves and the black layer. It is not always that clear on the photographs but in the case of grave context 314 this difference can be clearly observed (fig. 5.8). This could mean that the Merovingian graves were not dug down at the time this layer existed. If that was the case more black soil should have been present in the fill of the grave pits. Their fill usually had a more brownish colour (fig. 5.7 and 5.8).[76] If these observations are correct than the black layer came into being *after* the graves had been dug. We will see later that this suggested post-Merovingian date for the black layer will lead to serious interpretative problems when discussing the evidence from the excavation levels. The creation of the black layer led to the destruction of the upper parts of the Merovingian graves. Human skulls were indicated in the black layer. The distinction the excavators made between the Merovingian graves and the black layer indicates that the graves in the black layer should be considered as a separate horizon of burials. We will see in chapter 12 that we can indeed distinguish two different phases in the burial activities on the site. The Merovingian cemetery will be designated cemetery 4 and the younger burials (in the black layer) as cemetery 5. Unfortunately we cannot follow the layer to the south beyond thirteen/fourteen meters on the red line because of the presence of other features in that part of the section. This means that we cannot make direct observations on the relation between the deep pits and this layer. Only two deep pits (contexts 449 and 496) can be seen in the section,[77] they are older than a layer of gravel that covers most of

Fig. 5.10
Trench 4. East wall section. Photograph and drawing of 18 to 28 meters.



(75) It is not easy to assign context numbers to the graves in the section because more graves have been observed at the excavation levels that should have been visible in the section than there were indicated. A part of the layers between the graves might also be the fill of graves as was suggested above. (76) This difference can also be observed in the photographs of the levels in trench 5 where the graves have a brownish color and the black layer is really black. (77) One other pit in the extreme south of the section has the same stratigraphic position but is not deep.

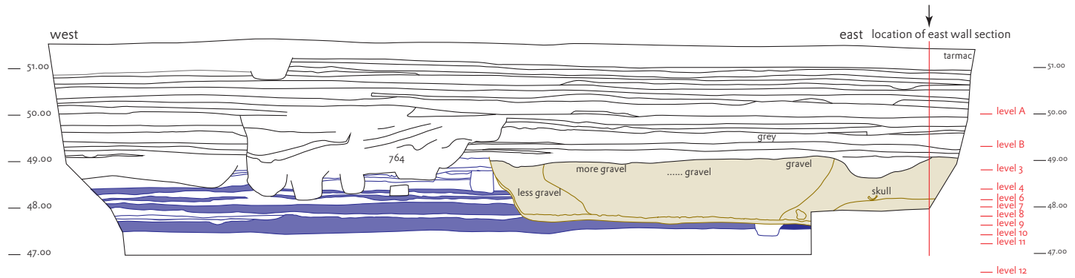
Fig. 5.11
Trench 4. Excavation level 7 (top) and 8 (below)



the medieval features (see below). Context 496 is also older than a long rectangular structure (context 497). The date of these pits depends on the date of the other features in the section. We will see that the long rectangular structures date to the (late) Merovingian and/or Carolingian period. The pits may date to this period too or are somewhat older. The form of the deep pits is different from those of trench 1. They had less steep walls and were wider.

Long rectangular structures (fig. 5.6, C brown)
In the section the remains of two long rectangular structures were visible (C 497 and 89). These contexts will be described in detail when discussing the excavation levels in trench 4. Here we have to discuss the stratigraphic relations between these structures and other features in the section for they are crucial to date them. One of them was younger than pit C 496 and older than the youngest band of gravel (see below). The other one (89) 'hangs' under the

Fig. 5.12
Trench 4. Drawing of the section of the north wall of the trench.



black layer with burials (fig. 5.7). On the field drawing no distinction was made between the black layer and the fill of the structure. The difference between both must have been difficult to observe. We now have to refer to the drawing of the north wall section of the trench (fig. 5.12). On this drawing another situation is presented. The western end of the long rectangular structure is clearly indicated, the eastern end was outside the trench.[78] The fill of the pit consists of two different concentrations of gravel: a lot of it in the centre and less in the western and eastern ends. The top of the fill is at 49.00 m +NAP. This is the same height as the top of the black layer in the eastern section wall. Strangely enough no gravel is indicated on the drawing of the east wall section and no black layer is indicated on the drawing of the north section wall. Moreover on the basis of the information from the northern wall section gravel should have been indicated at level 3 in the northeastern corner of the trench. It is not. Gravel is indicated somewhat further south which relates to the bands of gravel (see below). Instead two grave-like features are indicated (contexts 323 and 324). If they are graves they must have been cut into the gravel fill of the long rectangular structure.[79] So in the northeastern corner of trench 4 four important features intermingle: the black layer, a long rectangular structure, a band of gravel and graves. The excavators could not disentangle the complicated sequence of features. If we accept that this long rectangular structure had the same function as the other one, which is a safe hypothesis in view of their common characteristics (see below), then this one must have been older than the top layer of gravel. When the top layer of gravel was created this structure was filled up entirely. The stratigraphic relations between the dug in structure, the black layer and the bands of gravel are difficult to establish on the basis of the drawings of the sections alone. We will come back to these structures when discussing the features in trench 4.

Layers of gravel (fig. 5.7, C purple)
In the southern part of the section two distinct layers of gravel were present [4145 and 4038]. The lower one was cut by pits 449 and 496. The upper one covered all features in that part of the section and must thus be relatively young. The top of the youngest layer is more or less at the same height as the top of the black layer in trench 1 and trench 4. This means that in the Middle Ages the top layer of gravel must have been at the surface. Both layers are the remains of a 1.5 to 2.0 metre wide north south oriented band of gravel observed at levels three to nine in trench 4. It was interpreted as a track.[80] There were at least two distinct periods of use interrupted by the digging of the structures discussed above. The bands were also observed in the northern part of the trench which means that at least the lower one must have run up the elevation of the built up area from the Roman period. We expect that the lower band of gravel was created in the Roman period and remained an important element in Merovingian times. However this conclusion poses some problems. The upper layer will date to the central and or late Middle Ages.

One element complicates the interpretation of the gravel deposits: the layer in between [4144]. We cannot definitely establish its nature and date. On the field drawing it is characterized as 'black and phosphate'. This does not suggest a natural origin. The light colouring of the layer on the field drawing is a bit misleading. The photograph shows that is was quite dark (fig 5.10). The photograph of level 8 (fig. 5.11 below) provides a clue to how this layer in between could be interpreted. In the middle of the band of gravel a dark zone is visible (black arrow). This might be a remnant of the dark layer in between the layers of gravel. The bands of gravel may not have been a track but a ditch filled with gravel to provide better drainage. When the younger band of gravel was created a new ditch could have been dug down to the older layer of gravel. The layer in between the layers of gravel could be the lower fill of the new ditch. We will discuss these layers of gravel further when we present the excavation levels in trench 4.

(78) Moreover the trench was not dug out deep enough to see the eastern lower part. (79) We have identified these features as graves on the basis of their shape. It cannot be excluded that they are parts of the black layer. (80) Dijkstra/Flamman 2004, 54.

Late and Post Medieval layers (fig. 5.6, D black and grey)
On top of the black layer with graves and the top layer of gravel a sequence of late and post-medieval layers is present. As in the section of trench 1 light and dark coloured layers alternate. They are related to successive improvements of the square whereby its surface was raised considerably. These improvements were for the main part probably related to the use of the square as a military parade ground since the seventeenth century.[81] This raising of the surface must have ended by 1738 when the present Main Guard house (*Hoofdwacht*) was build along the western limit of the square. The (few) finds that were recovered while lowering the trench to level A consist of red and white wares and stoneware, such as that from the Westerwald production centre. The northern part of level B is situated just above the black layer. The oldest finds at that location and height are white and red Andenne pottery shards (appendix 5.2). However (early) stoneware was also found at that level. Two fragments of floor tiles date to no earlier than the thirteenth century. The older material dates to the later part of the Central Middle Ages, except a few Roman shards. Fragments of pitchers of Andenne ceramics are not much older than the late twelfth century.[82] A fragment of South-Limburg pottery (find nr 802) originating from the lower part of the brown/black layer [40034] on top of the black layer dates to the same period. It can be concluded that the layers on top of the black layer are not older than the (later part of the) 12th century. However at level B tiles and a lot of brick remains were found which indicates that this excavation level in the lower part of the top package of layers is situated in layers that rather date to the late Middle Ages or even Modern Period. The high medieval shards could originate from the black layer that was partly removed when creating level 3 or is residual material in the higher lying layers. The layers on top of the black layer were in that case (much) younger than the twelfth century. A date to the late Middle Ages seems to be more plausible in view of the larger number of pottery shards recovered (table 5.1), which is an indication that more activities took place in that period on the Vrijthof Square area.

Conclusions on the basis of the sections
On the basis of the information from the sections in trenches 1 and 4 we can distinguish a sequence of depositions that represents the main history of the square area. They are: 1. natural deposits, 2 depositions related to the Roman road that ran along the northern limit of the square, 3. depositions related to habitation along the southern limit of the road that date to the second century, 4. depositions (probably colluvium) dating to a period before the use of the terrain as a cemetery in Merovingian times, 5. depositions related to the use of the terrain as a burial ground in Merovingian times, 6. depositions related to the digging of deep pits and long dug in structures, 7. depositions related to the use of the terrain as a burial ground in Carolingian (and Ottonian?) times, 8. depositions related to the use of the area (black layer), 9. depositions related to the raising of the soil and the use of the square as a military parade ground in late medieval and modern times.

This history can be refined and expanded with the help of the features observed in the excavation levels of trenches 1, 4, 5 and 6. These will be presented below.

Trench 1: the features observed in the excavation levels
In trench 1 fourteen levels were cleaned and drawn. Levels A and B were situated in the raised levels of the Modern Period.[83] Level 3 was situated at the top of the black layer with the skeletons and deep pits. Level 4 *in* the black layer or at the bottom (in the north). The lower lying levels were in the Roman layers or the 'colluvium' layers. Moreover a small part in the north of the trench was drawn as a separate level.[84] Some of the levels cover only a part of the whole trench. The interpretation is complicated because the excavation levels were really level whereas the various layers were slightly sloping down to the south. At the various levels outcrops of sloping down layers were observed and indicated as lines on the drawing. Apart from the Roman habitation layers, which were difficult to interpret, the relevant features in trench 1 are: 1. the remains of the Roman road, 2. graves, 3. large and deep pits, 4. postholes, 5. a ditch in the southern part of the trench.

Roman road
Remains of the Roman road were observed in the northern part of the trench at levels four to seven.[85] The information is not very informative and does not add anything to the information from the sections.

Graves
Graves were observed at levels three to seven. Some graves were observed at different levels. We will deal with the graves in more detail in the following chapters.

Deep pits and a ditch
In the east wall section of trench 1 deep pits with steep walls were visible. They were dug down from the black layer with graves. Such pits were found all over trench 1. They were visible from level 4 up to the deepest level '8' (fig. 5.13).[86] In figure 5.14, A and 5.15 the outlines of such pits from all levels and the drawings of sections are presented. A number of interesting observations can be made. Most of the pits were round but some had a square form. They were at least one metre in diameter most of them had a diameter around 1.25 to 1.50 metre at the higher levels. The largest one (427) is three meters wide and c. 4.5 meters deep.[87]

(81) Dijkstra/Flamman 2004, 59-60. (82) Verhoeven 1998. (83) They were not included in the analyses below. (84) Level 14 which has various heights. Level 13 was erroneously designated as level 8. We indicated it as '8'. (85) The remains were originally identified as a wall by the excavators, for they did not expect to find a Roman road. (86) From level '8' a section was made through most pits. (87) On the field drawing of the west wall section of trench 1 it is indicated that the bottom was at c.

Fig. 5.13
Trench 1. The digging out of the deep pits at the lowest level in the trench. A man is working in the pit in the foreground (another man is looking down) and a man is standing in the pit next to the wheel barrow.



They had steep straight walls. In some of them small 'steps' were made in the wall, probably to allow the digger to climb out of the pit.[88] These features indicate that the walls did not suffer from erosion. Many pits must have been filled up quite soon after they were dug. Information on the fill of the pits is meagre. The field drawings indicate that the fill had a relatively light colour. This however is misleading. Van Pernis, the field technician, usually coloured most layers too light. The photographs show that the fill contrasted strongly with the natural soil in which they were dug out. The excavators did not record a sequence of layers in a number of the pits, which indicates a fairly homogeneous fill. Others do show a sequence of layers. These pits were filled in more than one phase.[89] The top of the fill of some pits (such as context 420) contained lumps of marl and stones and is less homogeneous than the lower (black) part (fig. 5.16). The same goes for context 438 (fig. 5.17). Five times the presence of animal bones was recorded on the field

4.5 meters. (88) Another suggestion is that wooden stakes were placed in them to create a kind of ladder. (89) How long this period lasted is unknown, one season, several years?

Fig. 5.14
Trench 1. Plan of the distribution of deep pits. A. Deep pits with outlines of all excavation levels at which they were recorded and context numbers, B. The northern part of trench 1 with deep pits and graves on top of their fill, C. other features in the northern part of trench 1. Scale 1:200.

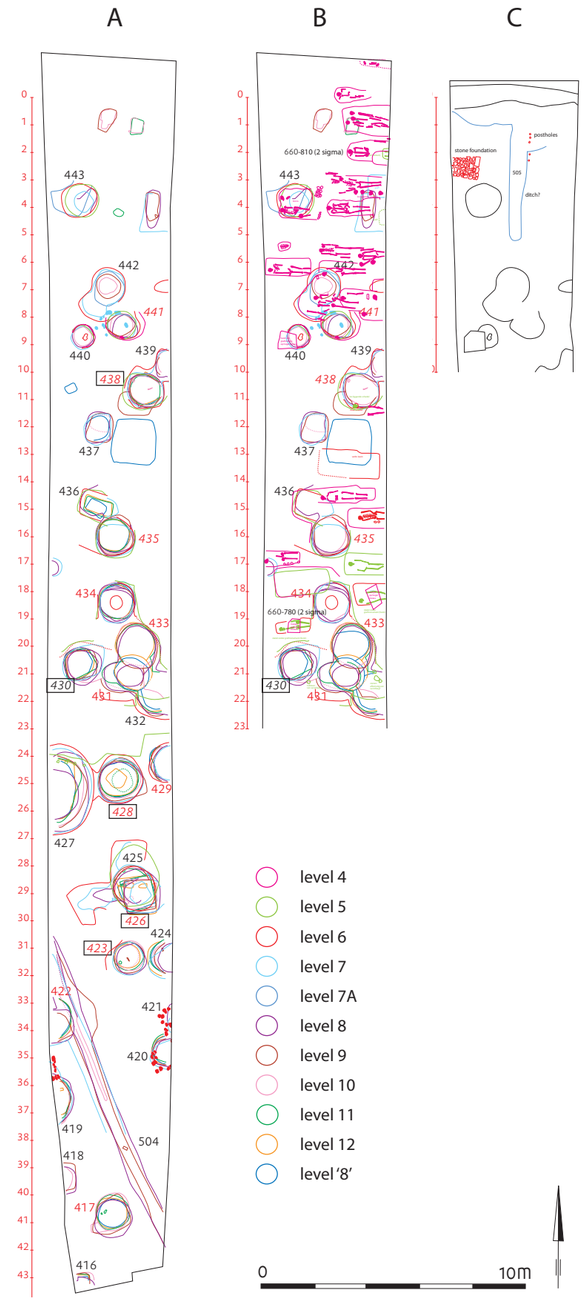


Fig. 5.15
Trench 1. Sections through a number of the deep pits. Scale 1:40.

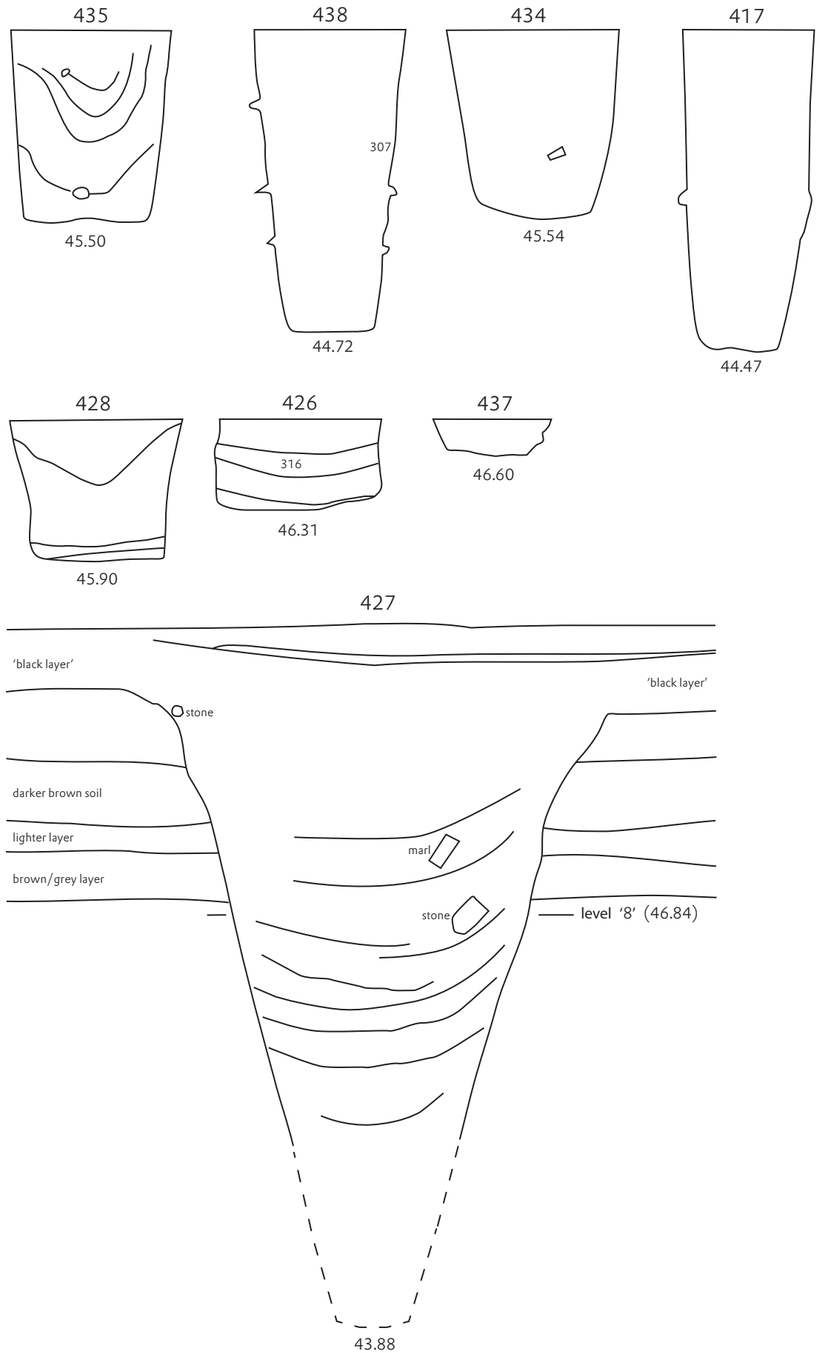


Fig. 5.16
Trench 1. Photograph of the section through deep pit context 420.



Fig. 5.17
Trench 1. Photograph of the section through deep pit context 438.
Note the 'steps' in the wall of the pit.



drawings, in one case 'many animal bones' were mentioned. The reference to animal bones is an indication that remains of slaughtered animals were dumped in these pits. Next to animal bones small quantities of pottery shards were recovered.[90]

It can be concluded that all over trench 1 deep pits were dug, some of which were filled up quite soon with animal bones, pottery shards and other organic waste that was not recorded or did not leave any traces.

It is difficult to determine the function of the pits on the basis of the evidence from the Vrijthof excavation. However, similar features were discovered in the Heumarkt excavations in Cologne. A large number of deep pits with steep walls with a depth of up to 4.7 meters and diameters of 1.3 to 1.8 meters were discovered.[91] Usually they got filled up relatively quickly. Most of them date to the Carolingian age. The lower parts of the fill usually consisted of organic material, more specifically excrements, but also many cherry stones. The upper parts were filled in when the organic material reached the edge about one or two meters. Settlement refuse and stone debris was used. Large amounts of pottery shards were found in the pits.[92]The stone debris reminds of the stones and marl found in the upper layers of some of the Maastricht pits. In Cologne many of those pits are considered to be latrines. The Maastricht-Vrijthof and Cologne-Heumarkt pits share many characteristics. It is suggested that the Maastricht pits also functioned as latrines or waste dumps that were filled almost instantaneously.[93] The Cologne pits however contained much more finds than the Maastricht ones. The interpretation of the pits will be discussed further in chapter 14.[94]

When were the first pits dug? In the northern part of the trench some pits (443, 442, 441 possibly 440, 438 and 436) are stratigraphically older than the graves (fig. 5.14, B). ^{14}C-dates were made of skeletal remains in two graves: the total date range (2 sigma) is 660-810 (of one of the northernmost graves) and 660-780 (one of the southernmost).[95] No grave goods were found in these or the other graves, which are trench graves. It is most likely that they date to the very late seventh or rather eighth century.[96] Other graves could date to the ninth century. At present we have no means to establish the date of the youngest graves.[97] It is possible that the graves on top of the fill of some deep pits date to a younger phase in the use of the area as a burial ground (eighth/ninth century).[98] It is unlikely that the deep pits were dug in an area that was in use as a burial ground.[99] Thus the pits in the northern part of trench 1 were dug before burial began in that area. It is not possible to determine when burial activities started there within the time range indicated by the ^{14}C-dates (660-780). The lack of grave goods, the total absence of wooden containers suggests that burial started here somewhere in the eighth century.

The low number of pottery shards found in these pits poses a problem, but also their date is problematic. In appendix 5.1 the pottery found in each pit is described.[100] The majority dates to the Roman period. The pits do certainly not belong to the *vicus* habitation. They were cut through the layers on top of those of the *vicus*. When they got filled up the Roman pottery shards were thrown in, which indicates that the fill consisted of local material. However in a number of pits pottery shards dating to the Merovingian period were also found (fig. 5.18).[101] These pits are indicated with a red context number in figures 5.14, A. It is surprising to find

(90) This in spite of the fact that the lower part of many pits was shoveled or trowelled out. The trowels used can be seen on the picture in fig. 5.13. See appendix 5.1 for a description of the pottery in each pit. (91) Aten 1998, 95; Aten 2001, 669; Höltken 2003. (92) Aten 2001, 669: in 68 pits more than 11000 pottery shards were found. (93) The excavators referred to one of the pits as 'cesspit', probably they observed organic material that reminded of excrements. (94) This interpretation is also determined by the relations with other features to be discussed in this chapter. (95) Grave 364: GrA-32718: 1275 + 30 BP 1 sigma: 680-725 (31.8%) 735-770 (30.1 %) 2 sigma: 660-810 (95.4%). Grave 392: GrA-32705: 1285 + 30 BP 1 sigma: 670-720 (41.4%) 740-770 (26.8%) 2 sigma: 660-780 (95.4%). (96) See chapter 12 (97) We need a new series of 14C-dates. (98) Both dated graves do not cut the fill of a deep pit. (99) We will see that in trench 6 pits were dug through Merovingian graves. By then the Merovingian cemetery was likely out of use. (100) The pottery was described according to the Maastricht system in use at the time the pottery was studied. In appendix 5.3 the codes and descriptions are given. (101) Only diagnostic shards were drawn.

Table 5.2
Trench 1. The distribution of Carolingian pottery shards and Andenne pottery shards in deep pits.

pit	find number	number	type	description	level
423	287.5	1	VIA3	fine oxidizing ware	11
426	269.8	1	VIA3	fine oxidizing ware	10
426	316.4	1	VIA4	Mayen ware (stoneware-like)	13
426	316.5	2	VIA	white ware and others	13
428	153.10	12	VIA3	fine oxidizing ware	5 to 6 or 5 to 8
428	153.11	3	VIA4	Mayen ware (stoneware-like)	5 to 6 or 5 to 8
428	153.12	2	VIA8	Grey ware with light core, stone hard	5 to 6 or 5 to 8
428	153.13	1	VIIA4	Andenne white ware	5 to 6 or 5 to 8
428	202.1	1	VIA2	Badorf pottery with relief-band	7
430	208.6	1	VIA8	Grey ware with light core, stone hard	7 to 8
435	123.8	2	VIA3	fine oxidizing ware	5 to 6
438	300.14	1	VIA2	Badorf pottery with relief-band	13
441	101.6	1	VIA3	fine oxidizing ware	4 to 5
		29			

almost no pottery shards dating to the Carolingian period. Twenty-nine shards from this period were found in seven pits (table 5.2).[102] These pits are indicated with a context number in italics in a box in figures 5.14, A.[103] In four of them only one shard was found, in pit 428 nineteen shards were found but also a shard of Andenne pottery (VIIA4) dating to the Central Middle Ages. Only two shards of 'relief-band amphorae' (type VIA2) were found.[104] Seventeen shards were of fine oxidizing ware (type VIA3). Two of the pits with Carolingian shards were older than graves (438 and 441). Can we date these pits on the basis of these pottery shards to the Carolingian period in spite of the fact that the Merovingian pottery dominates the spectrum? In five of those pits Merovingian shards were also found.[105] If we date the pits (or rather their fill) to the Carolingian period the Merovingian shards were residual finds. Moreover if pits 438 and 441 date to the Carolingian period the graves on top of their fill have to be dated to the (late) Carolingian or even Ottonian period. In pits 441, 435, 430 and 428 the Carolingian shards were found at levels 4 to 8, which are the higher lying levels. In pits 423, 426, 438 the shards were in the deeper levels (10 to 13). The shards in the higher levels could belong to the final filling of the pit, which would explain the presence of an Andenne pottery shard. The shards at the deeper levels could relate to their use period.[106] How to explain the small number of Carolingian shards if some pits were in use in that period? It was concluded that many pits were filled in relatively fast. This means that the finds in the lower parts of the pit have some dating value. It is not expected that these pits were open for a 100 years or more. So some pits could be dated to the Carolingian period. Does this mean that a possible abundance of material from the Carolingian period would have been missed entirely by the excavators when excavating the many levels in the trench and the pits? They operated in a crude way but not that crude that all material culture dating to after the Merovingian period disappeared unseen when it was present.[107] We have to conclude that not much Carolingian pottery shards were present at the Vrijthof site prior to excavation. So, the conclusion must be that the oldest pits date to the Merovingian period. How long continued the digging of the deep pits? In view of the small number of Carolingian shards we have to conclude that the digging of deep pits did not continue for a long time in the Carolingian period. It is most likely that the majority of the pits dated to the seventh and first half of the eighth century that is before typical Carolingian pottery starts to dominate the ceramics spectrum. Some pits could be somewhat younger.

In the southern part of the trench a ditch (context 504) was present at levels 7, 8, 9, and 10. It was oriented northwest-southeast. In the east wall and west wall sections it can be seen that this ditch was dug from the black layer with graves. One of the deep pits situated against the west wall of the trench either cuts the fill of the ditch or the ditch cuts the fill of the pit. The information on the drawings of the west wall section and the levels is contra-

(102) These are the youngest shards in the pits. Residual material from the Roman period is often present. At times also shards from the Merovingian period are present (see appendix 5.1). In one case there is a shard from the Andenne production centre. This shard may be somewhat younger (Ottonian?). (103) So find numbers in red, in italic, in a box contain both Merovingian and Carolingian pottery shards. (104) Because of their sturdiness shards of these amphorae are usually a bit larger and are easily detected. The near absence might be the result of their absence on the site. (105) 423, 426, 428, 435 and 438. (106) The stones in the higher parts of the fill, possibly related to a final fill were found at levels 6 and 7. (107) There are neither much finds from the Central Middle Ages (950-1300).

Fig. 5.18
Pottery found in various contexts in trench 1. Scale 1:4.
(contextnumber-findnumber)

all wares late Roman

red painted Merovingian

fine ware grey/black Merovingian

fine ware red/brown Merovingian

coarse ware (mayen) Merovingian

all wares Carolingian

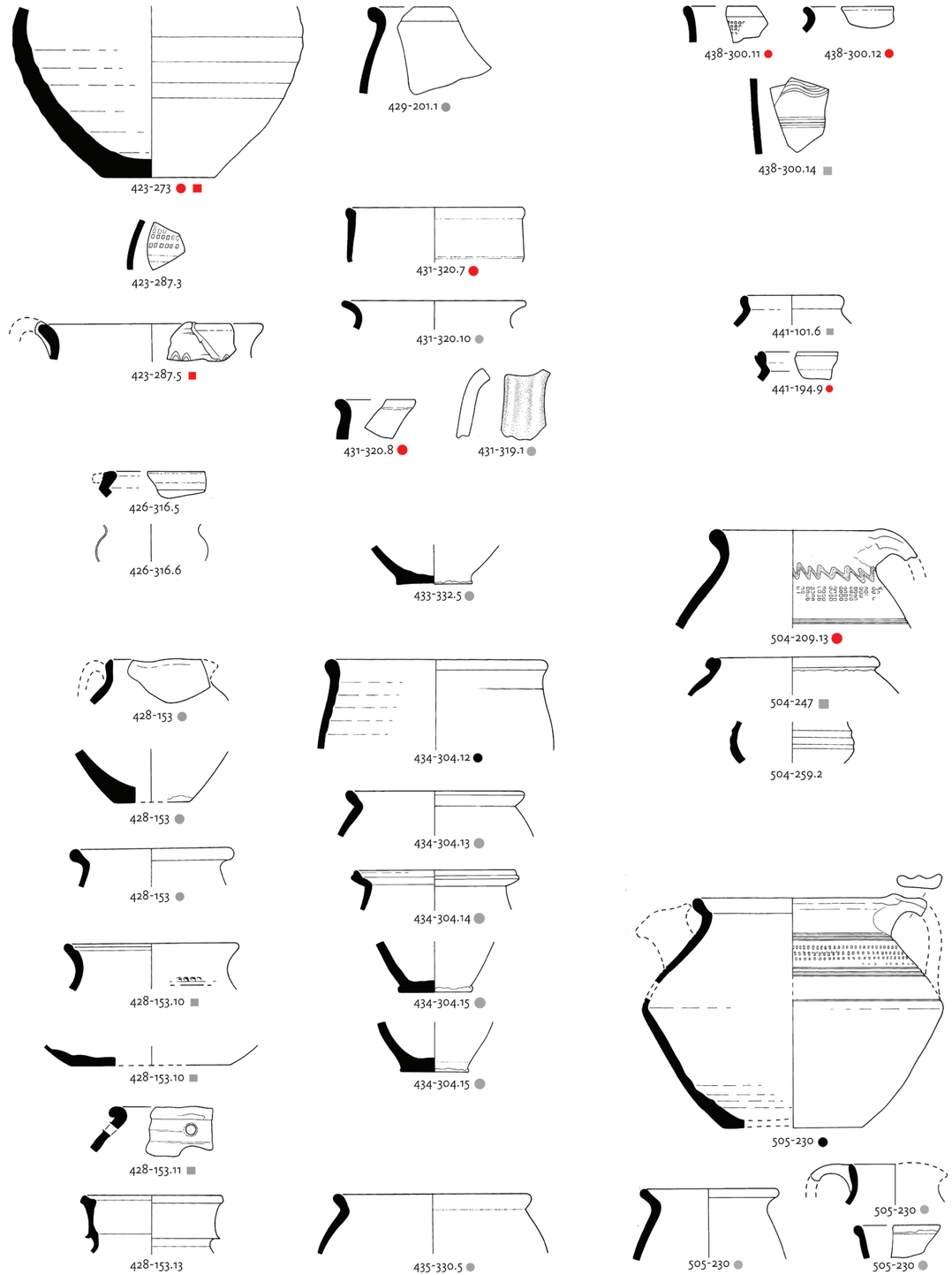
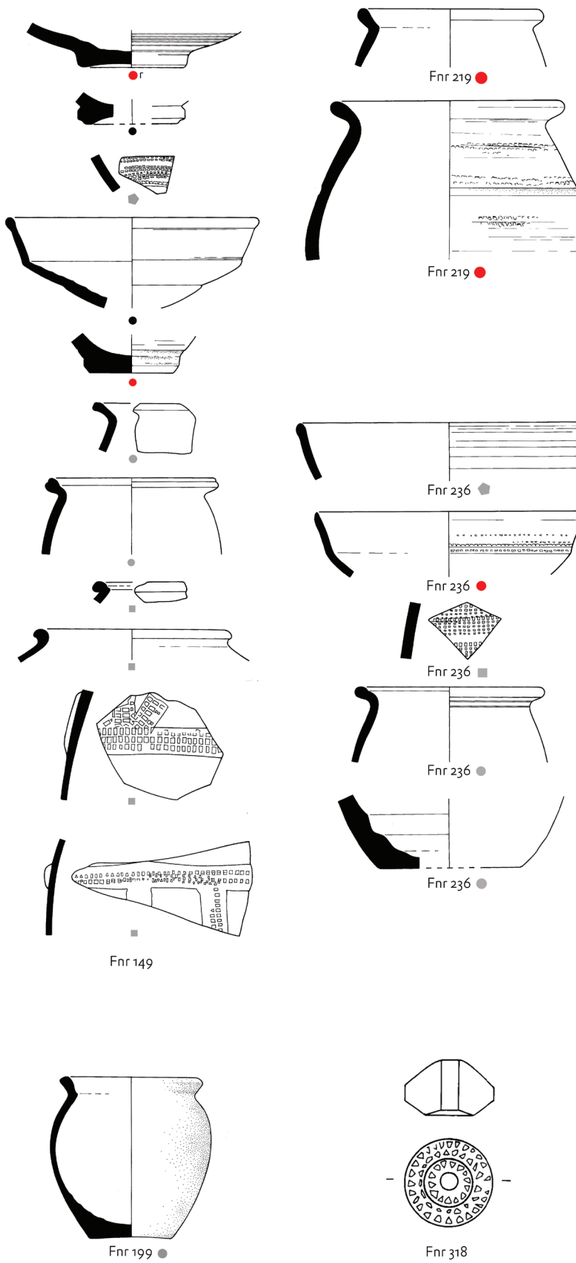


Fig. 5.19
Pottery found in various contexts in trench 1. Scale 1:4.
(contextnumber-findnumber)



dictory.[108] In view of its general stratigraphic position it is certain that the ditch is of medieval date. In the fill many Roman shards were found next to one base fragment of Merovingian coarse ware (VA4), two fragments of Carolingian fine oxidizing ware (VIA3), one rim fragment of Carolingian Mayen ware (VIA4), and five fragments of Andenne white ware (VIIA4) dating to the Central Middle Ages (fig. 5.18).[109] To date the fill of this ditch we would have to copy the discussion on the dating of the deep pits. In view of the relatively large number of shards of Andenne pottery the fill could date to the Central Middle Ages and might be much younger than the pits. However it could already have been in use in the Carolingian period.

Postholes, a ditch(?), a small stone foundation (fig. 5.14, C)
In trench 1 only a few pits were recorded that could be designated as postholes. At level 6 (48.20 m +NAP) a short row of very small postholes was observed in the northern part of the pit. Its length was only one meter. They could have been stakes of a fence. In view of the absolute height these postholes could date to the Roman period. However a ditch like structure (context 505) had the same orientation. It was observed at level 7A at 47.87 m +NAP. A substantial number of Merovingian pottery shards was found in this feature (fig. 5.18). The feature thus probably dates to that period. If so it was dug in deep into the Roman layers.

Small postholes observed at level 14 in the northernmost part of the trench could belong to a fence parallel to one of the oldest roads. They were found below the layer of gravel of the auxiliary road of phase 3.

As said before level 4 was located in the black layer or at the bottom of it. On the field drawing of level 4 no indications of postholes, wells, or any feature other than the deep pits and graves are indicated that could relate to early medieval habitation. One could at a first glance suggest that the excavators missed these features in the black soil. On the other hand, they saw the fills of the pits and the graves and they recognized the remains of buildings in the Roman layers. It is therefore unlikely that such settlement features were present.[110]

At level 6 a rectangular stone foundation was found measuring 1.0 x 0.85 meters. It was made of broken Roman brick tiles and fragments of quern stones (probably tephrite). Its date and function cannot be established.

Diagnostic finds that are difficult to assign to a specific feature
In trench 1 a number finds cannot be assigned to a specific feature such as the shards of find number 149 which is assigned to '6/7' which means that they were probably found when lowering level 6 to level 7. Other finds come from this trench but were not listed in the finds list, such as find number 199. Find number 219 was assigned to 7/8, 236 to 7 or 8?, and 318 to the east section. The diagnostic fragments of early medieval pottery are presented in figure 5.19. Two of them are wall fragments of relief-band amphorae. Most early medieval fragments date to the Merovingian period.

Fig. 5.20
Trench 4. Plan of the northern part of the trench with features from all excavation layers indicated. Scale 1:200.

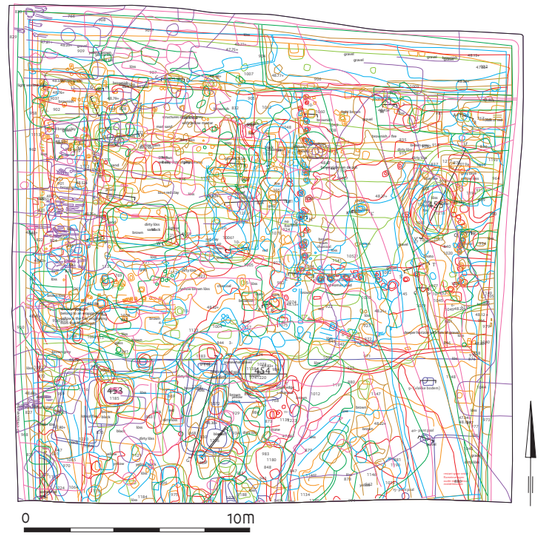
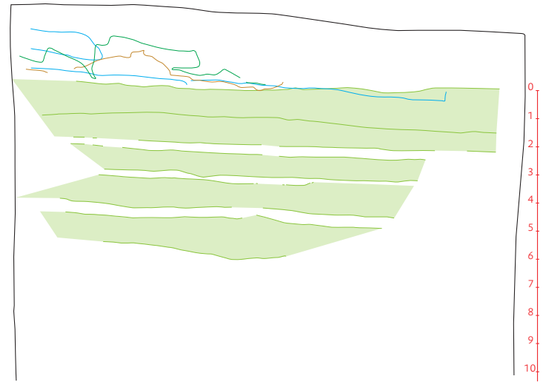


Fig. 5.21
Trench 4. Southern limits of the layers of gravel of the Roman road and the fill in the ditches parallel to the road (green colour). Scale 1:200.



Trench 4: the features observed in the excavation levels
In trench 4 eleven levels were cleaned and drawn.[111] The first two levels (A and B) were situated in the package of late and post medieval layers. They do not provide any relevant information for our present purposes. Level 3 was located in the black layer (in the north) and in the brown layer on top of it (in the south). In figure 5.20 the northern part of the trench is shown with all features from all levels (except levels A and B). As in trench 1 this presents a very confusing situation. Again this is to some extent due to the fact that the levels do not follow the layers that were sloping down a bit to the south. A number of lines was related to outcropping layers. So the field drawings often show older layers in the northern part of the trench and younger layers in the southern part. The relevant features in trench 4 are: 1. the Roman road and ditches, 2. postholes, wells and narrow ditches, 3. graves, 4. the black layer, 5. deep pits, 6. the north-south oriented bands of gravel, 7. structures with sunken floors, 8. fireplaces from the modern period.

Roman road and ditches (fig. 5.21)
At levels 6 to 8 layers of gravel of the Roman road or rather the auxiliary path were observed. At level 11 the fills of four or five ditches were recorded. These were at a deeper level than the layers of gravel and were related to the oldest roads (phases 1 and 2). New ditches were dug next to filled up older ones. This indicates that the limits of the road zone were not fixed in detail in the early phase of its construction.

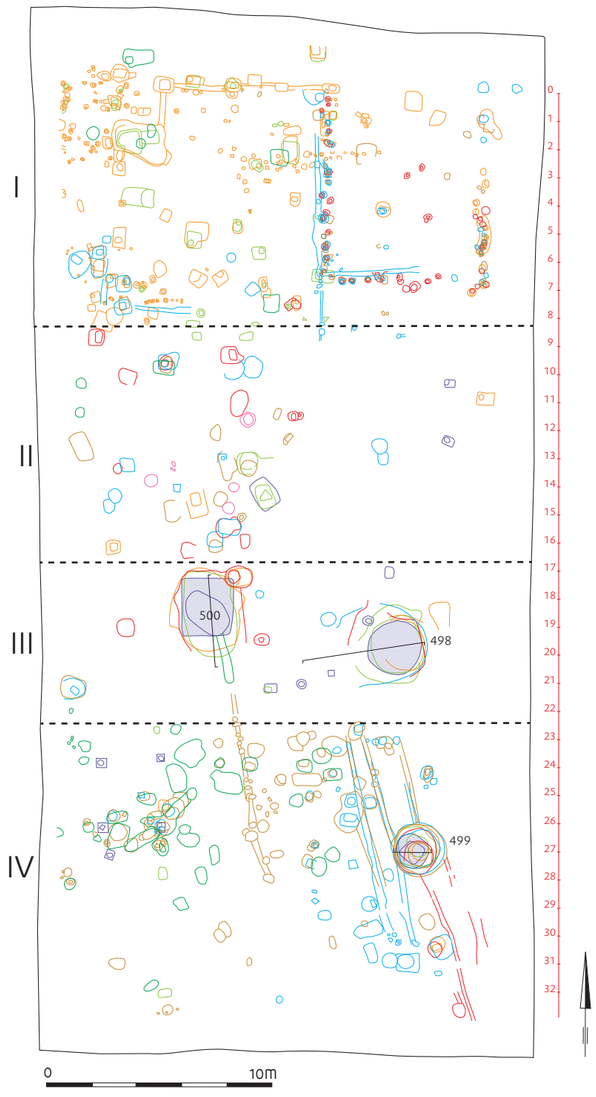
Postholes, wells and narrow ditches
In this trench many postholes and small pits were recorded at levels 4 to 12. They were related to habitation in this area. Some configurations of postholes clearly represent (fragments of) ground plans of buildings. The distribution of the postholes in the trench is not random. Four zones (I-IV) can be identified with a different composition of postholes (fig. 5.22 and table 5.3). Most of them were found in the northern and southern parts of the trench (zones I and IV). In between these zones a smaller number of postholes was present. This intermediate zone can be divided in a zone almost devoid of postholes (zone III) and a zone with a limited number (zone II). Moreover they were unevenly distributed vertically (table 5.3). At levels 6 to 8 postholes were present in both the northern and southern zones of the trench. At the deeper levels 9 to 12 almost no postholes were recorded in the southern part of the trench except at the lowermost level 12. The postholes at these levels (9 to 12) certainly date to the Roman period for they are located in the package of Roman layers south of the road. The postholes at levels 4 to 8 are situated in two different

(108) The drawing of the west wall section and level 8 suggest that the pit is younger, the drawing of level 9 suggests that the pit is older. (109) The fragment of the pot with handle and decoration with undulating lines and roulette decoration (find number 209.13) was identified as Carolingian by the excavators. It is however a spouted pot to be dated to the Merovingian period. (110) This is in accordance with the observation that no such features were observed in the sections. (111) Level number 5 was skipped by the excavation team.

Table 5.3
Trench 4. The frequency of postholes in the four zones at various excavation levels. With a brown colour postholes of the Roman period are indicated, with a grey colour those of the Early Middle Ages. - = no postholes, -/+ = some postholes, + = postholes are a regular phenomenon, ++ = many postholes. It can be seen that most postholes were found in zones I and IV and that in zone IV most postholes occur at the higher lying levels 6 to 8.

zone	level 3	level 4	level 6	level 7	level 8	level 9	level 10	level 11	level 12
I	-	-	-/+	++	++	++	++	++	-
II	-	-/+	-/+	+	+	+	-/+	-/+	-/+
II	-	-	-	-/+	-/+	-/+	-/+	-	-/+
IV	-	-	++	++	++	-	-	-	-/+

Fig. 5.22
Trench 4. All postholes and wells recorded at various excavation levels in the trench. Scale 1:200.



contexts. In the northern part they are located at the height of the Roman levels, in the south they were located at the height of the upper layer of gravel and the layer in between the two layers of gravel. The southern postholes of levels 4 to 8 must be younger than the northern ones. They date to the Middle Ages. We can thus create two new plans: one with postholes from the Roman period and one with those from the Middle Ages. Before we do that however, we have to discuss the wells.

Three wells were discovered (in fig. 5.22 the outline at level 12 is filled with a purple colour). The southernmost well (context 499) was first observed at level 7, the northeastern one (context 498) at level 8, and the northwestern one (context 500) at level 9. Wooden constructions were only observed in the lower parts of the wells. All three were square plank built wells (fig. 5.23). On the basis of the pottery the wells 499 and 498 can be dated to the Early Middle Ages, the other one (500) dates to the Roman period (fig. 5.24). The bottom of well 498 was at 43.80 m +NAP. It was at least 4.20 m deep. Halfway its fill a rim and wall shard of Merovingian coarse were found (find 1320), find number 1329 contains a fragment of a Merovingian bowl.[112] The structure of well 499 is somewhat different than that of the others. It is possible that the excavators only recorded the fill of the well shaft and did not see the pit in which the well was built. Well 499 had the same depth as well 498. In the shaft a layer of burned wood and charcoal was found and a layer of 'red brick'. In find numbers 1216 and 1253[113] at the lowest level (18) 24 shards of Merovingian fine and coarse ware were present of 13 different pots and bowls and a jug (fig. 5.24). Moreover find 1099 from the shaft was a rim fragment of late Roman Samian ware. Both wells 498 and 499 have to be dated to the Merovingian period.

Wells 498 and 499 seems to have been filled all at once where as the Roman well 500 seems to have collapsed gradually. The fill of the shaft is irregular and the upper dark fill is probably the fill of a pit that was dug at that location after the well collapsed. The Roman well was observed in zone III, the medieval ones in zones III and IV.

Wells 499 and 500 cut the fill of some short narrow ditches that have a northwest-south east orientation. They were observed at levels 7 to 9, so it is most likely that they date to the early Middle Ages.[114] Roman features were not present at this height in this part of the trench. It is difficult to interpret these ditches. One of them seems to be combined with postholes, it could be part of a building ground plan with wall ditches or a fence around the backyard. Another possibility is that they were related to the band with gravel (see below).

If we combine the Roman postholes with the Roman well and the medieval postholes with the medieval wells and ditches we obtain the patterns illustrated in figs. 5.25 A and B.

(112) The find number is not indicated on the drawing. (113) These are not indicated on the field drawing. (114) In that case the observation that well 500 cut such a ditch cannot be correct. It should have been the other way around.

Fig. 5.23
Trench 4. Drawings of sections through the wells and plans of the wooden well constructions. Scale 1:40.

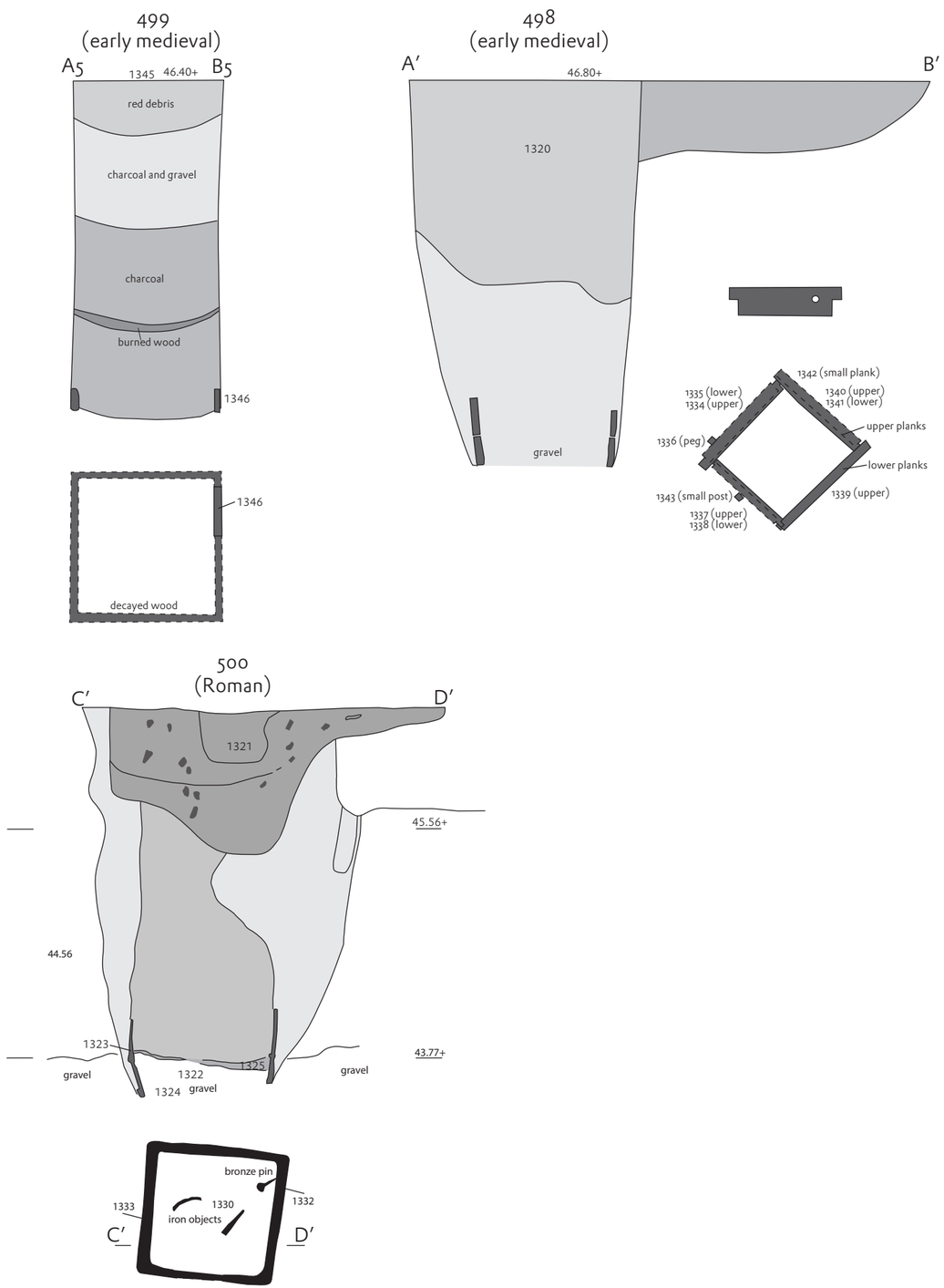


Fig. 5.24
Pottery found in various contexts in trench 4. Scale 1:4.
(contextnumber-findnumber)

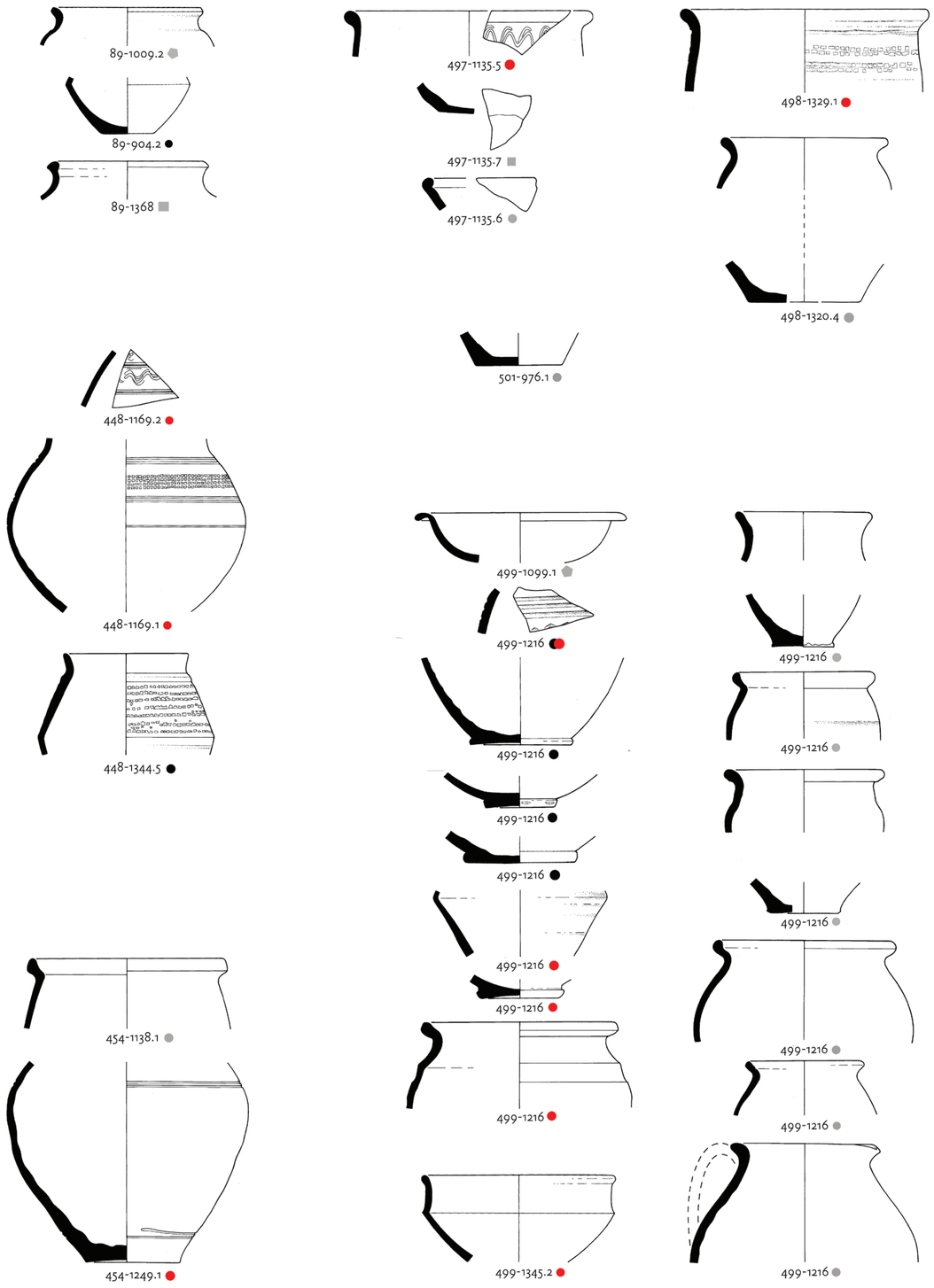
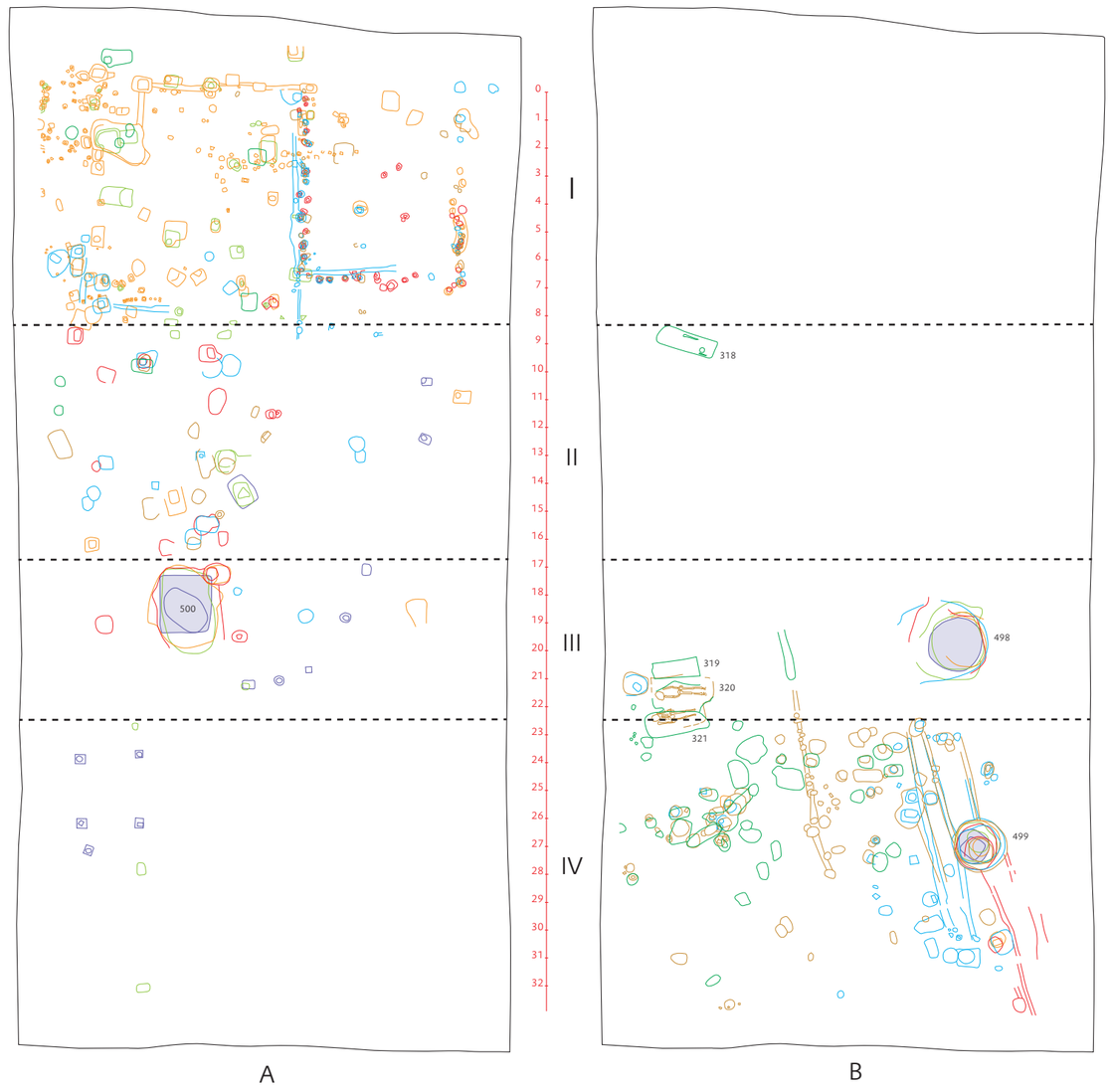


Fig. 5.25
Trench 4. Postholes and wells assigned to the Roman period (A)
and to the Early Middle Ages (B).



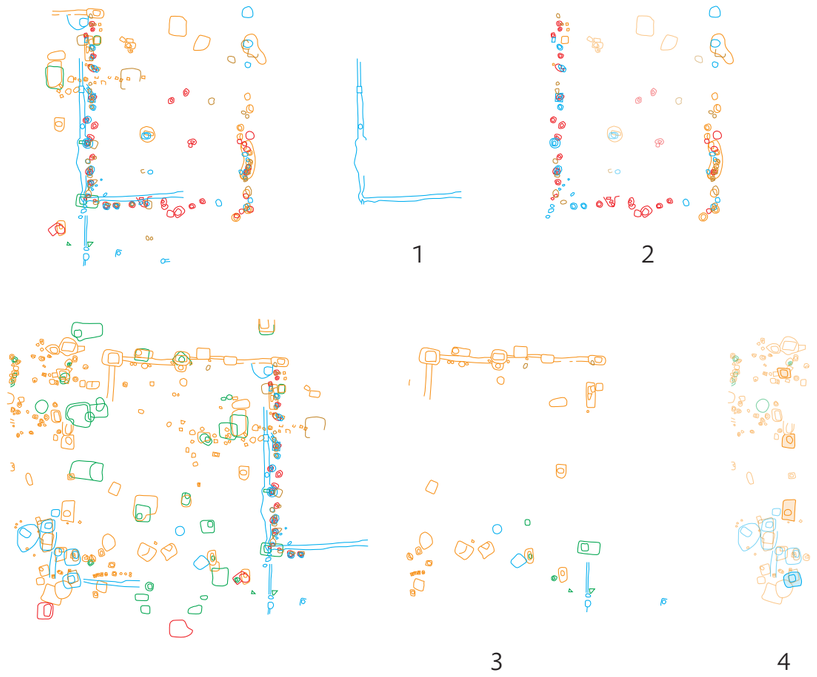


Fig. 5.26
Trench 4. Plans of the remains of four buildings dating to the Roman period. To the left are the plans of all postholes at one single spot at the location of buildings 1/2 and 3/4.



Fig. 5.27
Trench 4. Photograph of the northern part of excavation level 8 with a rectangular area with white soil (chalk?).

The Roman vicus

Figure 5.25 A shows the distribution of postholes related to habitation in the Roman *vicus*. In zone I the remains of three or four north-south oriented buildings were present. It is possible to unravel the concentration of postholes to some extent because some lines of postholes can be observed. In the eastern part of the concentration the remains of two buildings can be observed (fig. 5.26). They had different wall constructions. In building 1 the wall was lowered in a narrow ditch, in building 2 the wall was built up with the help of many small posts. The post-built structure 2 is at least 7.10 meters long and 5.65 meters wide. The western part of the concentration is more difficult to unravel. The remains of at least two houses were recorded. One (nr 3) was a post-built structure with wall ditches in between the posts. It was at least 8.5 meters long and 6.1 meters wide. A row of postholes was observed of another building (nr 4). On the photograph of level 8 patches of white/yellow material (loam or chalk?) making up a rectangular area were visible (fig. 5.27). On the field drawing they are not indicated as clearly as they are visible in the photograph. They could be related to a floor of building three. Not all houses need to be contemporary. It is possible that new buildings were built next to older ones. Some pits may have been located next to the houses but it was difficult to reconstruct a clear image of a yard.

It is not possible to observe many details of the construction of the buildings. Three different wall constructions were observed: one with a wall lowered in narrow ditches, one with a wall of posts possibly for a wattle and daub construction, and one with narrow ditches between posts, possibly of a wattle and daub construction or of a construction with planks.

The northernmost postholes were observed at more or less zero metre on the red line (fig. 5.25). That must have been the position of the front wall of the buildings. The layers of gravel of the auxiliary road were less than one metre further to the north. This means that the Roman buildings stood immediately next to this auxiliary path. The rear wall of the houses must have been at c. seven to nine meters on the red line. This is where the layers of the Roman *vicus* in the east wall section of trench 1 start to slope down. The higher lying part of the Roman layers was thus entirely taken in by buildings. The zone behind the buildings (zone II) with a lower number of postholes reaches until c. 17 meters on the red line. This zone corresponds to the slope of the Roman layers in the east wall section of trench 1. The immediate backyards were located in this area. Various activities took place there for which posts were dug in. However it is not possible to reconstruct small buildings such as barns or sheds. Zones III and IV were in the lower lying part of the terrain. In zone III one well was found. In zone IV a configuration of four postholes could be the remains of a granary or a small building to keep small livestock, such as chicken or pigs. It indicates that some activities took place in that zone too. So, the Roman *vicus* was structured in four zones: along the auxiliary road was a row of buildings with a yard behind them of c. nine to ten meters long, followed by a zone in which wells were located. Behind the well was an outer backyard where, on a limited scale, activities took place.

On the basis of the pottery it could be established that the *vicus* was inhabited in the second century. It was abandoned around AD 200 at the latest, maybe earlier.[115] Only a few late Roman shards were found in the excavations.

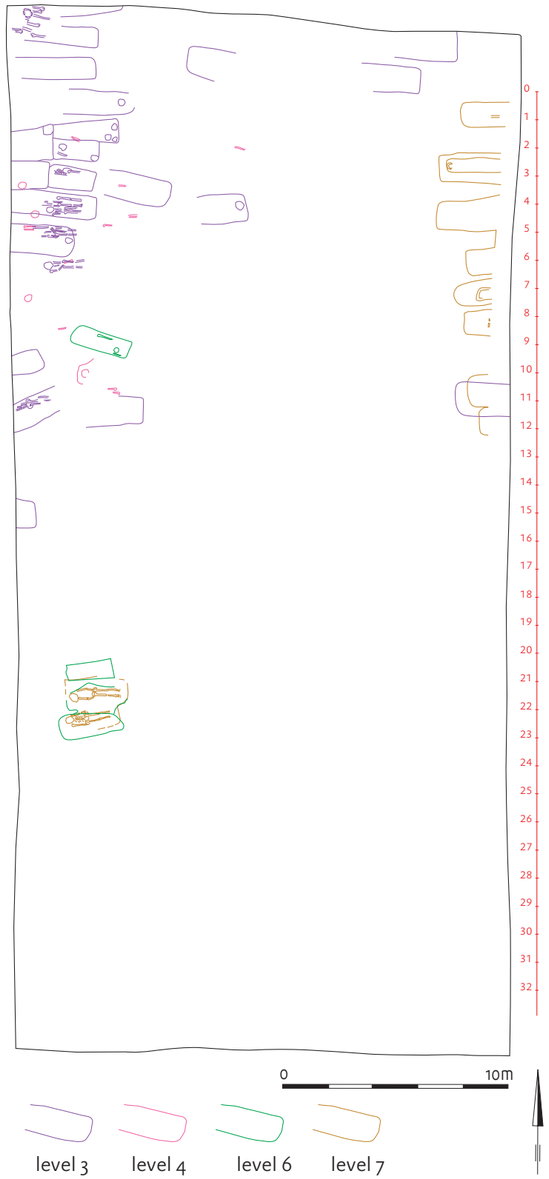
Early medieval habitation

Figure 5.25 B shows the distribution of features related to habitation in the Middle Ages. They are mainly found in zone IV. This pattern may reflect the original situation. If medieval habitation took place in zone I postholes and pits that were dug in 40 to 50 cm would have been visible in the top layers of the Roman period. It is possible that some postholes in zone 1 indicated in fig. 5.25 A date to the Middle Ages. Their number is not high, because most postholes can be related to Roman buildings.

It is difficult to establish the relation between the features of early medieval habitation and the black layer. It was suggested before that the black layer post-dated the Merovingian burials. The early medieval postholes became only visible at level 6 after the black layer was removed from the trench. The postholes and the north-south oriented ditches at level 7 and 8 were dug in lower lying layers. The photographs of levels 7 and 8 (fig. 5.11) suggest that two different layers were involved that cannot be identified in the east wall section because of the presence of the layers of gravel. At level 7 one can identify four different basic colours of outcropping layers. From north to south (from bottom to top in the photograph) they are: yellow löss, a brown band of soil, a grey layer (in which two graves were dug) and finally a black layer in the corner of the trench. The features of the early medieval habitation were dug through the grey layer. The black layer seems to cover them. The postholes in the southernmost part of the trench were found at levels 8 and 9 when the black layer was removed. All this however need not be proof that the black layer is younger than the early medieval habitation. The features of the settlement could have been dug down from the black layer. If this is the case we have difficulties in explaining the relation between the black layer and the Merovingian burials on the one hand and the settlements remains on the other. Both types of features only became visible after the black layer was removed but their relation with the black layer might have been different. Moreover the Merovingian burials and the habitation need not be contemporary. It is possible that the black layer developed after Merovingian burial had stopped and habitation and a new round of burials (the Carolingian ones) started and that later the top part of the Merovingian and Carolingian graves and the settlement features was reworked and

(115) We did not study the finds from the *vicus* in detail for the *vicus* was outside the focus of our study.

Fig. 5.28
Trench 4. Plan of all graves recorded at various levels. Scale 1:200.



integrated in the black layer including a part of the finds in these features.[116]

It is not possible to detect any structure in the concentration of postholes. We have to be content with the conclusion that the postholes, well and ditches point to the presence of habitation in that part of the terrain. The pottery found in the wells date the habitation to the Merovingian period. The pottery shards are unfortunately not diagnostic enough to suggest a more precise date. It is interesting to note that burials 319-321 are at right angles to the narrow ditches (fences?) and could thus be part of the same habitation phase.

Graves (fig. 5.28)
In trench 4 burials were observed at levels three to seven in the northern part of the trench. The burials at level seven (brown lines) are dated to the Merovingian period. Those at level six (four graves, green lines two of which are identical to those at level 7) might also belong to the (late?) Merovingian period. The majority of those at level three and four (pink and purple lines) date to the Carolingian period, some could be somewhat older (very late Merovingian period). It is not known how long burial continued on this site. The graves will be discussed in great detail in the chapters that follow. It is possible that the four (isolated) graves (contexts 318, 319, 320 and 321) at level six were related to the habitation discussed above and that they were burials on farmyards or at the fringes of a settlement (see fig. 5.25 B). Such burials were found in several Merovingian settlements in the southern Netherlands.

The black layer
The black layer with graves cropped out at various excavation levels, because it slopes down in southern direction. At level 3 it was visible in the northern part of the trench that was coloured somewhat darker than the rest of it. The southern part at level 3 was at the height of the brown layer (with the small post medieval fireplaces) on top of the black layer. At level 4 the black layer was present in the southern one/third of the trench and at level 6 it was only visible in the southern three meters. At deeper levels the layer was absent. Below the layer postholes of Roman *and* early medieval habitation became visible.

Deep pits (fig. 5.29)
In the eastern section wall two deep pits were observed. A few more were present in the other part of the trench. The deep pits that were observed over more than three levels were given a context number. One pit was observed at level 4 and reached level 9 (444). Three were observed at level 6 (445/446/447, 450, 452) which reached the lowest levels 11 and 12. Five were seen at level 7 (448, 453, 501, 502, 503), three at level 8 (451, 454, 455) and

(116) Remember: if that is the case the deep pits would be post-Merovingian for they were dug down from the black layer. Some of them are however almost certainly Merovingian in date. (117) See the discussion in a section above (levels

one only at level 10 (449). The other, less deep pits, were probably associated to the Roman or Merovingian habitation. In almost all pits residual Roman pottery shards were found. In pits 445, 448, 501, 503 and possibly 454 Merovingian pottery shards were found (fig. 5.24). They are the pits with red context numbers in figure 5.29. No Carolingian pottery was found in one of the pits. Most pits with Merovingian finds were located in the zone with Merovingian settlement features, so the Merovingian shards could be residual finds. But if the pits were dug in a later (Carolingian) period, it is strange that no finds from that period were recovered.[117] On the basis of the pottery one has to conclude that most pits will date to the Merovingian period. In view of the roulette decoration some of the pottery will date to the later sixth or seventh century. Fragment 1169.2 in context 448 might date to the sixth century.

Pit 455 (first observed at level 8) rather belonged to the Roman *vicus* habitation in view of its stratigraphic position and the relatively large amount of Roman pottery shards found in it. At the location of pit 455 level 8 is in the middle of the package of Roman layers.

The north south oriented bands of gravel (fig. 5.30)
In the eastern part of the trench bands of gravel were recorded at levels 3 to 9. These features were related to the layers of gravel in the east wall section of the trench discussed above. Although the bands were observed at the same place at six successive levels its use was interrupted by the creation of a dug-in structure at right angles to the band (see below context 89 and 497). The bands at levels 8 and 9 were older than this feature, those at levels 4 to 7 were younger.[118] This does not mean that, in contrast to what the section wall suggests, there is a thick layer of soil between the two phases. Level 8 (older phase) and level 7 (younger phase) are only 20 cm apart. The lowest part of the younger band of gravel is just above the top of the gravel of the older phase. This corroborates the suggestion made earlier, that the 'layer in between' the two layers of gravel in the section forms the lower part of the upper band of gravel in a ditch-like structure.
The bands run over the entire length of the trench, although it could not be observed in the northernmost part of the trench where another dug-in structure was located filled with gravel. In the northern part of the trench the band was 1.5 to 2.0 meters wide, in the southern part is was only one metre wide at some levels. The surface of the band of gravel was raised several times. The height difference between level 3 (c. 48.80 NAP) and 9 (c. 47.60 NAP) is 1.20 meters. The gravel bands have been interpreted as a small track, a *diverticulum* of the main Roman road. Another possible interpretation is that that it is a drainage ditch filled with gravel to discharge the water from the high lying road. Whatever

of trench 1). (118) The relation between the gravel at level three and the long feature cannot be established.

Fig. 5.29
Trench 4. Plan of all deep pits recorded at various levels. Scale 1:200.

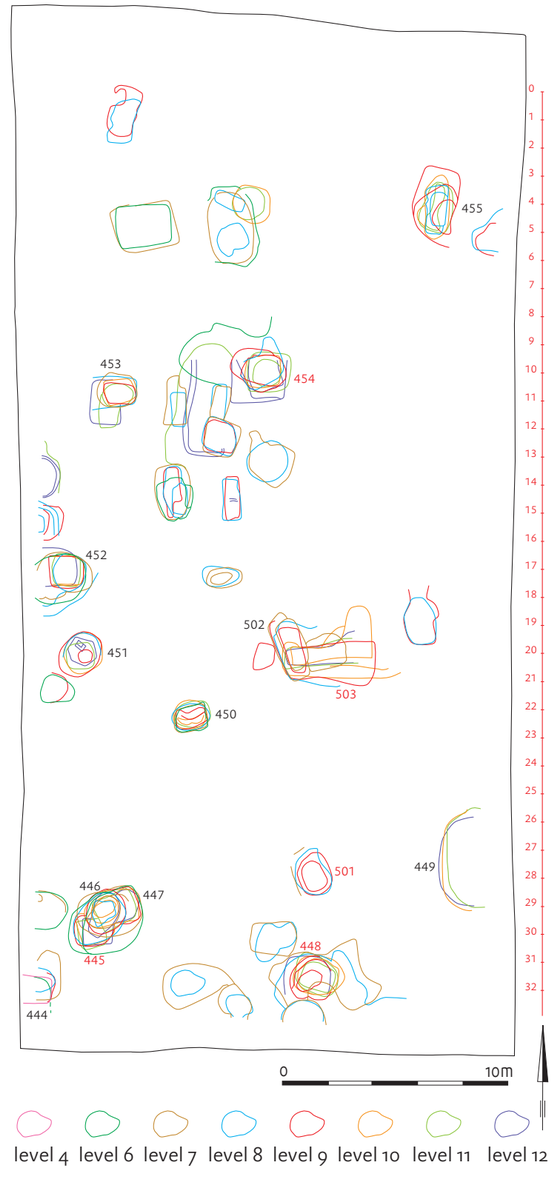


Fig. 5.30
Trench 4. Plan of all bands of gravel recorded at various levels. Scale 1:200.



is the case the bands of gravel seem to indicate that at that location a limit was present at the Vrijthof Square that lasted for a long time. Only at the time of the dug-in structures and cemetery 5 it did not function as such.

It is difficult to date the gravel bands. The oldest band is younger than the postholes of Roman building 3 (fig. 5.30). The oldest gravel band could be created in the latest phase of the *vicus* or after the habitation disappeared.[119] In the southern part of the east wall section the lowest layer of gravel is situated above the Roman layers, which suggest a post-Roman date (fig. 5.6). In the northern part of the trench the oldest band of gravel was probably created by digging away parts of the Roman layers. In Merovingian times the band of gravel clearly functioned as the western boundary of the cemetery. Thus the band was either created in Merovingian times or existed before. If it already existed it is possible that there is a relation with the raising of the terrain after the Roman habitation had disappeared and before the Merovingian cemetery was in use. When the terrain was raised (colluvium) the drainage of water from the road to the south must have been taken care of. The road was kept in use in late Roman and early medieval times. This feature, a ditch filled with gravel, could solve the drainage problem. It is also a solution that prevents erosion in a gully at times of heavy rainfall. The creation of a gravel-filled ditch could be a late Roman activity to prevent the road from periodic flooding. It is however also important to point to the identical orientation of the bands of gravel and the narrow ditches in the southern part of trench 4. Could it be that the ditches were oriented on an existing limit marked by the bands of gravel? In the (early?) Carolingian age two long structures were dug through these bands of gravel. At that time the boundary did not function. After these were abandoned new bands of gravel were created, that is the drainage (and boundary?) or track was repaired.

Dug-in rectangular structures

In trench 4 two rectangular structures with a sunken floor were found (contexts 89 and 497) (fig 5.31). They have a rectangular form and measure c. 10,50 by 3 metres and have a more or less identical orientation. Each of these structures will be described below in some detail because such structures are quite unfamiliar in early medieval archaeology. After that their date will be discussed.

Dug-in rectangular structure context 497

This structure was found in the middle of trench 4. The eastern limit was situated beyond the trench. It should have been visible at level 4 of trench 5, which is situated at 47,92 m +NAP, but no specific observations were made, which is remarkable in view of the fact that the stone walls of the structure were visible in the eastern

(119) Dijkstra/Flamman 2004, 54. (120) This is more or less at the same height as the top of the feature in the east section wall. (121) Entry of the 9th of January 1970. (122) Entry of the 13th of January 1970. (123) Entry of the 19th of January 1970. (124) In the field diary of Van Pernis, he notes on the 20th of January that

wall section of trench 4. Only a patch of green coloured soil was recorded in trench 5. The structure did not extend much beyond trench 4. The first outline of the structure was visible at level 5 at a height of 48.20 m +NAP. However, at level 4 (pink in fig. 5.31) a small line of red coloured soil was indicated at the place where the north-western corner of the structure was. The first observation of this structure was thus made at a height of 48.31 m +NAP.[120] At level 6 (dark green in fig. 5.31, 48.20 m +NAP) the structure was partly hidden under the gravel of the second phase of the gravel band discussed above. Its width was three metres. The northern limit was coloured in with a dark red colour and black spots, probably indicating fired loam and small lumps of charcoal. It was also indicated that the fill contained some gravel. The image was somewhat clearer at level 7 (brown, 48.00 m +NAP). At that level the structure had a maximum width of 3.20 meters and a maximum observable length of 6.60 meters. The northern and eastern limits were red coloured. A stone is found along the southern limit. In the excavation diary it was noted that this band of red soil was burned loam and that the fill of the feature was grey with loam and charcoal.[121] This could indicate that the building burned down. Next it was stated that the eastern part of the fill contained a lot of flint stone.[122] At the next level (8, light blue, 47.85 m +NAP) the stratigraphic relation between the structure and the band of gravel had reversed because it cut into the gravel. The structure was thus younger than the lower part of the gravel band. The width was now 3.25 m, the maximum observed length 8.80 meters. At this height the whole western part of the outline of the structure was coloured red. The fill consisted of two different layers, one of which covers the north-western part of the structure, the other the rest. At level 9 (red, 47.60 m +NAP) the red coloured band in the western part of the structure widens and was up to 35 cm wide. The rest of the northern limit was also coloured red. At level 10 (orange, 47.40 m +NAP) it can be seen that the structure had stone walls which were built up against the walls of the excavated pit (fig. 5.32). This was also clearly visible in the section of the structure (fig. 5.9). Ter Schegget noted that it concerned stone of the Namur region and that on top of them some kind of red brick stones were found.[123] He is not very specific on the nature of these bricks; they might be reused Roman tiles. The exterior width of the structure at this level was 3 meters, the interior width 2.60 meters.[124]

At this level the structure cut through features dating to the Roman period. The layers of the gravel band disappeared at this height. The walls were still present at level 11 (light green, 47.20 m +NAP). They are 35 to 50 cm thick. The wall in the southwest corner seems to be somewhat thicker (60 cm). At this level the external width was 3 metres the internal width only 2.10-2.20

local limestone fragments are found in the context of the building on the basis of which he drew the conclusion that the building must be medieval. However the Roman cellar in trench five was also built of local marl.

Fig. 5.31
Trench 4. Plan of the deep dug in structures recorded at various levels.
Scale 1:200.

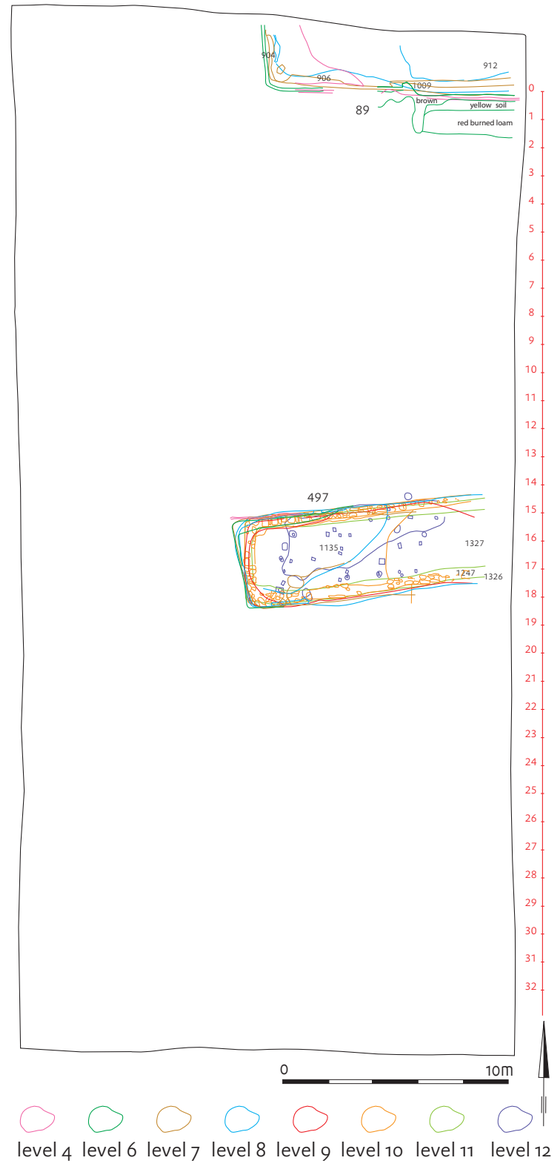


Fig. 5.32
Trench 4. Photograph of the north wall of structure 497. Note the red soil on the inside of the wall. The pit with burned clay to the left of it must be older and probably dates to the Roman period.



metres. The maximum observable exterior length was 8,60 m, the maximum interior length 8.30 meters. Finally at level 12 (dark blue, 46.80 m +NAP) the walls had disappeared. Instead numerous small holes (of driven in stakes?) were observed at the location of the structure. This seems to be an indication that they are related to this structure, this level was c. 30 cm below the reconstructed level of the floor of the building (see below). It is not possible to discover any structure in these postholes. The walls were not exactly upright; they were sloping inwards towards the bottom of the pit.[125] At level 10 the interior width was 2.60 metres at level 11 it was only 2.10-2.20 metres, which is c. 50 cm less. However, at level 11 the external width was three meters which is only 25 cm less than level 8 where the maximum width of the pit was 3.25 metres. This means that the insides of the walls slope inwards more than the wall of the pit. This was probably done to create some kind of foundation. The walls were to some extend 'plastered' with the red loam that was observed at the higher levels.[126] It is also stated that a floor was present of the same red loam. The drawing in the field diary suggests that it was located at the bottom of the stone walls.

The excavators made a drawing of the interior view of the south wall (fig. 5.33). The first impression is that of a dry wall built in an irregular way with stones of various forms and sizes. On the basis of the drawings and the photographs of the north wall it cannot be established whether material from the Roman period was reused. The bottom side of the wall was not at one level. At point E part of the wall was lost, however at each side of the gap big square stones were present. Could this be an entrance? At points A and C the structure of the wall differed from the rest. Piles of slabs were put in place there. To the left of A three stones were put up in a vertical position. At point D there was another pile of slabs. In between A and C thin layers of burned material (charcoal) and fired loam were found. The construction of the vertical piles and layers of loam and burned material could be the remains of a hearth placed in or against the wall. Another interesting feature is observed between points F and G. This is a zone where small stones were placed between concentrations of large stones on each side (at F and G). The meaning of this is not known. The floor must have been situated at a height of c. 47.10 m +NAP. The east section wall of the trench shows that a large pit (context 496) was present to the south of the structure (fig. 5.34). It is not very well indicated on the field drawings of the levels. It was interpreted as a separate pit. Could it be related to the structure with the sunken floor and the features observed in the south wall? Could the structure be entered from this pit? Could it have been a stokehole? We have no answers.

Dug in rectangular structure context 89

This structure was first observed at level 4 (48.36 m +NAP). At that level a narrow band of red burned loam is visible of the southern limit of the structure. This band of loam was cut by the upper layers of the gravel band. This is an indication that the gravel was deposited in a dug out structure, a ditch. At the same height in trench 5 (level 1, 48.41 m +NAP) the eastern limit of the pit can be observed. There the limit of the pit is indicated as a narrow band of black soil. A remark informs us that the fill consists of yellow and black clay, a lot of red burned loam and gravel. It cuts through a Merovingian grave. At level 6 in trench 4 (48.15 m +NAP) the western limit of the structure is visible as a narrow band of red burned loam. In trench 5 the eastern limit can be observed at levels 2 and 3 (48.30 m and 48.22 m +NAP respectively). The maximum length of the feature is 10.90 meters. Its width cannot be established.[127] It was noted in the excavation diary that the pit had an

(125) This was also observed by the excavators: excavation diary of January 23rd and 28th. (126) Entry of the 29th of January 1970. (127) At this level (green lines in fig. 5.31) a few strips of soil can be seen to the south of the pit that might belong to this structure. First there is a strip of brown soil of c. 20 cm wide, the southern limit of this strip matches the outer limit of the structure in trench 5 and it exactly matches a strip of soil that limits the pit at level 4 in trench 5. It is possible that the strip of brown

Fig. 5.33
Trench 4. Plan of the walls of deep dug in structure 497.
Below a view on the inside of the south wall.

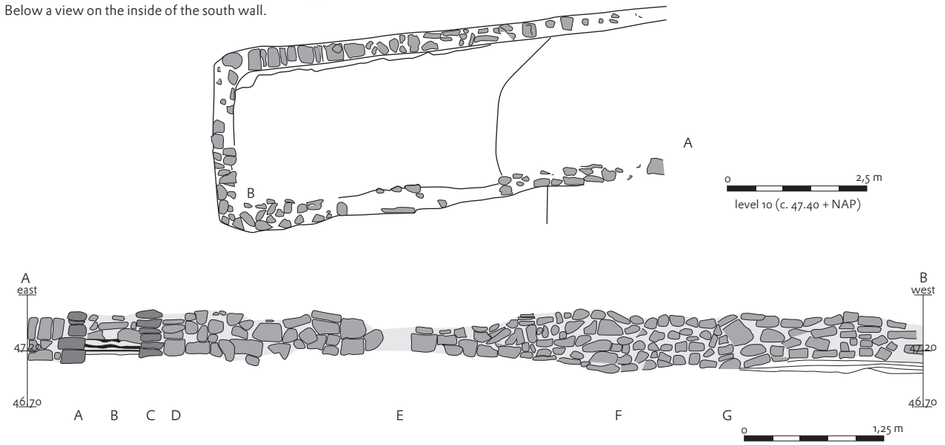
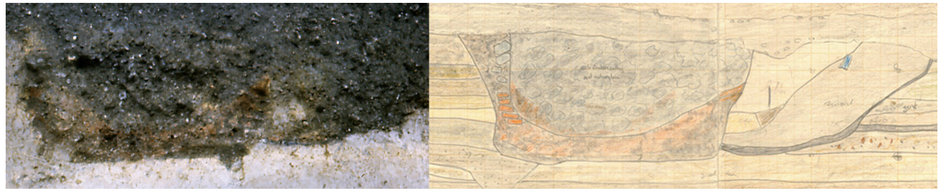


Fig. 5.34
Trench 4, east wall section. Photograph and drawing of deep dug in structure 497.



outer limit of burned loam and a black fill with a lot of gravel. This structure thus must have been older than the younger layers of the band of gravel. Moreover the pit cuts the (older) gravel layers of the Roman road.

At level 7 in trench 4 (47.97 m +NAP) (fig. 5.35) and level 4 in trench 5 (47.92 m +NAP) the southern, eastern and western limits of the pit were observed. The maximum length of the feature is 10.65 metres. In trench 4 the limits are marked by red burned loam. In trench 5 no specific indications are given. The limit is coloured grey/black. In trench 4 it is indicated that the fill contained gravel. At level 8 in trench 4 (47.80+) the bottom of the feature seems to have been reached. What remains is a patch of red coloured soil, maybe remains of a floor? In trench 5 no observations below level 4 have been made. On the field drawing of the north wall section of the trench it was indicated that two different layers of gravel could be observed.[128] Moreover it could be seen that the top of the structure was at c. 49.00 m +NAP and the bottom at 47.66 m +NAP. It was thus c. 1.35 m deep. No stone walls comparable to those in the southern structure were observed. But the red burned limits of the pit and the red floor indicate that they had the same function. Some big stones present in the structure (fig. 5.35) may be the remains of such walls.

The structures are difficult to date on the basis of the finds found in their fill. Structure 89 was cut through one (or more) Merovingian graves. It also postdates the older band of gravel that seems to have served as a western boundary to the Merovingian cemetery. It is save to conclude that structure 89 postdates the Merovingian cemetery. Two rectangular, grave-like structures were dug into its fill of gravel. If these are graves (an uncertain interpretation!), they most probably belong to cemetery 5 that dates to the Carolingian or even Ottonian period (see below). This means that the date range for structure 89 is quite limited: it dates to the late Merovingian and Carolingian period. The structure is also older than the younger band of gravel that dates to the (later?) Middle Ages. Few pottery shards were found in the features. Most of them is residual Roman material (fig. 5.24). In structure 497 two shards of Merovingian pottery (types VA3 an VA4) and one fragment of Carolingian pottery (type VIA) was found. In structure

soil in trench 4 limits the pit. The whole strip might have been loam but only the interior side consisted of burned loam. To the south of this strip of soil a band of c. 35 cm of yellow soil is indicated. Then follows a long rectangular feature (3.25 by 0,85 metres) filled with red burned loam. To the west of this feature is a feature with a lot of charcoal indicated. (128) The section through this structure in the north wall of the trench has already been discussed.

Fig. 5.35
Trench 4. Photograph of deep dug in structure 89 in the north-eastern corner at excavation level 7. Note the red coloured soil along the edges of the pit.



89 two shards of Merovingian pottery (type VA2) and one shard of Carolingian pottery is all what was found from the medieval period. Here we could repeat the discussion on the dating of the deep pits in trench 1 in relation to these structures to the Merovingian or Carolingian period. The stratigraphy shows that structure 89 cut a Merovingian grave and both cut the band of gravel forming the western boundary of the cemetery. So, we do not expect these structures to be contemporary to the Merovingian cemetery. They date to the eighth or ninth century. But this is not yet a satisfactory date because at that time cemetery 5 to the east and west of the pits was in use. Again: how is it possible that so few shards from the Carolingian period were found in a feature that is supposed to have functioned at that time?[129]

General observations on the dug in structures

In trench 4 two, almost identical dug in structures were excavated. The northern one had a maximum exterior length of 10.90 metres; its width cannot be established. The southern one had a maximum width of 3.20 metres and a minimal length of 9.00 metres. If we combine these measurements we can conclude that these structures measured c. 10.00/11.00 by 3.00 metres. The structures were at least 1.20/1.35 m deep. The original depth might have been 1.50 m. In both buildings red coloured walls and 'floors' were present. We cannot establish whether the red clay on the bottom was actually a floor. The red colour was probably due to the presence of (intense) fire in the pits. Both buildings were located immediately west of the Merovingian cemetery but cut some of the westernmost graves. Strangely enough they were cut through the layers of the lower band of gravel, which must have lost its meaning at the time the dug in structures were in use. The younger band of gravel lay on top of these structures which means that the band of gravel temporarily lost its function as boundary.[130] The pits could have been filled with gravel, at least the northern one, which had already been filled to some extent with gravel, when the younger band of gravel was created. It is also interesting to see that at level 6 the north-south oriented gravel stripe widened at the location of the southern structure. This is an indication that the location of this structure has been levelled with gravel at the time the upper layers of the band of gravel were created.

What was the function of these constructions? Because of the presence of what might have been a hearth in the wall of the southern structure they might have had a residential function. However, the size of the buildings is not impressive. A maximum interior width of 2.10-2.20 metres at the bottom of the southern structure with a length of eleven metres is a strange proportion which seems to contradict a residential function of these constructions. Sunken huts are a common feature in the Early Middle Ages but they were never dug this deep. Moreover, the walls are relatively thin, they measure only 25 to 40 cm. It is thus not likely that these structures served as dwellings.

There is one feature that can be compared to these structures. It is found in the village of Les-Rues-des-Vignes on the river Scheldt, eight kilometres south of Cambrai.[131] It was a dug-in building with stone walls of c. 40 to 80 cm thickness. The floor of the pit was c. 1.40 metre below the present surface, which may have been the early medieval surface as well. It measures 13.53 by 4.52 metres on the outside and 12.40 by 3.44 metres on the inside. It cut several Merovingian graves and it was cut by a younger grain silo. The walls of the building were made with large rectangular stones placed in mortar in the length of the wall. The wall in the north-east corner of the building was more solid than the rest. Immediately to the south of this part of the wall there was an entrance marked by two stones that formed a threshold. In one of the stones was a hole to support a construction for a door. The threshold indicates that this building was entered from outside. Postholes in the corners of the building might have been related to a wooden construction on the walls that carried the weight of the roof. It is impossible to indicate how high the building was, although the limited width of the walls does not suggest it was a two-story building, that is, a building with a cellar that was partly underground and a first floor on top of it. In 1985 Florin presented a reconstruction whereby the walls were raised to such a height that cross beams could be placed on them to create a roof construction with a thatched roof.[132] After it was found a debate arose as to its function. Several possibilities were suggested: a rural chapel, a profane (residential?) building or a *memoria*. No final solution was offered. In different publications different dates were given for its construction. The traces of habitation and the building post-date the Merovingian cemetery. In 1981 Florin suggests a date in the beginning of the ninth century.[133] Late in the ninth century it burned down, but it was rebuilt. During this second phase it coexisted with sunken huts and possibly some grain storage pits suggesting that the whole complex had a residential function. At the end of the tenth or beginning of the eleventh century the building was abandoned.

The threshold and indications for the presence of a door indicates that the dug in part of the building at Les-Rues-des-Vignes was meant to be entered from outside. At Maastricht such indications are absent, perhaps because too little remained of the original height of the walls. Some stones in the southern wall of structure 497 could be interpreted as relating to entrances but this is rather wish-full thinking.

Another feature of the Maastricht dug in structures that should be considered is the presence of the red burned loam in both structures. The walls of the features consisted, among other materials, of red loam and the bottom of the southern structure also consisted of red loam. This red colour is probably the result of intensive heat. It could be that the buildings that stood over them burned down. In that case we would expect more indications for that, in the form of collapsed parts of the superstructure. No mention of burned wood of parts of the roofing of the building were mentioned or indicated on the drawings.[134] The fill was quite homogeneous; dark coloured and contained a lot of gravel. If the building burned down it could also be expected that more of the walls were preserved. Now it seems that part of the walls were deliberately removed/demolished. It thus seems that the building had not been burned down, but taken down and that the reddish colour of the loam was not caused by an accidental fire that destroyed the building. The red burned loam is rather an element related to the function of the building. Could they be part of heating systems of buildings? In that case all other indications for contemporary habitation disappeared from the site. Could they be large ovens? Unfortunately no indications as to what was possibly produced in these ovens was recorded by the excavators. In the end we have to conclude that we are confronted with highly enigmatic structures of which the function cannot be established and their assignment to the Carolingian period uncertain.[135]

Fireplaces from the Modern Period

As in trench 1 a number of small round fireplaces was observed at level three, mainly in the middle and the southern part of the trench where level three is in the brown layer on top of the black layer. They had a diameter of c. 50 cm. They will date to the Late Middle Ages or the early Modern Period.

Trench 5: the features observed in the excavation levels

In trench 5 the majority of the Merovingian graves were located. It was decided at the start of the excavation of trench 5 to dig down in full to the level of the Merovingian graves. That became level 1. We indicated the height of this level, as well as that of level 4, on the drawing of the east wall section of trench 4. It can be seen that a large part of the black layer was taken out mechanically in the northern part of the trench and with it probably (we will never know) a large number of Carolingian burials. Between 6 and 11 meters on the red line part of the black layer must have been present at level 1. Later we will see that in this zone graves from the Carolingian cemetery 5 were preserved. Further to the south, parts of the black layer were present at level 1. This means that the excavation levels in trench five were mainly situated in the layers of the Roman vicus, in which the Merovingian graves were dug down. The graves will be discussed in separate chapters. In this chapter we will deal with the other features observed in this trench. They are almost exclusively related to the Roman *vicus*.

The Roman vicus (fig. 5.36)

In the northern part of trench 5 traces of habitation were recorded in the form of a stone built cellar, a number of postholes to the east of it and layers of deposited material.

A square stone built cellar was discovered against the northern wall of trench 5 (figs. 5.37 and 5.38). Its interior measurements were 3.12 by 3.32 m. In the northern and southern walls niches were present, which originally were overarched. In the east wall a niche was present that either provided light in the cellar or was the place of a flight of stairs. The walls were built up on a layer of yellow sand on which a layer of black limestone was placed. On top of that were two layers of large stones of marl followed by layers of small stones of marl.[136] Chalk was used as mortar. To the east of the cellar remains of broken out foundations were found, that must have belonged to the same construction.[137] One feature was at the location of the niche in the east wall. The foundations might belong to the building in which the cellar was built. They could also relate to stairs or, might be foundations of low walls surrounding an area where the light shaft came to the surface in order to prevent water from running into the cellar. At floor level of the cellar two rectangular discolorations were found against the north and south walls that might relate to its use (fig. 5.37). The cellar

(129) Again it is not because they were insufficiently well excavated because the excavators did find 58 Roman pottery shards in structure 497 and 13 in structure 89 (which was full of gravel). (130) We will see that the cemetery of the eight/ninth century also disrespected this boundary. (131) Florin 1981; Demolon 1997; Peytremann 2003, 2, 295-297 with all the literature. (132) Florin 1985 (133) Florin 1981. There must be a printing error for the publication says 11th century (XIe siècle in stead of IXe siècle). (134) The excavators had by then often indicated layers of charcoal and burned material on the field drawings. They would have done so if they were present. (135) In chapter 14 we will come back to the interpretation of these structures. (136) This is only shown for the interior of the northern wall in figure 5.37. All walls were built in this way. (137) In fig. 5.36 they are indicated in red to the east of the walls of the cellar.

Fig. 5.36
Trench 5. Plan of the features of the Roman *vicus* in trench 5. In red the remains of the Roman stone built cellar. In the north-western corner the eastern end of the medieval deep dug in structure 89.



Fig. 5.37
Trench 5. Plan and inside views on the walls of the Roman stone built cellar. Scale 1:100.

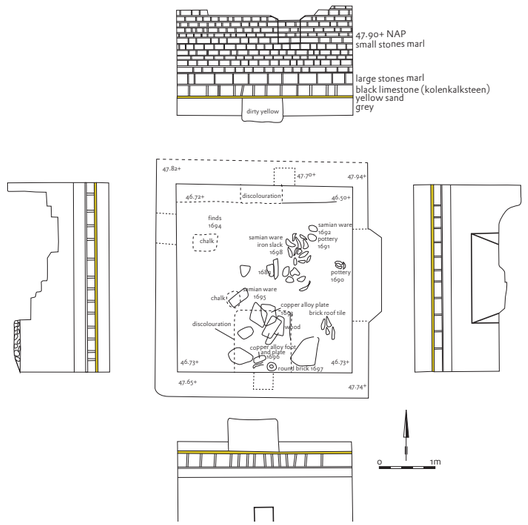


Fig. 5.38
Trench 5. Photograph of the east wall of the Roman cellar.



contained a series of interesting finds such as pottery and fragments of copper alloy statues.[138] Parts of at least two (maybe three) copper alloy statues were found, one of which was life size. The statues could date to the first or second century. The Samian ware beaker found in the cellar however dates to the second half of the second century.[139] It must have been in this period or around 200 AD that the cellar was filled up. Unfortunately no section of the fill was made so that we could follow its later history. It was suggested before that the copper alloy fragments might have been collected for recycling the copper alloy.[140] Could this be an indication for craft activities in the *vicus*?

To the east of the cellar a configuration of small postholes was found at levels 3 and 4 that could be the remains of a post-built structure (fig. 5.36). It is difficult to identify an internal ordering in the configuration.[141] It could be the rear wall of a building, for it is at more or less the same location as the rear wall of the cellar. It is unlikely that the building is contemporary with the foundations to the east of the cellar. Some posts were below one of these foundations. The post-built structure might be older than the cellar. If so there were two successive buildings there, a post built structure and a structure with the stone cellar. At the location of the posts a rectangular layer of soil was found, which could relate to the post-built structure.[142]

Further to the east were more postholes, as well as rectangular soil discolorations and a narrow ditch that must have been related to habitation.

Finally layers of soil were recorded south of the cellar that seem to be outcrops of deposits from the north into the somewhat lower lying backyards. The southernmost layer was characterized as: 'many fire remains and red rubble'. Red rubble was also mentioned as part of the fill of the cellar at the same level 4. Some photographs of graves show that fire debris was present on the site. The remains could be the result of a fire in one of the buildings, or from craft activities on the site.

Trench 5 shows that the Roman vicus was also present in this area, probably in the second century. The recorded features seem to indicate that plots were present. On one of these the building with the Roman cellar and the depositions to the south of it (backyard) were present. The postholes and ditch in the easternmost part of the trench might be on another parcel. Two or three parcels were present in the area of trench 5. The cellar and the postholes to the east of it indicate that the back of the buildings was at about two meters on the red line. The front must have been at the Roman road to the north. In trench 4 the back of the houses was at seven meters. This difference cannot be explained. Maybe the back of the houses in trench 5 was not observed and was also at seven/eight meters. Postholes were found that far south. The deposited layers reached until nine meters. No wells were found in this part of the *vicus*.

Post-Roman features

Except for the corner of the deep dug in rectangular structure 89 in the northwest corner of the trench and the Merovingian graves, no significant features from the Middle Ages in this trench were found. Of course the trench was dug out instantly to the level of the Merovingian graves but it is remarkable that no deep wells or pits were found. In this sense trench 5 contrasts strongly with trench 1 and to a lesser extent to trench 4, where some wells were found. If deep pits were present they would have been observed, because they would have been dug through the Merovingian graves.

Finds that cannot be assigned to a feature

A number of objects found in this trench cannot be assigned to one of the recorded features (fig. 5.39). Some of them will be related to Merovingian graves but this is not certain. The jug was found in between graves. It might have been dug in during or after a burial ceremony. All finds date to the Merovingian period. The decorations on two biconical pots indicate that a date in the later sixth and seventh century is most likely.

Trench 6: the features observed in the excavation levels (fig. 5.40)

Trench 6 was also dug out mechanically, straight away to the level of the Merovingian graves (level 1). Apart from Merovingian graves round pits were observed. No remains of buildings from the Roman *vicus* were observed because this trench was located somewhat further south than the others. This trench is thus located in the backyard area of the *vicus*. Some layers of soil older than the Merovingian graves and a few postholes might belong to the *vicus* phase.

Eye catching is a considerable number of pits. The pits were coloured quite dark often the qualification 'black' is given to their fill. This characterizes the actual colour probably better than the light coloured fills drawn by Van Pernis in trench 1.[143] The pits were dug through the Merovingian graves and were thus younger. The small amount of pottery found in the pits (such as context 463) dates to the Merovingian period (fig 5.41).

This trench was dug out in the last days of the excavation. All attention went to the Merovingian graves. The pits were not dug out further below level 2. These round pits with their homogeneous fill can be compared to those found in trench 1 although we do not know their depth and form. What we can observe is that in trench 1 and 6 a large number of deep pits were present whereas they are absent in trench 5 and in the northern and northeastern parts of trench 4. We will see that they were also present in trench 3.

Trench 3: The southern wall section (figs. 5.42 and 5.43)

In trench 3 the south wall section was cleaned and documented. From top to bottom it was c. 6.50 m high. The section shows a different sequence of layers than those in trenches 1 and 4

(138) These finds are described and analyzed by Panhuysen (1996, 50-51). (139) Panhuysen 1996, 51, note 161. (140) See literature in Panhuysen 1996, 51, note 161. (141) The postholes indicated in green in fig. 5.36 were seen at level 3 the others at level 4. The levels were 30 cm apart. (142) It was colored yellow on the field drawing. It might be löss. (143) The field drawings were evidently made by another field technician, probably Greving.

Fig. 5.39
Stray finds of pottery from trench 5. Scale 1:4.
For the legend see fig. 5.18.

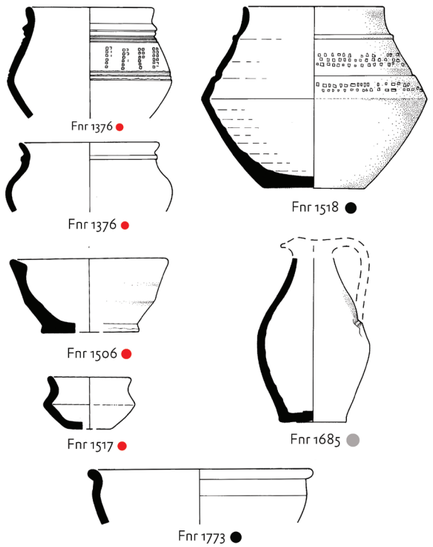


Fig. 5.40
Trench 6. The distribution of deep pits recorded at two excavation levels. Scale 1:200.

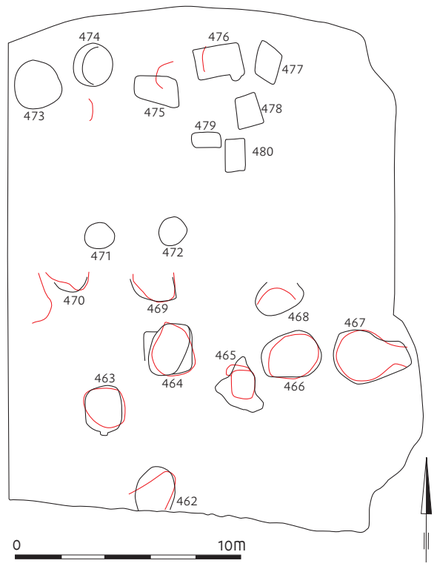


Fig. 5.41
Trench 6. Pottery from one context and a stray find.

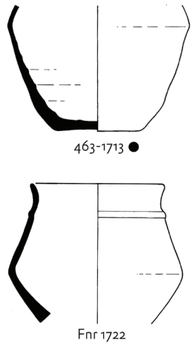


Fig. 5.43
Trench 3. Photograph of the eastern part of the south wall section.



because no Roman habitation was present in this part of the Vrijthof Square. In this section the following groups of layers could be distinguished: 1. natural layers, 2. a layer dating to the Merovingian and possibly Carolingian period, 3. a black layer with deep pits, 4. late medieval and post-medieval layers.

The natural layers (fig. 5.42 A)
These layers were discussed before and need no further clarification.

'Dirty black layer' (fig. 5.42 B)
On top of the natural layers was a layer of c. 70 cm thickness [3053] which was characterized as 'dirty black layer'. It is in this layer that level 12 was situated. On this level first indications of habitation were observed. At the levels below this one (levels 14, 15, 16 and 18) features of a Merovingian and early Carolingian settlement were observed as well as a number of graves. The skeleton located at 0 on the red line was at a height of 46.58 m +NAP those at 10 meters at 46.43 m +NAP and those at 25 meters at 46.21 m +NAP. When the skeletons were at the bottom of the grave pits (and these were at least 50 cm deep), the graves were probably dug down from the 'dirty black layer'. The height of the skeletons (black solid line) and the lowest possible level from where they were dug down (black broken line) are indicated in figure 5.42. The graves were not observed at level 12 which was located in this layer. The graves were relatively old and date to the fifth-sixth century (see chapter 12). The pottery found in the settlement features observed at the same heights rather dates to late Merovingian and Carolingian times. It is possible that the black layer discussed here was formed during the habitation in that period and that the top of the older graves was reworked and included in the 'dirty black layer'. This dates that layer to the Merovingian and (early) Carolingian period. Further to the west (to the right in fig. 5.42) the situation is less clear. Different layers [3132, 3048, 3055, 3057] were indicated, of which it is difficult to establish the relation with the 'dirty black layer'. In view of their stratigraphic position they must belong to this horizon of layers. It is not possible to assign the layers further west [3092, 3093, 3094, 3096, 3097], beyond a large modern pit to any of the layers discussed here. The suggestion made in figure 5.42, B may not be correct.

'Very black layer' with deep pits (fig. 5.42 C)
On top of the previous layer is another layer, about 40 cm thick, characterized as 'very black' [3045 with *3046*]. If the previous layer dates to late Merovingian/early Carolingian period this layer must be younger. Op top of it are the layers related to the raising of the square in late medieval and modern times. It can thus date from the Carolingian to late medieval period. The layer changes character in a western direction. It was coloured less black and contains pieces of mortar (from about twelve meters on the red line) and marl (from seventeen meters on the red line). It is difficult to follow the layer beyond the modern pit [3090, 3091]. The suggestion made in figure 5.42 C may not be correct. Two deep pits (indicated in green [3049, 3051]) were probably dug down from this layer, through the Merovingian layer into the natural layers.[144] Their fill is characterized as 'black, bone, mortar and marl' and 'black, marl and mortar'. On the photographs the fill of the pits has a black colour, which means that they had a high organic content.[145] The pits had steep walls.[146] They look identical to those observed in trench 1 and will have had the same function. If that is the case, the 'very black layer' must be identical to the black layer observed in the sections of trenches 1 and 4. In trench 3 the top of the layer is at 47.60 m +NAP in the east. In the south of trench 1 is was at 48.55 m +NAP which is almost a metre higher. In the south of trench 4 it must have been at 48.40 m +NAP. Does this mean that in the Middle Ages the surface level of the Vrijthof area dropped almost a metre from the south of trenches 1 and 4 to the south of trench 3?

The layers of the raised Vrijthof Square (fig. 5.42 D)
On top of the black layer is a series of layers related to the raising of the square in late Medieval and modern times. It includes a large well or cesspit and a modern sewer system.

Trench 3: the features observed in the excavation levels
In trench 3 twelve levels were cleaned and documented. They do not have successive numbers because the excavators skipped a number of levels of their system.[147] Levels A to 7 were located in the late and post-medieval raised layers of the square. Level 9 is located in the very black layer [3045], level 12 in the Merovingian layer [3053] and the rest in the natural layers. At level 9 large and small irregular features were recorded that are difficult to interpret. At some places gravel was found as well as marl and mortar (chalk?). The deep pits that were visible for the first time at a lower level were not indicated at this level. This might be due to a reworking of the soil of this layer after the pits were filled in again. If that is the case we have to conclude that what is visible in this relatively thin layer dates to later phases in the Middle Ages. From level 12 to 18 a substantial number of features could be observed. The features to be described are: 1. a number of deep pits, 2. the features of habitation at the lowest levels. Although the package of layers above the very black layer [3045] dates to a large

(144) There is of course the possibility that the pits were dug down from the top of the 'dirty black layer and that the top of this layer was reworked later into the 'very black layer'. In that case the deep pits belong to the older layer, but to the latest phase in the formation of that layer. (145) The photographs of this section are not very informative. It is difficult to relate them to each other and some parts were not cleaned properly. (146) Strangely enough they were not indicated on the field drawings of levels 12 to 18.This might be due to the oblique position of the section. This oblique position must also be responsible for the presence of dark patches of soil to the east and west of these pits [3066, 3063] that seem to 'float around' and that have an impossible stratigraphic position. They probably are remnants of similar pits. (147) See chapter 3. The excavated level numbers are: A, B, C, 4, 6, 7, 9, 12, 14, 15, 16, 18.

Fig. 5.44
Pottery finds from trench 3. Scale 1:4.

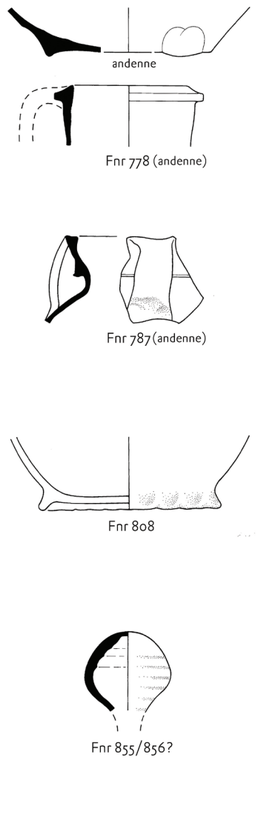
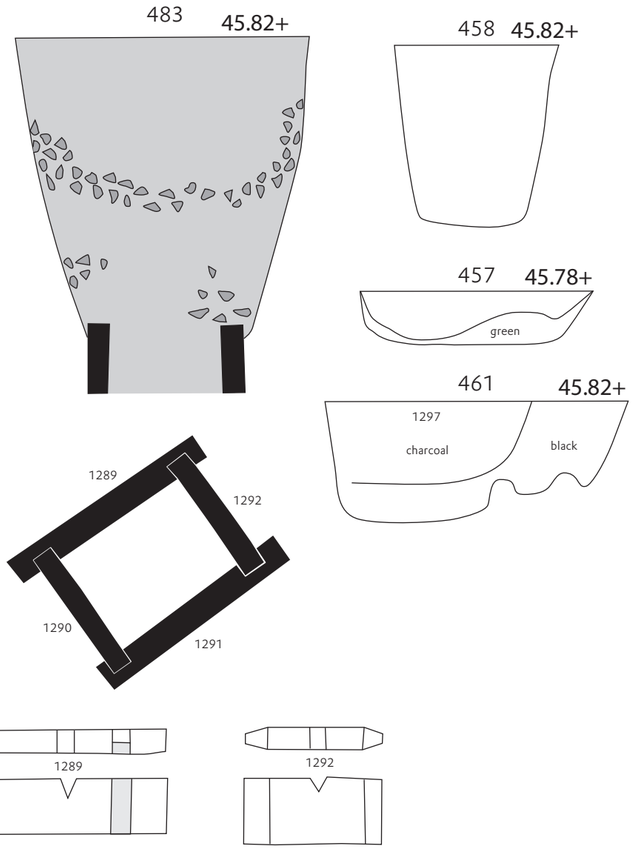


Fig. 5.45
Trench 3. Sections through the well and deep pits.
Scale 1: 40.



degree to the Modern Period, not much pottery was recovered. The majority of the pottery from levels 4, 6, 7 and 9 originates from the Andenne production centre and dates to the Central Middle Ages (fig. 5.44). Some stoneware shards found at level 7 date to the Late Middle Ages. It is save to say that level 9 [3045, very black] and all the layers on top of it date to the (last part) of the high and late Middle Ages and Modern Period. All the pottery recovered at level 12 and the levels below date to the Early Middle Ages except for one shard from Andenne. Only 24 of them date to the Carolingian period. Two of them were found at level 18. This distribution of pottery shards is also an indication that level [3053] dates to the early Middle Ages and that the layers on top date to the Central Middle Ages and Modern Period.

Merovingian/early Carolingian habitation

Postholes, small pits and ditches (fig. 5.46 A)

At levels 12 to 18 numerous small pits and postholes were recorded. Many of them were only recorded at one level. This means that those from levels 14 and 15 were not deep. Those at level 16 could have had some depth (up to 40 cm), but there are not many pits/postholes that occur only on this level. On figure 5.46 A all small pits or postholes that occurred at more than one level are indicated, as well as the Merovingian graves.[148]

It is not possible to detect any structure in the configuration of the larger pits or postholes. Some of them were dug through the fill of a grave indicating that they must be younger. No postholes were found west of 30 m on the red line. This could indicate that some kind of limit was present there at the time of the habitation. It may not be a coincidence that in that area north-south oriented ditches and features were found. On the field drawings it is in-

(148) An exception was made for the small postholes of stakes in the western part of the trench.

Fig. 5.46
Trench 3. A. Merovingian postholes, a well and graves,
B. pits from the Merovingian period, C. deep pits. Scale 1:200.

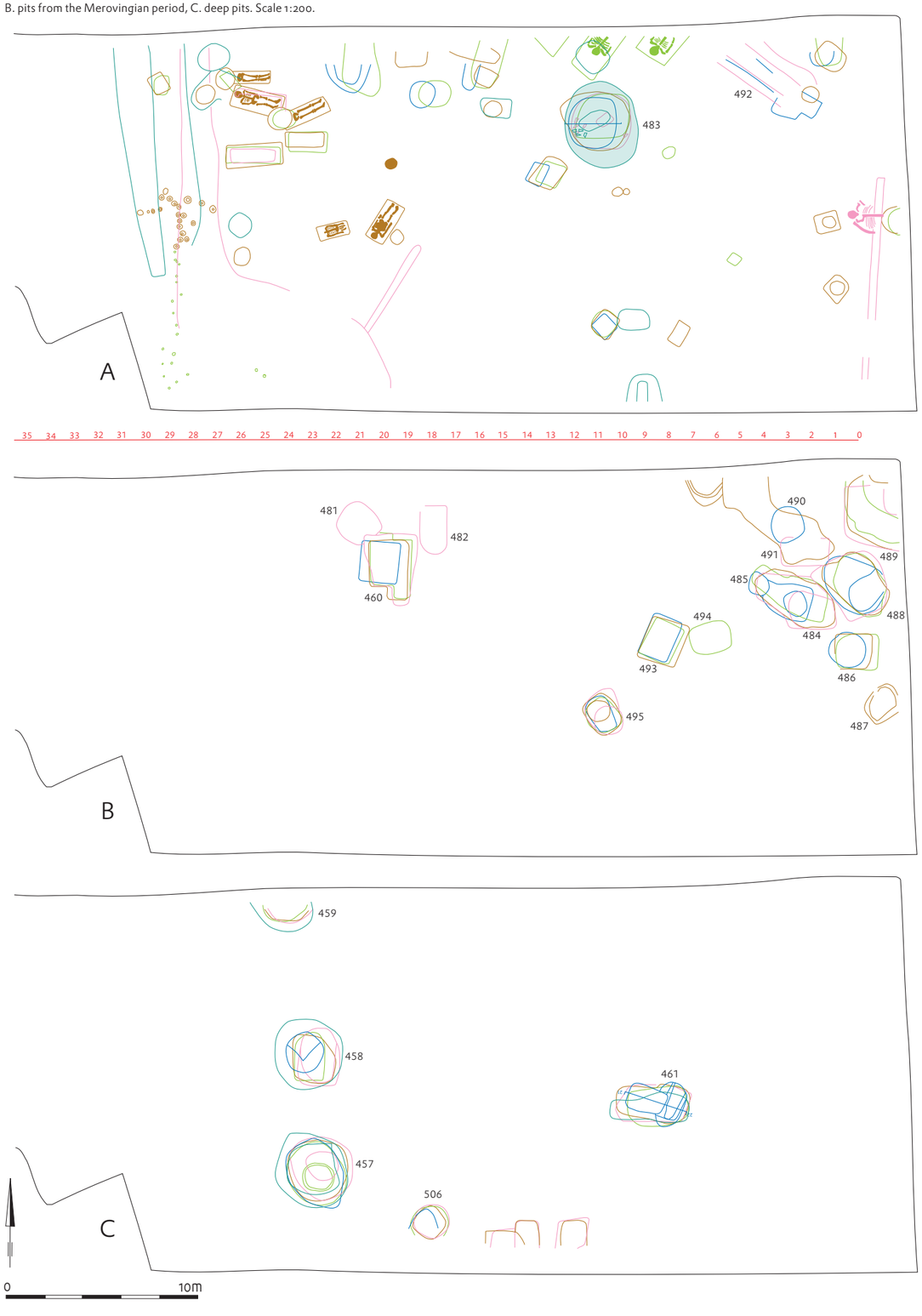
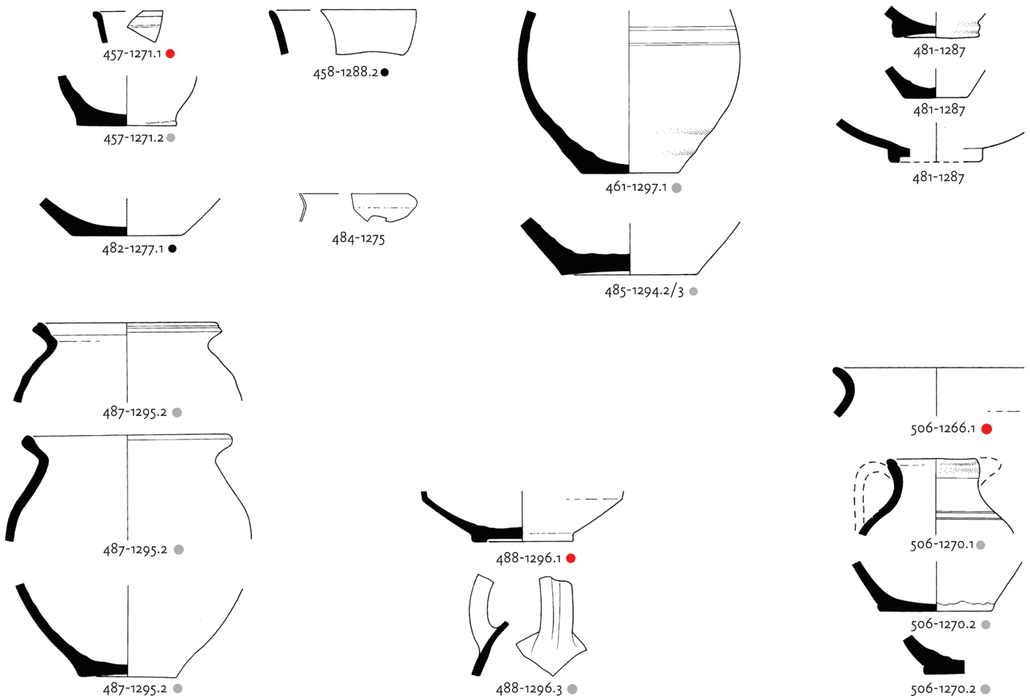


Fig. 5.47
Pottery from contexts in trench 3. Scale 1:4.
(contextnumber-findnumber)



dicated that gravel was present in that area too. Are these features a continuation of the bands of gravel from trench 4 in a southerly direction? Next to the ditches a north-south oriented row of small postholes was present in that area. These might relate to a fence.
An interesting observation is that at levels 16 and 18 a different orientation (northwest – southeast) of a ditch can be observed. The graves observed at that level (in green) were at right angles to this ditches (south-west /north-east) as well as a narrow ditch in the southern part of the trench. This observation indicates that a change of orientation took place some time in the Merovingian period between level 16 and 18 and the (younger) level 9 to 14. In the western group of graves both orientations occur.

Well (fig. 5.45 and 5.46 A)
One well (context 483) was recorded at levels 12 to 18. It had a square sturdy construction made of thick planks.

Pits (fig. 5.46 B)
At levels 14 to 18 a number of pits were found that could not be considered postholes. They have a round and rectangular form and occur mainly in the eastern part of the trench. They have substantial depths. Because they were not observed at level 12, where the other deep pits were already seen, they belong to the Merovingian habitation.

Deep pits (fig. 5.45 and 5.46 C)
In the section of the south wall two deep pits were observed between 14 and 18 on the red line [3049, 3051]. It is difficult to identify these with features recorded on the horizontal levels. Next to these two four others were recorded from level 12 to level 18. The sections of the lower parts (from level 18 downwards) show that one had the characteristic form with steep walls. Two others might have had such a form because the outlines at different levels do not vary much. Three pits had a round form, with a diameter of c. 1.20 m. The fourth has an oblong/rectangular form. They are comparable to the pits found in trench 1 and probably to those found in trench 6. The pits cut through the layer [3053] associated with the features from a settlement. They should therefore be younger than that layer. The pottery from the pits however, dates to the Merovingian period (fig. 5. 47) which could be residual material. This presents us with a strange situation. If the pits are younger than layer [3053] and younger than the Merovingian period, it can be expected that they contain also a substantial quantity of Carolingian pottery. Only pit 481 (fig. 5.46 B) contains one Carolingian shard!

Conclusions on habitation
It can be concluded that in the eastern part of trench 3 traces of habitation were found that date to the Merovingian (possibly early Carolingian) period. The habitation zone seems to be limited to the west by ditches and fences. A change of orientation of the parcelling from northeast/southwest to north/south took place during the Merovingian period.

This concludes the description of the sections and levels documented in trenches 1, 4, 5, 6 and 3 on the Vrijthof Square. The data from trench 2 will be dealt with in the context of the analyses of the excavations in the Cloister garden (Pandhof) and *basilica* of Saint-Servatius. What follows is a general analysis of the history of depositions on the Vrijthof Square from early Roman times to the late Middle Ages.

The history of depositions at the Vrijthof Square, an overview

The analyses of the sections and levels allow to describe the history of depositions at the Vrijthof Square.[149] In this final section we limit ourselves to the Vrijthof square itself. In a final chapter the results presented in this chapter will be discussed in the context of the Saint-Servatius complex and the development of the early town of Maastricht. The history presented here differs from the one usually reproduced on the basis of the study by Panhuysen and Leupen.[150] They suggested, as was mentioned before, that the Vrijthof area was a swampy area not suited for habitation. Moreover they suggested that the square was a creation of the tenth century and was meant to represent the accommodation of the religious and lay spheres of power (bishop and king) in Maastricht by filling in a swampy gap between two inhabited areas in Maastricht, the centre along the Meuse river and the Saint-Servatius complex on the hill to the west. In order to create the square this swampy area was, according to the authors, raised to its present level. Their suggestion means that the square was the result of a master plan based on ideological motives. Although it was an attractive idea, the archaeology of the square does not support this model. In fact the tenth century is, also to our surprise, invisible in the stratigraphy of the Vrijthof Square. In what follows we will sketch the development of the site in Roman (AD 0-300), late-Roman (AD 300-525), Merovingian (AD 525-675), Late Merovingian/early Carolingian (AD 675-750) and Carolingian/Ottonian (AD 750-c. 1000) times. A few remarks will be made on the eleventh and twelfth centuries and late medieval times.[151] We will refrain from describing the development in the Modern Period.

The Roman period (c. AD 0-300)
The oldest occupation at the site dates to the early Roman period. In Augustan times the Roman road between Tongres and Cologne was created. It crossed the Meuse at Maastricht and from the Meuse it ran in a western direction towards Tongres along the northern limits of the present Vrijthof Square. The oldest road surfaces were narrow compared to the wide and thick layers of gravel deposited later (fig. 5.48). The southern limits of the metalled surface, a wide bank and ditches were observed in the excavations. It was suggested that a similar configuration of bank and ditches existed to the north of the metalled road. Thus a broad public zone was created for use by the Roman state and its military and officials. No doubt others used the road as well. This road was going to determine the topographical development of the area to a high degree and does this to the present day. In the first century there was no habitation along the road. The early Roman habitation was found further east along the Meuse River.

The road was improved and widened on several occasions. Around AD 100 the road was made wider and an auxiliary path ran parallel to it separated by a bank that was by now more narrow. A ditch marked the southern boundary of the public zone (fig. 5. 49). It is not known to what extent a similar configuration of bank, path and ditch existed to the north of the road. The auxiliary path could have served the first human activities to the south of the road. Local traffic may have been separated from that on the 'highway'.

In the middle of the second century the metalled road received its largest width (fig. 5.50). Successive (?) ditches ran parallel to its southern limit. By now habitation had appeared to the south of the road. Wooden houses were built at right angles to the road, in their

(149) It is thus not exactly a history of the square. It is not possible to describe the history of the square since late medieval times because the archaeology does not provide sufficient data. That history has to be written on the basis of documents and images. The buildings surrounding the square, with the exception of the basilica of Saint-Servatius and the church of Saint John, date to the modern period. See: http://monumentenregister.cultureelerfgoed.nl/php/main.php?cAction=show&ccOffset=0&cLimit=25&ccOBJnr=27685&oOrder=ASC&cLast=37&oField=OBJ_RIJKSNUMMER&sCompMonNr=&sCompMonName=&sStatus=&sProvincie=Limburg&sGemeente=Maastricht&sPlaats=Maastricht&sStraat=vrijthof&sHuisnummer=&sPostcode=&sFunctie=&sHoofdcategorie=&sSubcategorie=&sOmschrijving=&ID=0&oField=OBJ_RIJKSNUMMER and https://nl.wikipedia.org/wiki/Lijst_van_rijksmonumenten_in_Maastricht/Vrijthof (both 26-06-2015). The oldest non-cult building of the square is the Spaans Gouvernement (now Museum at the Vrijthof), dating to the sixteenth century. Virtually nothing is known about the predecessors of most buildings. (150) Panhuysen/Leupen 1990. Panhuysen repeated this view recently (Panhuysen 2013, 379) along with a premature and incorrect representation of the development of the site. (151) What follows is based on the discussion of the deposits above and some information in other chapters. We will not provide references all the time to these sections and chapters.

Fig. 5.48
The Vrijthof site in early Roman times. The Roman road with parallel ditches (blue) passes the site in the northernmost part. For orientation the *basilica* of Saint-Servatius and the built up area in 1830 are indicated in grey as well as the outlines of the excavation trenches of the Vrijthof site and the Theatre and Entre Deux sites.

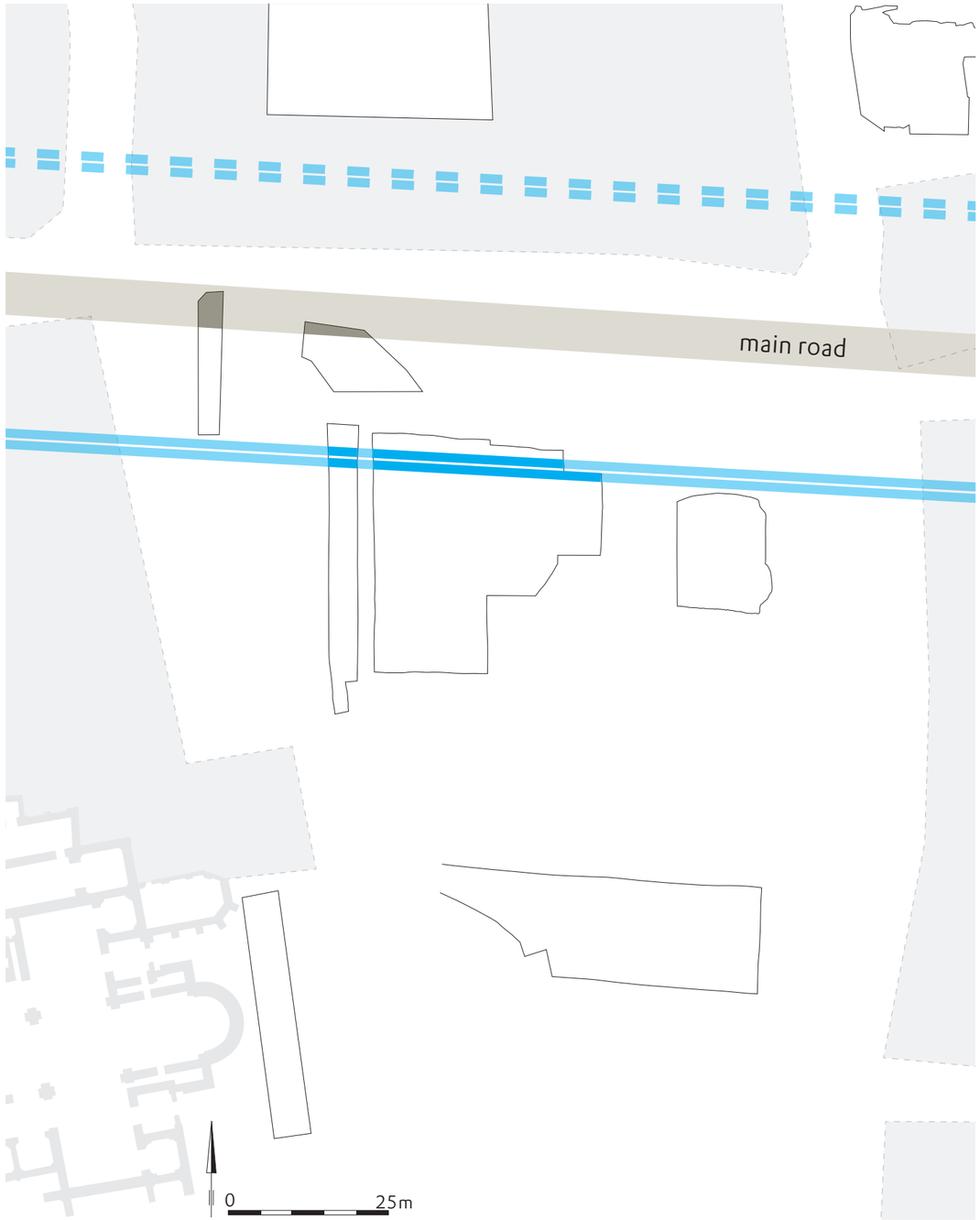
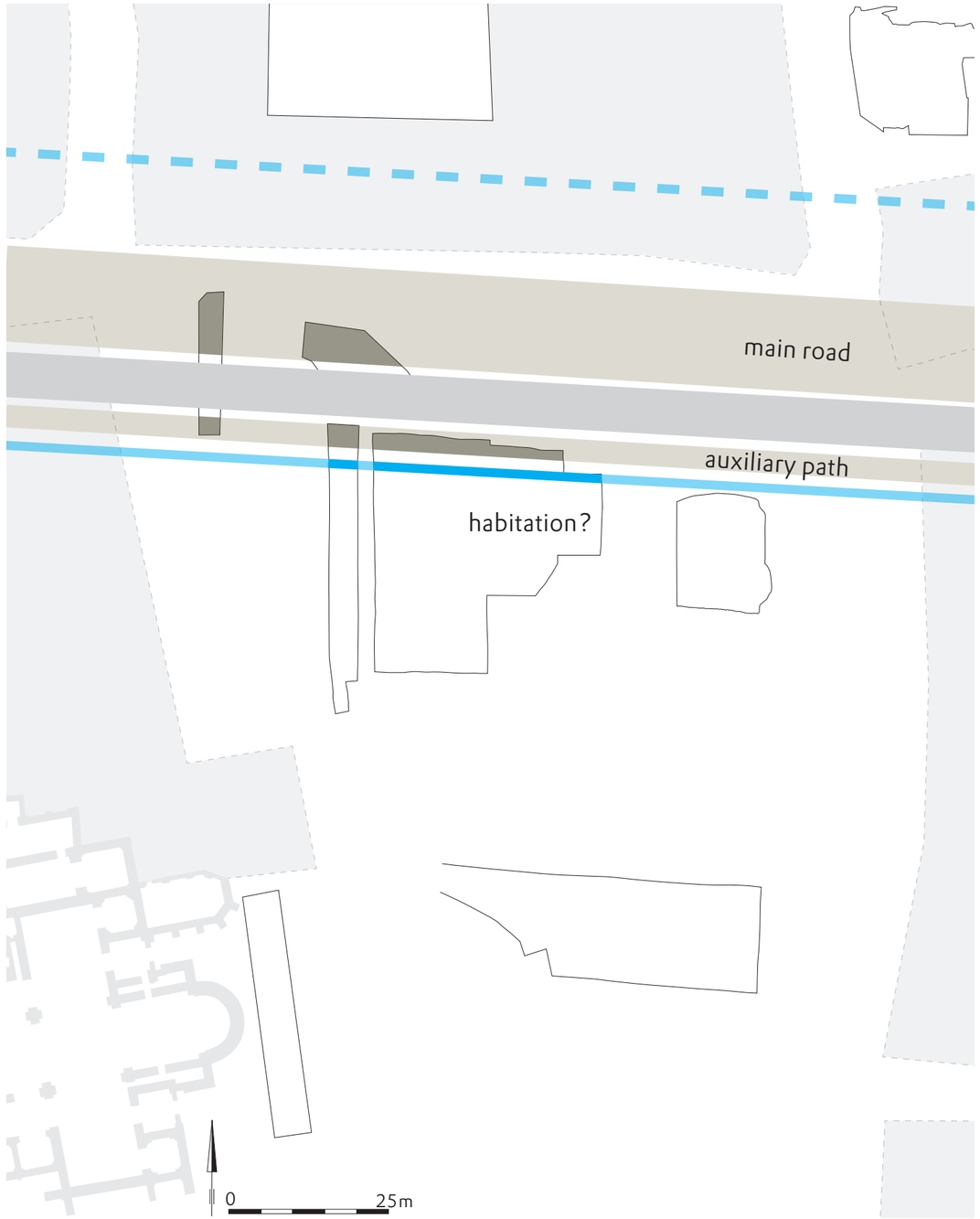


Fig. 5.49
The Vrijthof site c. AD 100. The Roman road with parallel ditches (blue) and an auxiliary path passes the site in the northernmost part. For orientation the *basilica* of Saint-Servatius and the built up area in 1830 are indicated in grey as well as the outlines of the excavation trenches of the Vrijthof site and the Theatre and Entre Deux sites.



backyards a well pits and small outbuildings were present. Several post- and plank-built houses could be identified from a plethora of postholes. To the east of these houses a stone built cellar was discovered. In its fill large fragments of destroyed copper alloy statues were found. Unfortunately there is no further evidence on the structure of which this cellar was a part. The subsoil cannot have been reworked to such a depth that all remains of a stone building were destroyed by that activity. After all the postholes of the wooden buildings were still visible.[152] Postholes were found to the east of the cellar. They may have been a part of a structure to which the cellar belonged. One would expect to see the remains of a more prestigious stone building or building with stone foundations when such a cellar is present but this is not the case. Maybe the cellar was part of a wooden building. Further to the east the indications for habitation in the same period gradually come to an end. In trench 6 no indications for habitation in the Roman period were recorded.[153] Further to the west the indications for habitation stop more or less at the limits of trenches 4 and 1. Hardly any traces of Roman habitation were observed at the levels of trench 1. In its northern part however several layers of burned material, dating to the Roman period were observed. To the north of the road no traces of Roman habitation have been observed in the trenches of the Theatre excavation. The most likely extent of the habitation proper has been indicated with a broken red line in figure 5.50. This settlement must have known a complicated habitation history which is illustrated by the successive layers of debris and washed in soil indicating periods of abandonment.

This habitation was probably not part of the Maastricht '*vicus*'.[154] The habitation zone south of the road does not seem to be longer than c. 40 m. There were probably no more than two houses at the same time. The site was isolated from the *vicus* further to the east. It was suggested before that the large amount of burned material, the fragments of copper alloy statues and the iron slag present in the road surface could relate to craft activities more specifically the casting of copper alloy objects and forging. However no distinct waste (moulds, crucibles) from these crafts were recorded in the habitation zone. For this reason the nature of the activities in this small settlement along the road remains obscure.

In de second century more habitation appeared in the area. At the location of the basilica of Saint –Servatius traces of habitation were discovered including constructions related to water (floor of a basin and elements of a well). These could relate to the baths of a Roman *villa*.

The Late Roman period (c. AD 300-525)

The small settlement disappeared around the turn of the second and third centuries. No human activities were observed in the archaeological record for the next two following centuries. Only a few pottery shards from this period were found in the older (1969-1970) and in the latest excavations (2003). Thick layers of soil were deposited, probably washed down material from the higher grounds to the west. These deposits levelled out the site. In Roman times it had become a somewhat lower lying area because the raised surfaces of the road now formed a kind of dam. The habitation too created a thick layer of debris and washed in soil immediately south of the road. The lower lying backyard area thus was filled up in late Roman times. This was probably due to the abandonment of large areas of the higher lying plateau to the west that became vulnerable to erosion. The Roman road climbing up the terrace must have functioned as an excellent drainage system. Again the Roman road, which was kept in order to some degree ran through an uninhabited landscape in this area. To the west there was the older Roman cemetery. It is not known how intensively it was still used in late Roman times. The long sections of the east walls of trenches 1 and 4 indicate that the surface created in late Roman times was more or less the surface of the area throughout the entire Middle Ages. Only in late medieval or even Modern Times was the surface of the square raised considerably (the layers indicated in grey in figures 5.5 and 5.6). In the Middle Ages the top of the late Roman deposits was worked and reworked as a consequence of various activities. A slight rise of the surface (10/20 cm) may have taken place at the same time as a result of the accumulation of waste and the digging of pits and the spreading out of the soil that came from them, but it is impossible to be more precise on this.

The Merovingian period (c. AD 525-675)

The first activities on the site after the late Roman period date to the first half or second quarter of the sixth century. From that time on the terrain south of the Roman road was used as a burial ground (fig. 5.51). Burial started at different places. ^{14}C-dates of skeletons discovered in the central part of the site (cemetery 3) suggest that burial started here already in the first half of the sixth century. The oldest grave finds in the northern part of the site have a long date range but in view of the dates of the ensemble of grave finds in the northern part it was suggested that burial started here somewhere in the first half of the sixth or towards the middle of the sixth century. In the course of the sixth and seventh century the cemetery in the north-eastern part of the site (cemetery 4) was used intensively. Unfortunately it had to be excavated in a hurry and not all parts were available for research. Burial activities stopped soon in the sixth century in the central part of the site. To the north of the road two graves were found during the Entre-Deux excavations.[155] ^{14}C dates were commissioned. One grave dates to the later seventh and eight century, the other to the first half of the seventh century. In this period there is thus one grave on that site.

The northern cemetery (nr 4) had clear boundaries to the north

(152) It could have been a framed building on a stone foundation laid down at the surface level. Such a foundation was most probably destroyed in the course of time. (153) However we have to keep in mind that this trench was not excavated very well. (154) Panhuysen 1996, 50-51. (155) Arts 2007, 70-71.

Fig. 5.50
The Vrijthof site in the second century. The Roman road with parallel ditches (blue) passes the site in the northernmost part. To the south the remains of the Roman *vicus* are indicated. For orientation the *basilica* of Saint-Servatius and the built up area in 1830 are indicated in grey as well as the outlines of the excavation trenches of the Vrijthof site and the Theatre and Entre Deux sites.

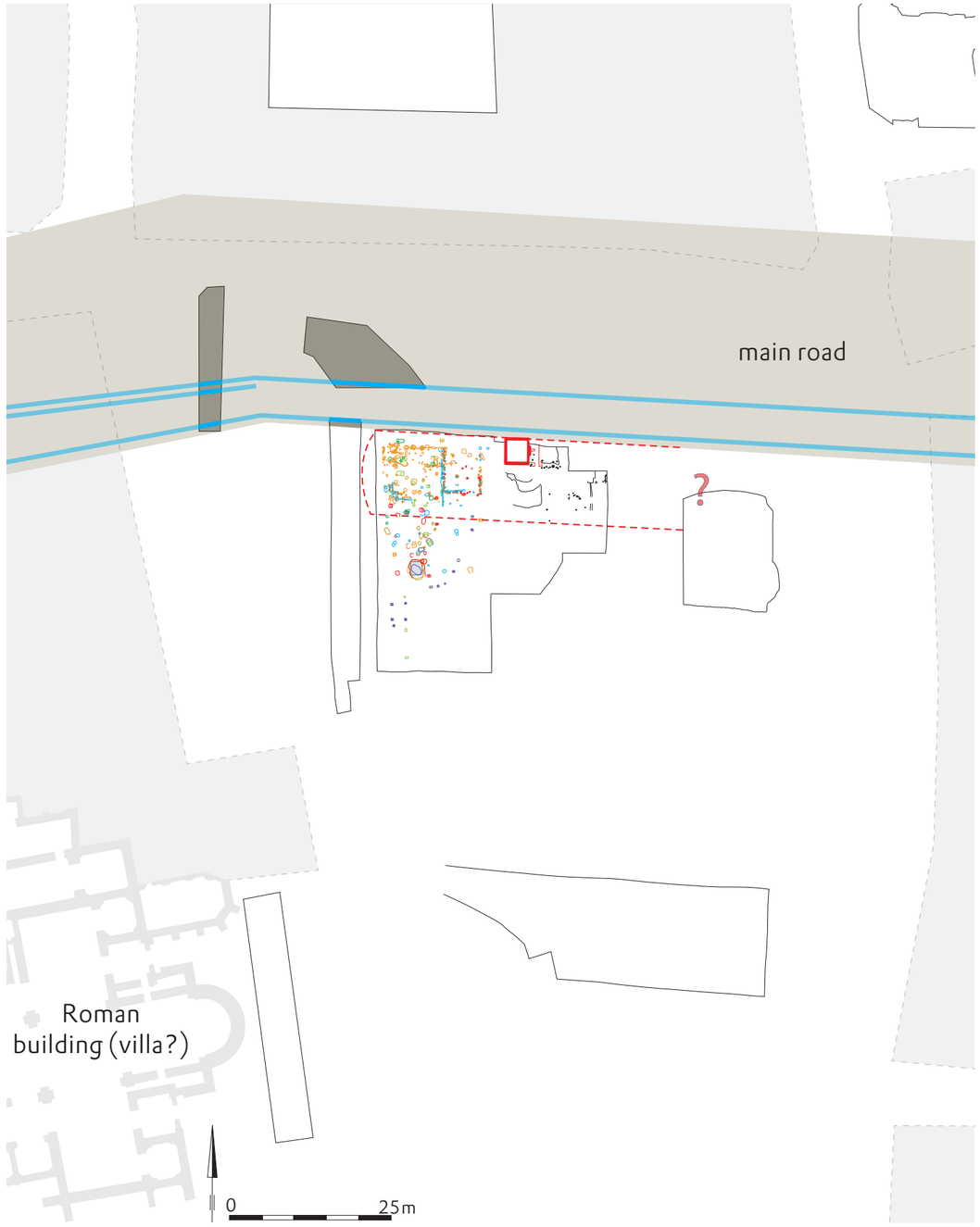
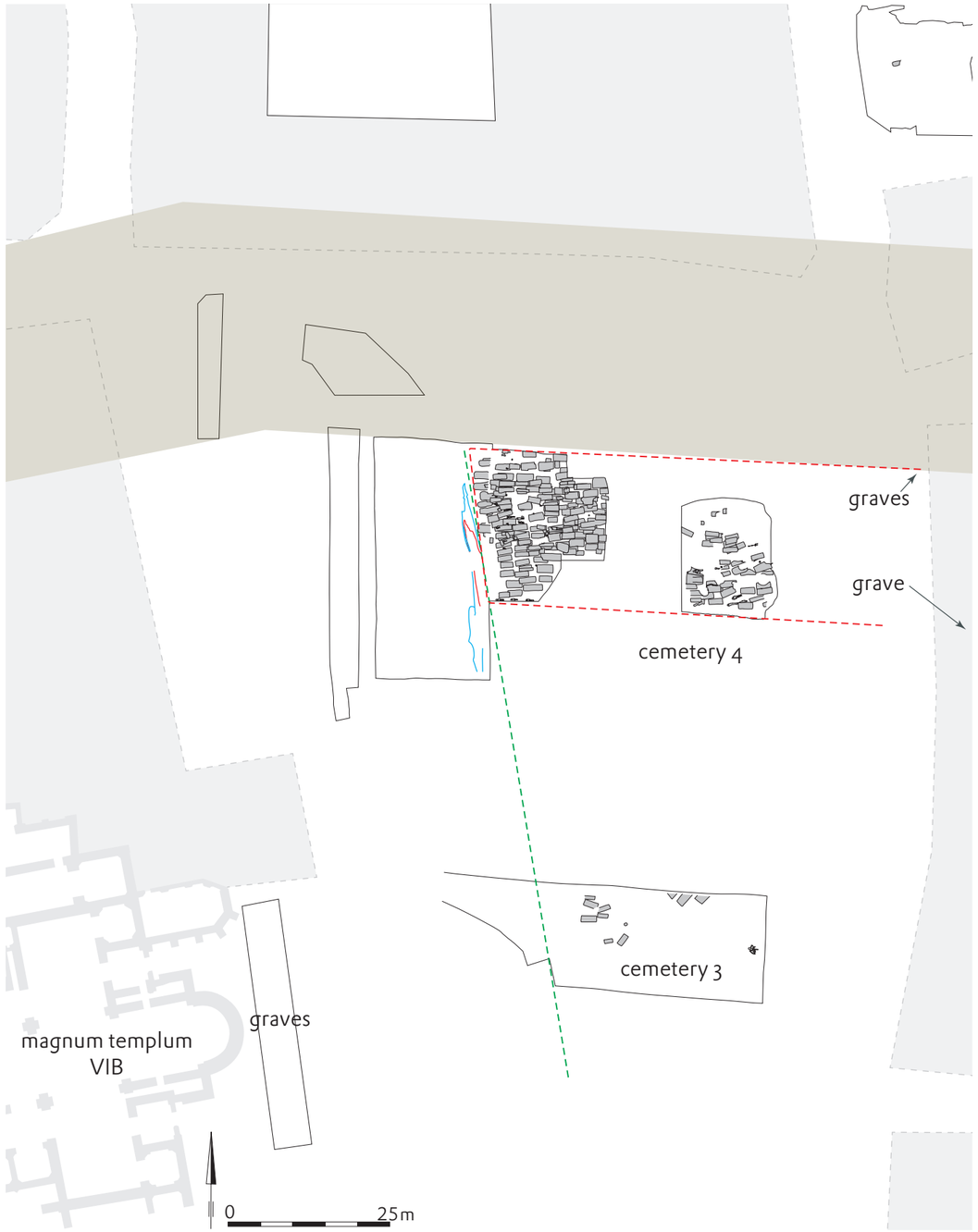


Fig. 5.51
The Vrijthof site in Merovingian times. The Roman road passes the site in the northernmost part. To the south of it the graves of cemeteries 3 and 4 are indicated as well as the bands of gravel that mark the western boundary of cemetery 4. For orientation the *basilica* of Saint-Servatius and the built up area in 1830 are indicated in grey as well as the outlines of the excavation trenches of the Vrijthof site and the Theatre and Entre Deux sites.



(the Roman road), the west and the south. The eastern limit cannot be established but several graves were found at the corner of the Vrijthof square and the Grote Staat. Another grave that could be Merovingian was discovered to the southeast. It is not possible to say whether the cemetery extended to this point, because it might as well, like the Entre Deux burial, be an isolated grave. The extent of the cemetery is indicated with a broken red line. The western boundary is interesting. The graves do not cross an imaginary line. A band of gravel that is difficult to interpret was observed immediately west of the graves. It might be a path although the layer of gravel was relatively thick and narrow. The gravel might also be the fill of a ditch to improve the drainage of the site. It could have prevented water running down the slope and the Roman road from flooding the cemetery. This band of gravel that obviously marked the boundary of the cemetery ran further south than the southern limit of the cemetery. In the trench in the central part of the site several north-south oriented ditches, bands of gravel and rows of posts were recorded that might be related to this boundary (see fig. 46, A). In figure 5.51 this boundary is indicated with a green broken line. The boundary is an indication that in Merovingian times the site of the Vrijthof Square was divided in at least two plots.

In the second half of the sixth century, when the Vrijthof cemetery was already in use, bishop Monulphus built his *magnum templum*.[156] This cult place is supposed to be the first church at the location of the *basilica* of Saint-Servatius.[157] Around the *magnum templum* there was also a cemetery which extended east down the slope into the long trench opened to the east of the basilica. The boundary seems to separate two areas with their own cemeteries. We will come back to this element in the final chapter of this book. The cemetery remained in use until the second half or late seventh century.

So far the history of depositions at the Vrijthof Square is relatively straight forward. However it is not possible to provide a clear-cut reconstruction of activities in the late Merovingian period (c. 675-750). We cannot disentangle in detail the sequence of events that lead to the specific composition of the archaeological record. What we can do is present the archaeological record and make suggestions as to why it has the composition it has.[158]

The late Merovingian/early Carolingian period (c. 675-750)

In this period cemetery 4 became obsolete, cemetery 3 was already out of use for a century. This does not mean that burial stopped in the northern part of the site. New trench graves were dug that date to the very late seventh century but rather to the eighth or maybe even (early) ninth century (fig. 5.52). It is difficult to establish whether there was direct continuity between the 'Merovingian' (cemetery 4) and this '(early) Carolingian' cemetery (nr 5). There might be a (short) time gap between the youngest graves of cemetery 4 and the oldest of cemetery 5. We have no conclusive evidence on the dates of the youngest graves. New ^{14}C dates have to be commissioned because there were no grave goods in these graves that could help us dating the graves.

The topography of the new graveyard differs from that of the previous period. This image however might to some extent be the result of later disturbances of parts of the cemetery especially in the eastern part. There is no homogeneous distribution of graves over the area of cemetery 5. The graves cluster in several groups. The eastern group might have been larger because some graves were probably destroyed during levelling activities in the Middle Ages or Modern Period and during the excavation.

It is important to notice that the western boundary of the Merovingian cemetery was not respected. Graves were now also present to the west of this old boundary. Moreover we could not identify a physical marking of this boundary in this period in the form of bands of gravel or ditches. However a number of narrow ditches related to the settlement features to be discussed below have the same orientation.

It is interesting to try to fit this cemetery into the burial landscape and cult landscape of Maastricht in (early) Carolingian times. We will try to do so in a concluding chapter, but its interpretation is also dependent on the nature of other features present at that time.

The cemetery is not the only phenomenon from this period on the site. First there are the numerous remains of a settlement (wells, postholes, pits, ditches). The pottery from these features dates to the seventh and early eighth century. There is no pottery dating to the Carolingian period in these features so we expect that the habitation ended before the middle of the eighth century. The settlement remains were discovered in the southern part of trench 4 and in the eastern part of trench 3. The zone in between these trenches was probably occupied too (on fig. 5.52 the possible zone with habitation remains is indicated with a broken red line).

In the north some ditches have the same orientation as the old boundary. Unfortunately trenches 5 and 6 do not extent far enough in a southern direction to see whether habitation occurred in the north-eastern part of the site. The western part of the site was probably not inhabited. The absence of settlement features in the western part of trench 3 is an indication for this observation. The settlement features seem to respect the old boundary in trench 3. Maybe there was a zone around the *basilica* that was not inhabited in this period (this zone is indicated with a green broken line in figure 5.52).[159] A ditch, recorded in the southern part of trench 1 could be related to such a new 'boundary' (on figure 5.52 it is indicated with a broken blue line).

Three burials in trench 4 are at a different level than those of cemetery 5. They (cemetery 6) seem to take in a separate position.

(156) See chapter 1. (157) We have to await the detailed analysis of the architectural remains of the site by Titus Panhuysen before we can make any further statements on the development of the Saint-Servatius church through time. (158) See also chapter 14.

Why this is so is not clear. They might have a more direct relation with the the settlement remains and could be farmyard burials like they have been found on Merovingian settlement sites in the southern Netherlands.

It is impossible to reconstruct building plans from the plethora of recorded features at different levels. This might be due to the limited areas excavated but we must also keep in mind that the type of habitation might be different from that of rural settlements we excavated in other parts of the southern Netherlands. We will come back to a possible interpretation of this habitation in a concluding chapter.

Next there are the numerous deep pits dug on the site (fig. 5.52).[160] They probably functioned as latrines and waste pits. At first it was thought, on stratigraphic grounds, that they dated to the Carolingian period because in trench 6 they were dug through Merovingian graves. However, in trench 1 some of these pits were older than graves of cemetery 5. ^{14}C dates of nearby graves date these graves to the early phase of cemetery 5. Unfortunately we do not have yet ^{14}C dates of graves that are in a direct stratigraphic relation with deep pits.

A lot of these pits were found in trench 1 were there were no other features related to habitation. A smaller number was found at the location of the settlement remains in the southern part of trench 4, but hardly any further north where the burials were. In trench 6 they are numerous but again no other habitation remains were found. During the short excavation of this trench most attention was paid to the graves. The information on the pits and other features is not very detailed. In trench 3 the deep pits intermingle with settlement remains. It is very difficult to establish the relation between the deep pits and the burials, the deep pits and the settlement remains and the settlement remains and the burials.

The analysis of the pottery showed that almost all pottery from the pits, except the residual finds from the Roman period, dates to the Merovingian period. Only a few shards date to the Carolingian period. These few shards are insufficient evidence to date the deep pits as a group to the Carolingian period (post c. 750 AD). The pottery indicates that the deep pits and the settlement features are almost contemporary.[161] This is interesting because there seem to be zones with only deep pits and zones with deep pits and settlement features. This hints at a certain functional division of the area with zones for habitation, zones for latrines and waste disposal and zones for burying the dead. However this division may not have been identical for all areas during the entire period of use. Functions of areas could have changed over time. This might explain the overlapping presence of different types of features (graves, pits and habitation features).

Yet another complicating factor are the so-called large dug in structures, extensively discussed above. Their function is not clear although the intensive use of fire is related to these features. They were located outside the zones with settlement features and deep pits and more or less in between groups of graves.[162] At first it was thought that they too dated to the Carolingian period, but the pottery shards from their fill date almost exclusively to the Merovingian period. On the basis of the pottery we cannot date these features to the Carolingian period (post c. 750). If they date to the Carolingian period we would have found more pottery from that period. In fact pottery from the Carolingian age is almost absent on the entire site. This leaves us with no other alternative than to date these features also too to the later seventh and first half of the eighth century.

All the features of the late seventh and early eighth century make up a strange combination of elements. The deep pits and the large dug in structures are not found at rural sites. Similar latrines were found at the Haymarket excavations in Cologne.[163]

Moreover the habitation and related activities did not last very long. We date these features to the (late) seventh and first half of the eighth century on the basis of the date range of the pottery but the time these features were in use might be shorter. Various suggestions for this configuration of elements can be given. They will be discussed in the concluding chapter of this book.

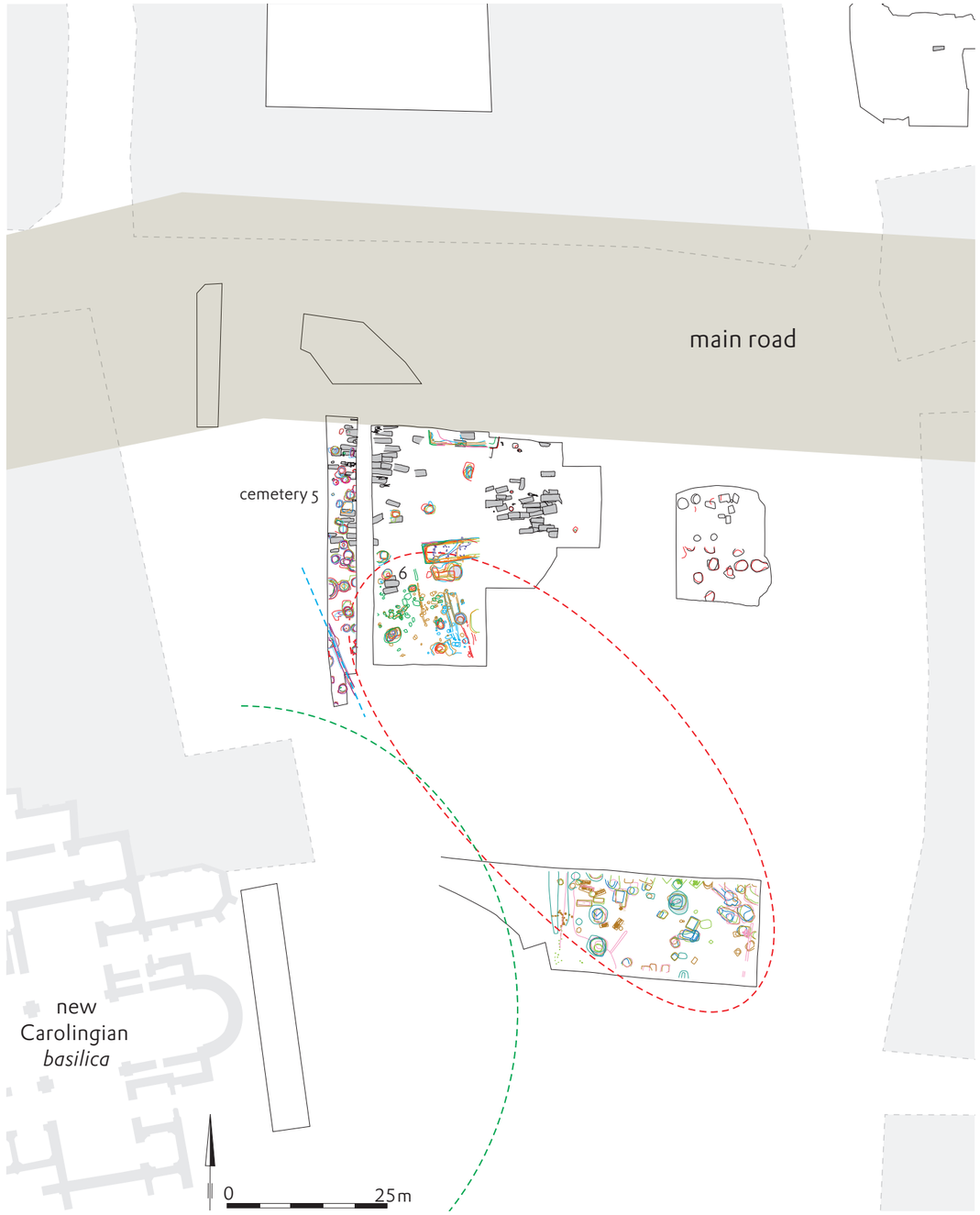
The Carolingian and Ottonian period (c. AD 750- 1000)

All the features related to habitation and burial of the previous period were no longer in use in the Carolingian and Ottonian age. This conclusion is based on the almost total absence of pottery from these periods (see table 5.1). The date range of some ^{14}C dates of graves of cemetery 5 is so long that it is in theory possible that at the beginning of the ninth century graves were still dug in. It is also possible that the cemetery went already out of use in the second half of the eighth century.

When we studied the levels of the excavation trenches we were amazed by the absence of Carolingian and Ottonian features and especially finds. At first we blamed the excavation technique for this, for we thought that an excavation technique consisting of removing layers of 20, 40 and sometimes 60 cm of soil was responsible for the removal of all layers and finds from this period. When studying the sections we expected to identify these layers, but they are not there. On top of the black layer with the graves of cemetery 5 is a relatively thin late medieval layer covered in its turn by almost three meters of raised soil from the Modern period. There are thus no Carolingian and Ottonian layers and depositions. There are not even clearly eleventh and twelfth century

(159) The form of the green circle is not meant to suggest that it was exactly round. The broken lines are indicative. (160) See the discussion on these pits above. (161) One although inconceivable interpretation could be that the Merovingian pottery is residual material too and that the pits date to the Carolingian period. This would mean that many pits dating to the Carolingian period do not contain Carolingian pottery. This seems to us inconceivable. (162) Two graves seem to be dug in the fill of the northern pit but both graves are rather vague features. (163) See the discussion above.

Fig. 5.52
The Vrijthof site in late Merovingian times (c. AD 675-750). The Roman road passes the site in the northernmost part. To the south the graves of cemetery 5 are indicated as well as the habitation features, the deep pits and the long dug in structures. For orientation the *basilica* of Saint-Servatius and the built up area in 1830 are indicated in grey as well as the outlines of the excavation trenches of the Vrijthof site and the Theatre and Entre Deux sites.



layers. A limited number of finds of those centuries (few in relation to the number of shards on other sites from this period) indicate that the layers on top of the black layer rather date to the late twelfth or thirteenth century. This date corroborates with the date of the oldest post-Roman surface of the road.

For the moment we have to conclude that no soil was deposited at the Vrijthof square area in Carolingian and Ottonian times. The surface on which the habitation took place in the decennia around 700 AD and from which the deep pits, wells and structures with fire remains were dug in remained the surface during a great deal of the Middle Ages.

No traces of habitation were identified dating to the Carolingian period. We considered of course the possibility that the traces of habitation were hidden in the black layer and for that reason not observed by the excavators. We discarded this possibility because the layer is too thin. The lower parts of features that were dug in deeper such as pits and wells would have been visible below the black layer. One could also hypothesize that the buildings were built on sills at ground level leaving no postholes in the archaeological record. This suggestion does not solve the problem of the absence of material culture from this period. If there was habitation more pottery and metal finds from the Carolingian and Ottonian periods would have been found like they found pottery from the Roman and Merovingian periods.

This means that from c. AD 750 the area was a large open space be it a muddy one (the black layer) in times of heavy rainfall. It was bounded by the Roman road to the north. The Theatre excavations to the north of the road showed that there was no habitation in that area in Carolingian and Ottonian times either. There were indications of Carolingian habitation in the area to the west of the basilica.[164] To the west the Vrijthof area was to a great extent bounded by the Carolingian *basilica* and the Saint-Servatius cemetery. The boundaries to the east and south are not clear. There are no indications of intensive habitation in Carolingian times between the basilica of Saint –Servatius and the Meuse river, neither are there many indications for habitation to the south. Of course new discoveries can change this image, but for now it seems that the Carolingian and Ottonian *basilica* of Saint-Servatius stood fairly isolated in the landscape. This was going to change in the eleventh and twelfth centuries.

The eleventh and twelfth centuries

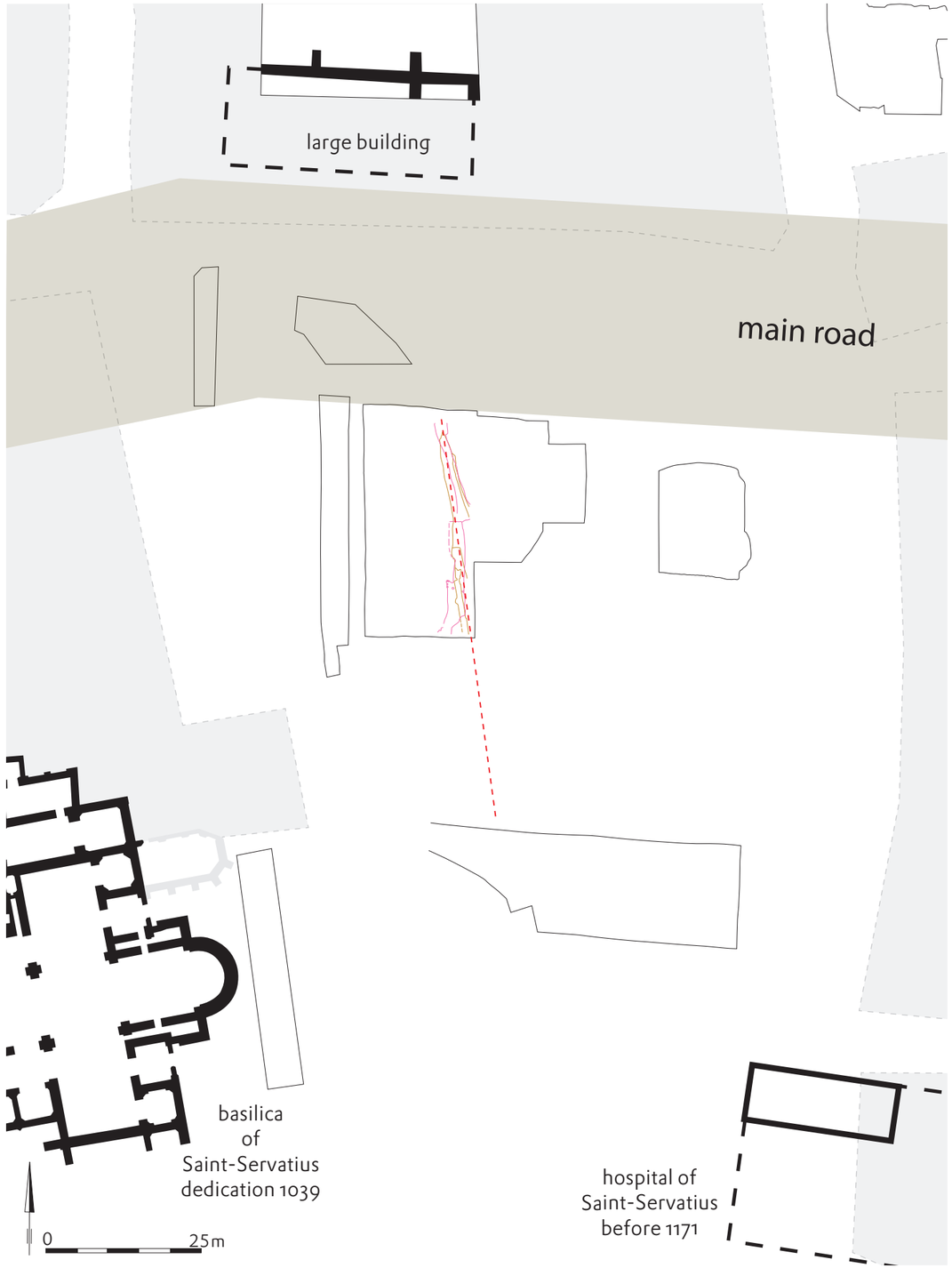
In 1039 a new *basilica* of Saint-Servatius was dedicated (fig. 5.53). Building activities will have started already in the later tenth century. In the Theatre excavations to the north of the Roman road the foundations of a large building were discovered.[165] These foundations were interpreted as those of a *palatium*, but this interpretation remains an educated guess.[166] The size of the foundations do suggest that the building was a prestigious construction. The excavators dated it to the early eleventh century. It was thus created at the same time as the new basilica of Saint-Servatius. Both buildings could have been commissioned by the same person.[167] In the southeast corner of the present square stood the hospital of Saint-Servatius. It was mentioned for the first time in 1171 and must thus have been built before. We do not know whether other prestigious houses were built along the eastern limit of the present square. The open space might have remained open for a long time in the Central Middle Ages.

The square does not seem to have been created ex nihilo on the basis of an integrated concept informed by ideological motives. The area east, northeast and southeast of the *basilica* was by AD 1000 an open space intersected by the Roman road reaching almost to the Meuse River where in the course of the eleventh and twelfth centuries a number of prestigious buildings appeared. We cannot, on the basis of the present evidence, conclude that the square was completely surrounded by buildings at the end of this period.

An interesting phenomenon was observed in trench 4. In Merovingian times a band of gravel was present that marked the western limit of cemetery 4. This band continued to the south beyond the limits of the cemetery. It was suggested that this feature marked a division of the square in at least two plots. This boundary may not have functioned in late Merovingian and early Carolingian times, at least not in the area of burials in the north. One of the long deep dug in structures also cut through the older band of gravel. However there might have been a division of the square to some extent because the western part did not show many traces of habitation whereas the eastern part did. In later times new bands of gravel were deposited on the same location that were clearly younger than the deep dug in structures. In other words the old boundary was restored. The gravel marking this boundary must have been at the surface for a great part of the Middle Ages. It is covered by layers dating to the Late Middle Ages and the Modern period. So in the period under discussion this boundary seems to have been in function and it may have divided the site again in two parts: an eastern one and a western one (on fig. 5.53 it is marked with a red broken line). This boundary reflects the division of the site in later times when part of it was controlled by the Saint-Servatius chapter and another part by the town. Unfortunately it is not possible to determine when the new bands of gravel were deposited. They must be younger than the southern deep dug in structure which was, as was suggested above, no longer in use by the middle of the eighth century. This is a terminus post quem for the deposition of the new bands of gravel and the restoration of the boundary. The boundary was thus temporarily abolished.

(164) Features from this period were found in the Sint-Servaasklooster excavations (see chapter 2). (165) Hulst 1994. (166) See now Panhuysen 2013, 383 for a nuanced statement, and a less nuanced indication on Farbabb. 36. For a better evaluation of this building it is necessary to restudy the excavations in more detail. We were not able to do so in the context of this study. (167) See chapter 1, the section on Charles of Lotharingia and his son Otto.

Fig. 5.53
The Vrijthof site in the eleventh and twelfth centuries. The Roman road passes the site in the northernmost part. The new buildings are indicated in black as well as the new bands of gravel that mark a boundary in the middle of the site. For orientation the built up area in 1830 is indicated in grey as well as the outlines of the excavation trenches of the Vrijthof site and the Theatre and Entre Deux sites.



The surface of the square was not raised in this period. In this period it was about three meters below the present pavement of the square. It is astonishing that nothing could be observed in the sections of trenches 1 and 4 of the building activities at the other side of the Roman road. No building debris whatsoever was visible in the sections. The same observation goes for the section in trench 3 where we could not see any indications for the building of the hospital of Saint-Servatius. Immediately to the east of the *basilica* soil was deposited, probably to reinforce the slope on which the apse was built. It is difficult to date these deposits.

The later Middle Ages and Modern Times

The excavations on the Vrijthof Square do not provide much information on the further development of the urban fabric in this part of the town in the Late Middle Ages and the Modern Period. The Theatre excavations show the development of the Wittevrouwen monastery in the first half of the thirteenth century. It replaced the prestigious building from the eleventh century.[168] The old observations of walls in the south-east corner of the square are not very informative.[169] Houses of canons appeared along the southern limit of the square. The monumental character of the buildings that flank the present square make it almost impossible to carry out new excavations and to see whether there were older buildings at the sites of the present houses of the Modern Period.[170] On the square itself a large well was created. In the northern part small fireplaces were discovered which show that in early modern times the site was occasionally used as a camping place.[171] Most important was the raising of the surface in late medieval and modern times. This raising of the surface must have ended in 1736 when the Hoofdwacht was built. Its threshold lies at the same height as the present pavement on the square.

This overview completes the discussion of the history of depositions on the Vrijthof site since early Roman times. In the chapters that follow we will discuss in detail the evidence of the cemeteries from the Early Middle Ages.

(168) Hulst 1994. **(169)** See chapter 2. **(170)** These buildings mainly date to the seventeenth, eighteenth and nineteenth centuries. The so-called Spaans gouvernement is one of the oldest houses of the town and dates to the sixteenth century. In Maastricht hardly any houses from the Middle Ages have been preserved. **(171)** Dijkstra/Flamman, 2004, 57, fig. 29.

6 The Vrijthof cemeteries: their limits, state of preservation and estimated size

After the creation of composite plans of all individual graves found during the excavations a plan was made of all the burials of the Saint-Servatius complex. On this plan at least five separate Merovingian/Carolingian burial grounds can be identified (fig. 6.1). They are:

1. A large cemetery on the plateau where the *basilica* of Saint-Servatius was built (it consists of the graves of the Pandhof excavation (1953/54), the Church excavation (1981-89) and those in trench 2 of the Vrijthof excavation (1969)). The burials in trench 2 are located on the eastern slope of the plateau.
2. A small group of burials in the Sint-Servaasklooster excavations.[1] It is not clear yet whether this was a separate burial ground or part of the large cemetery (1) to the east of it.
3. A loosely structured group of burials in the central part of the Vrijthof square (in trench 3, subdivided in 3a-c).
4. A cemetery in the northeast corner of the Vrijthof square (in trenches 4, 5, 6).
5. A group of burials in the northwest corner of the Vrijthof square (in trenches 1, 4 and 5).
6. As mall number of graves in trench 4 that can be associated to the early medieval habitation in that trench.

Next to these groups a younger groups of graves was present:
The *cimiterium* in the southwest corner of the Vrijthof square, east of the *basilica*, to the middle of the square (the burials in the upper parts of trenches 2 and 3).

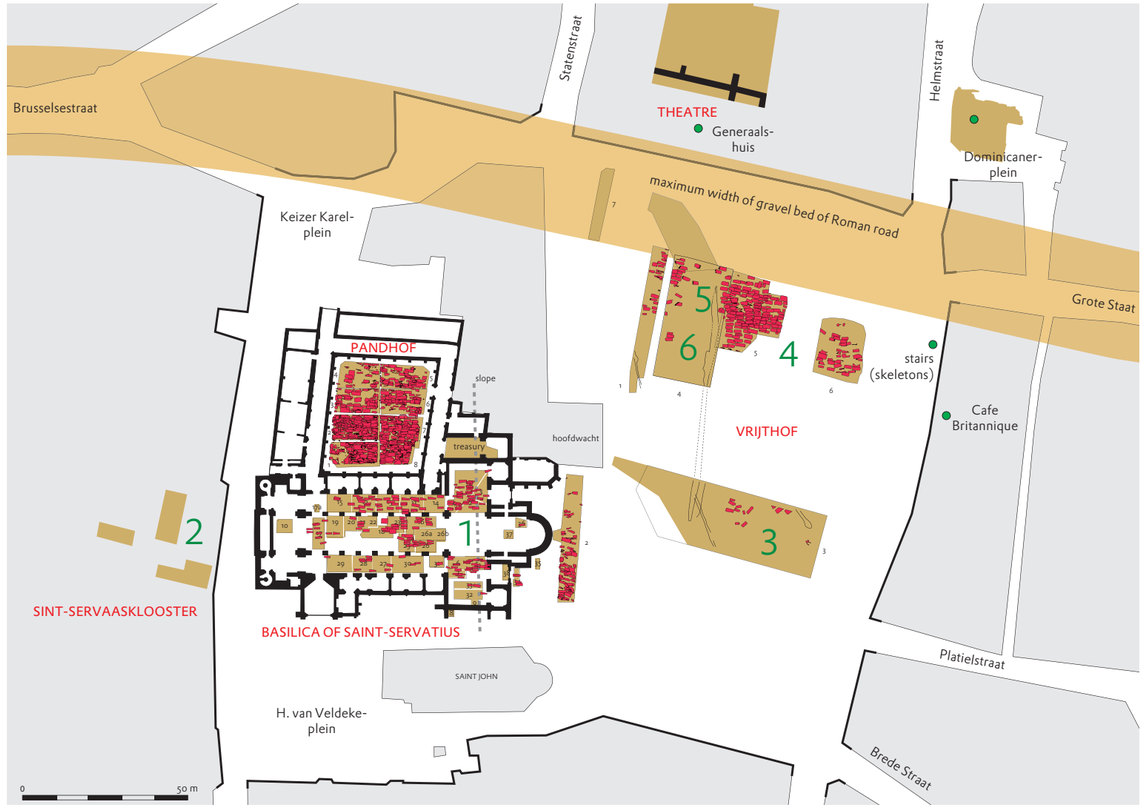
Finally the cemetery of the Witte-Vrouwenklooster in the theatre excavations[2] and some isolated burials were found at a greater distance of which those at the Dominicanerplein (Dominicans square) date to the Merovingian period.[3] The date of the burials discovered below the basement floors at Vrijthof 47 (Generaalshuis)[4] and café Britannique cannot be established.

In this book we deal with cemeteries 3, 4, 5 and 6. The early medieval burials in trench 2 and the *cimeterium* will be dealt with in the context of the cemetery on the plateau west of the Vrijthof.[5]

In this chapter we try to establish the limits of each cemetery and to what extent they were preserved in the parts that were excavated. Later it is possible to make estimates of the number of burials on each cemetery. Our search for limits of cemeteries does not imply that we think that all cemeteries were neatly delineated. Moreover the area inside the limits may not have been used evenly and single burials outside the limits may have been present. The recent discovery of isolated early medieval burials in Maastricht (Marktmaas, Dominikanerplein, Céramique) point to the existence of a highly differentiated burial topography in which large complicated cemeteries feature next to individual graves and small grave groups of various sizes and composition. It is neither expected that there is a neat relation between past social groups (geographically defined like the inhabitants of one settlement) and communities (defined otherwise like the people related to a specific church) in 'Maastricht' and the burial sites discovered. Single groups and communities may have used several burials sites to bury their dead.[6] This practice would result in a complementarity of burial grounds.[7] It is extremely difficult to connect different burial grounds to one another and, as a consequence, it is often difficult to establish where one burial ground ended and where another one started both in a topographical and mental sense. Moreover, it is necessary to include the chronological development of each burial ground into the analyses since not all the burial grounds were in use at the same time. Contemporary inhabitants of Maastricht and its surroundings may have perceived different early medieval burial grounds as parts of a coherent and integrated whole.[8]

In the northern part of the Vrijthof square a large number of burials was recorded in trenches 1, 4, 5 and 6. The analyses of these graves showed that they are not part of one single cemetery. We distinguished a Merovingian cemetery (nr 4), a Carolingian cemetery (nr 5) and a small group of graves probably related to contemporary habitation (nr 6) (fig. 6.2).

Fig. 6.1
The distribution of early medieval graves (indicated in red) in the Saint-Servatius complex. The 18 graves of the Sint-Servaasklooster site are not indicated. The green dots indicate isolated burials.



Cemetery 4 (trenches 4, 5 and 6)

The cemetery in the northeast corner of the square was not excavated completely. Parts of it were destroyed during the construction of the underground car park, but some minor parts may still be intact. The western limit of this cemetery has been established (fig. 6.3). It is bordered on that side by the bands of gravel running in a more or less northwest-southeast direction (see also figure 5.30). The bands of gravel could have been a track or a gravel-filled ditch. No graves dating to the Merovingian period were found to the west of this boundary.

The Roman road will have formed the northern limit of the cemetery. During the excavation of the entrance of the new

(1) Ypey 1985. The burials have been studied by M. van Haperen in the context of a research master. They have not been digitized yet and are for that reason not yet indicated on the map. A number of 14C-dates is available for skeletal remains from these graves. (2) Hulst 1994, 24-25 and 61-63 (contribution by R. Panhuysen to the excavation report). The graves date from the thirteenth to the eighteenth century. (3) Mark/Bink/Panhuysen/Wemerman 2007. (4) Chapter 2, nr 18. (5) A short description of the *cimeterium* is given at the end of this chapter. (6) On one possible interpretation of using multiple burial grounds see Theuws 2000a. (7) Theuws 2000a; R. Panhuysen 2005, 277-283. (8) We have to remember that in Merovingian times a large part of Maastricht and its surroundings may have formed part of a single royal estate.

Fig. 6.2
The distribution of all graves in trenches 1, 4, 5 and 6 of the Vrijthof excavation. A ditch in trench 1 and one of the bands of gravel in trench 4 and the Roman cellar are also indicated.

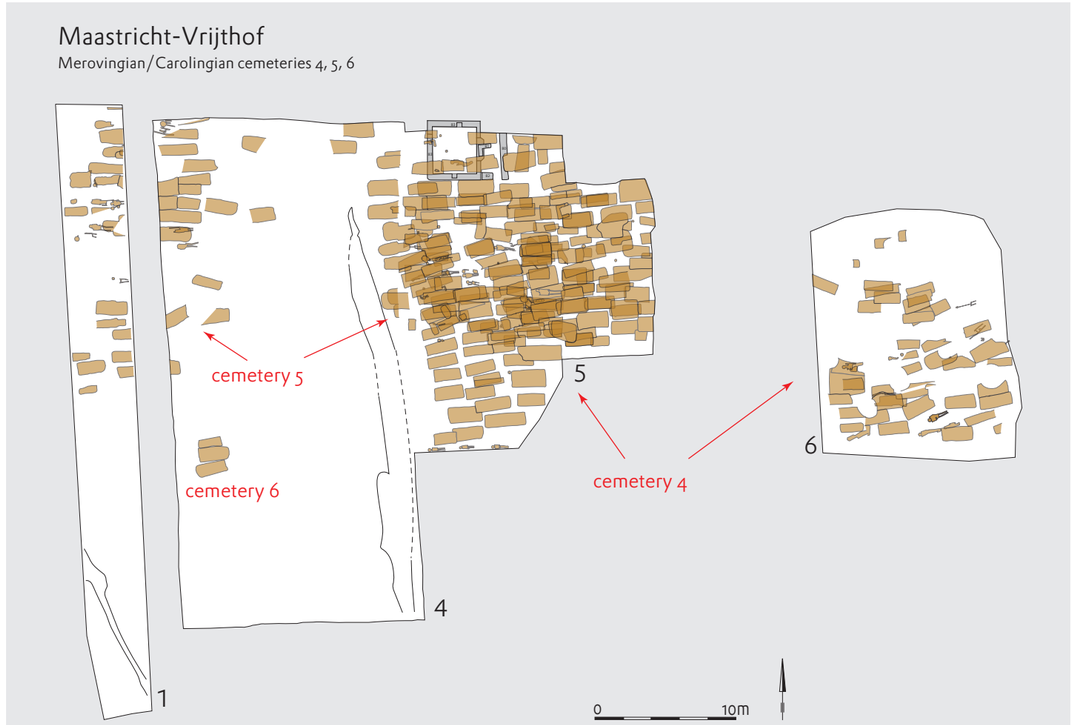
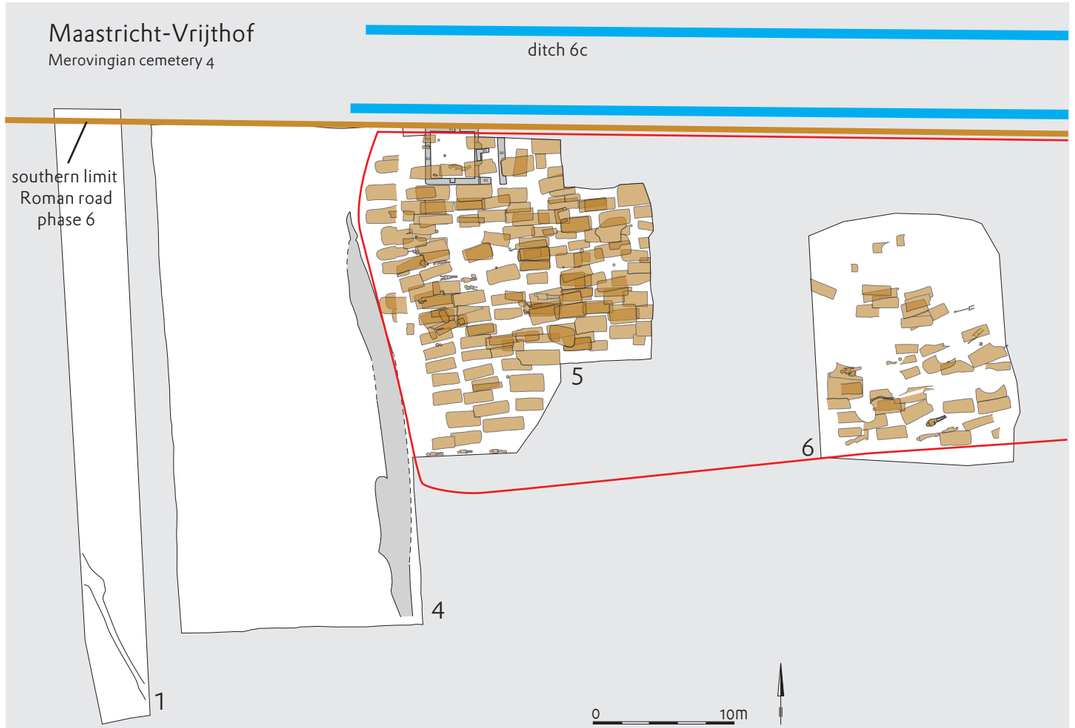


Fig. 6.3
The reconstructed limits of the Merovingian cemetery 4 (red line)



underground car park in 2003 it was established that the various layers of gravel of the subsequent Roman roads were so compact and hard that even with modern means it was difficult to dig into these layers.[9] It is therefore not to be expected that many graves were dug into these layers of gravel. The southern limit of these layers of gravel was situated just at the northern limits of trenches 4 and 5. We do not expect that the cemetery extended to the north beyond this limit.[10] The Roman cellar was not an element of importance for the choice of location of the cemetery. The oldest graves do not relate to the cellar.

How far the cemetery extended to the south is difficult to establish. In the report on the week of 16 to 20 March 1970 it was stated that the southern limit of the cemetery could not be established in trench 5 because beyond the trench a grave was found in the wall of the building pit as well as one in the flank of the ramp for the sand lorries which removed the soil, although no further specifications on their location were given. On the drawing of level 3 in trench 5 a line was drawn in a southerly direction and a remark placed next to it stating that the field technicians established the southern limit of the burials at 23.50 meters. It is not clear from what point they started this measurement. There are two alternatives. The first is a point in the northeast corner of the trench, the second is a point six meters further to the south. If the first point is used the cemetery extends c. 2.50 m beyond the southern limit of trench 5. If the second point is used it extends c. eight meters beyond this limit. There are two arguments to accept the first possibility. First, three skeletons are, hardly visible, indicated on the lower edge of the drawing. We suspect that this location on the drawing does not match their exact location in the field. These skeletons were probably found further south. In order to record them they were drawn at the edge of the large drawing of level 3 in trench 5. If these graves were located eight meters away with other graves in between the field technicians would probably have used a new sheet of drawing paper or glued a sheet of paper to the existing drawing, something they did in other cases too. The graves were probably put on the edge of the drawing paper in use because they were situated close by trench 5. Second, a southern limit of the burials in this part of the cemetery only 2.5 meters beyond trench 5 matches with the southern limit of the burials observed in trench 6. It is therefore accepted that the southern limit of the burials was found c. 2.5 meters beyond the southern limit of trench 5.

The eastern limit extended far beyond trench 5, since in trench 6 a large number of graves was recorded. The graves were found almost up to the southern limit of the trench. They may form the southernmost graves of the cemetery in that place. In the northern part of trench 6 less graves were found than in the southern part. This may be the result of a combination of the method of excavation and an older leveling of the terrain.[11] The northern limit of the cemetery at the location of trench 6 will have been situated along the Roman road as well. Graves have been found up to the eastern limit of trench 6. Thus, the eastern limit of the cemetery has not been identified. How far the cemetery extends further east is impossible to establish. In a small trench dug for the stairs of the pedestrians entrance of the car park at the corner of the Grote Staat and the Vrijthof square a number of skeletons was found (figs. 3.2, 6.1 and 6.4). These skeletons were west-east oriented.[12] Bloemers scribbled a number of notes on a drawing that the town of Maastricht delivered to the ROB in order to plan the excavation.[13] One of these notes concerns the location of this small trench that was dug in September 1971. On the photograph a shovel is standing next to the bones (fig. 6.4). If the blade of the shovel is 22 cm wide then the bones are c. 3.19 meters below the surface. On the mentioned drawing the height of the surface is indicated

(9) Dijkstra/Flamman 2004. See now also chapter 5 of this volume. (10) Dijkstra and Flamman suggest that the cemetery was bordered on the north side by ditch 6 c. (Dijkstra/Flamman 2004, 55-56). This is based on the reconstruction of their layer 8b (trench1), which is related to the Carolingian cemetery. We suggest that the north boundary of the Merovingian cemetery was located more or less at the southern limit of the layers of gravel from the Roman road and that the Carolingian cemetery may have extended somewhat further to the north. The Carolingian graves in trenches 1 and 4 are located somewhat higher than the Merovingian ones in trench 4 (see figs. 6.6-8 and 12.103 (with grave numbers). (11) See below. (12) This can be deduced from the position of the upper legs on photographs K1280-26 and 27. (13) Drawing nr. 96 of the Vrijthof project.

Fig. 6.4
A photograph of the wall of the building trench for the exit stairs of the underground car park at the corner of the Grote Staat and Vrijthof Square. Note the ends of long bones in the dug out niches.



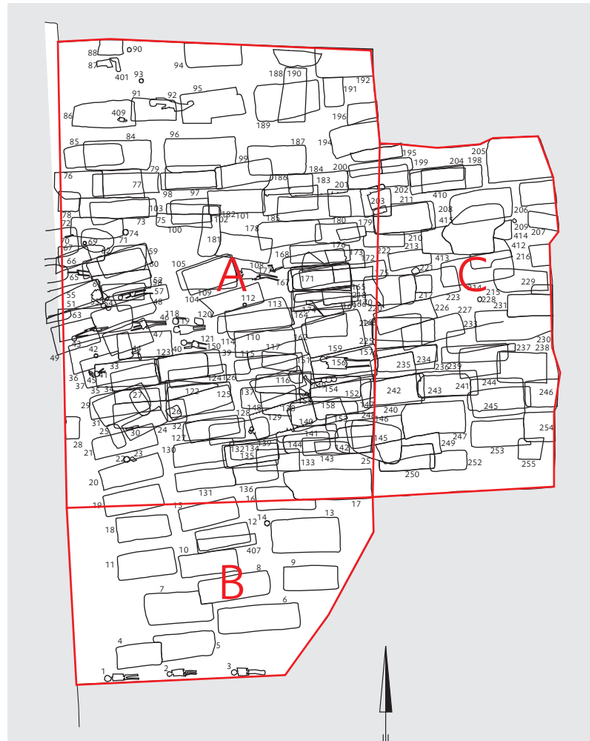
(50.75 meters). The bones were thus found at a height of c. 47.57 m +NAP, which is at the same height as the skeletons in trench 6.[14] An old find of a skeleton further south, below the floor of the cellar of café Britannique, might be an indication that the cemetery extended at least 25 meters beyond the eastern limit of trench 6 (fig. 6.1).[15] This find could, however, be a single grave. In that case the eastern limit of the cemetery is situated more or less at the eastern limit of the square. In the end one can conclude that, although only a part of the cemetery was excavated, it is possible to establish its limits approximately, except perhaps the eastern limit (in fig. 6.3 the limit is indicated with a red line). Following this line of reasoning the cemetery measures from west to east c. 67 meters and from north to south c. 26 meters, which results in a square surface of 1742 m². The excavated surface was 559 m².

If these are the limits of the cemetery one can conclude that, at least to the north and west, where a road and the gravel bands formed its boundaries, it has clearly defined boundaries. Such boundaries may have existed to the east and south as well. The general plan of the cemetery shows that it was used intensively and that a high density of burials existed within the limits of the burial ground. Such clearly defined boundaries in combination with a high burial density are not observed on contemporary cemeteries in the countryside.[16] When such burial grounds are found in urban contexts they are usually associated with a cult building.[17] However, no cult building other than the *basilica* of Saint-Servatius was found in the proximity of this cemetery.[18] Since cemetery 1 (the Servatius cemetery on the plateau) is clearly associated with this cult building it can be questioned whether the cemetery of the Vrijthof Square was also associated with it.

In order to evaluate the burial evidence and judge the value of our interpretations it is necessary to establish what part of the original number of graves has been excavated. This is not simply the same as the difference between the square surface of the cemetery and the square surface of its excavated area. Three important observations can be made on the basis of the general plan of the cemetery. First: only approximately 32 % of the total surface of the cemetery was excavated. Second, there is a vertical stratigraphy of burials. Third, the graves are distributed unevenly over the excavated areas, both vertically and horizontally. This uneven distribution is determined by the excavation strategy and possibilities for excavation, ancient differences in burial intensity on the cemetery, and leveling of the terrain in the past. The conservation of the burials in trenches 5 and 6 respectively will be described in more detail to explain this situation.

The conservation of graves in trench 5

Fig. 6.5
The three zones of trench 5, each with their own excavation history.



Trench 5 can be divided in three sectors (fig. 6.5). Sector A was the first to be excavated from the 23rd of February 1970 on. The excavated area measured c. 16 by 12 meters. Sector B is an extension to the south of sector A, where relatively few graves could be excavated. Sector C is an eastern extension of sector A. In this sector the density of graves seems to diminish somewhat in an eastern direction.

Sector A

Sector A was excavated by removing c. 3.00 meters of topsoil with an hydraulic excavator until the expected height of the skeletons, which was established in trench 4.

The last layers of topsoil were removed with the help of the dragline, which was believed to dig more precisely. After the final layers of topsoil were removed workmen cleaned the level with shovels. It is said in the diary of the excavation that this level did not provide much information so they were going to draw it again. They probably meant that they first were going to clean it again, thereby lowering the surface a bit with shovels. Then the first drawing of a level was made (level 1 at a height of 48.40 meters). Not much skeletons were observed yet, but from this level a number of skeletons was dug free. These excavated skeletons were left in place some time and ought to have been drawn as a separate level, since they must have been in grave pits that should have been observed already at level 1. However, as is stated in the diary, these skeletons, which came to lie on small raised plateaus of soil, were recorded on the same sheet of drawing paper with grave pits that were observed at this lower level. These grave pits were thus at a lower level than the skeletons and they must have been older than the top layer of skeletons. On the drawing of level 2 one can observe that several of the skeletons of the top layer are situated in an outline of which it is impossible to establish what its nature is. If skeletons were at the bottom of grave pits (which is the normal situation) then it is hardly or not possible to observe the grave pits of these skeletons at a level lower than the skeletons themselves.

This situation is well illustrated on photographs 21630 (fig. 6.6), 21663 (fig. 6.7) and 21582 (fig. 6.8). Photographs 21630 and 21582 precede 21663. On the last photograph the skeletal remains of graves 86, 92, 87, 88 and 401 have already been removed in order to lower the level with shovels. The men next to the wheelbarrow are digging out the skeletons in graves 97 and 98. In the background the skeletons of level 1 have been cleaned in the southern part of sector A. On photographs 21630 and 21582 level 1 is still at its original height (partly covered by plastic) in the southern part of sector A. On the basis of a comparison of photographs, drawings and height measurements it was possible to identify the grave numbers of the upper layer of skeletons.[19] It is clear from the photographs that this layer of skeletons was very vulnerable to disturbances. It is evident from the analyses of the section of the east wall of trench 4 that the excavation techniques must have affected the conservation of the top layer of graves. It can be seen on the photographs that the upper layer of graves was found in the middle and southern part of sector A and hardly in the northern part. Moreover these graves were dug into dark soil, while the northern graves are dug in into light colored subsoil. We now know that the dark soil is the black layer on top of the Merovingian graves [4039] and the light soil the remains of the Roman *vicus* (see chapter 5). There were probably more graves of the upper layer of skeletons in the northern part of sector A. This can be deduced

(14) Because of this find there is good reason to believe that the cemetery was bordered on the north by the Roman road in this location too. (15) For this ancient discovery see chapter 2. (16) We will deal with this phenomenon in a section on the topographical and chronological structure of the cemetery. (17) See for instance the relation between the Merovingian cemeteries and cult buildings in Paris (Périn 1985), Cologne (Päffgen 1992; Ristow 2007, 102-150) or to some extent in Metz (Halsall 1995, 214-241). (18) See chapter 14. (19) They are the graves of cemetery 5.

Fig. 6.6
Trench 5 under excavation. Visible is excavation level 2 with discolorations of Merovingian graves in yellow soil. The skeletons on small raised plateaus of soil in the background belong to the upper Carolingian layer of graves. To the left the black layer in which the Carolingian skeletons were embedded can be seen. Two skeletons in this layer are being cleaned.



Fig. 6.7
Trench 5 under excavation. The skeletons on raised plateaus of soil in the background belong to the upper layer of Carolingian graves. The workmen in the foreground are digging out the fill of the deep dug in structure 89. Two other workmen are cleaning one of the skeletons. In the background it can be seen that sector B (covered by plastic foil) was dug out to deep by the building contractor. The deep part in the foreground is trench 4.



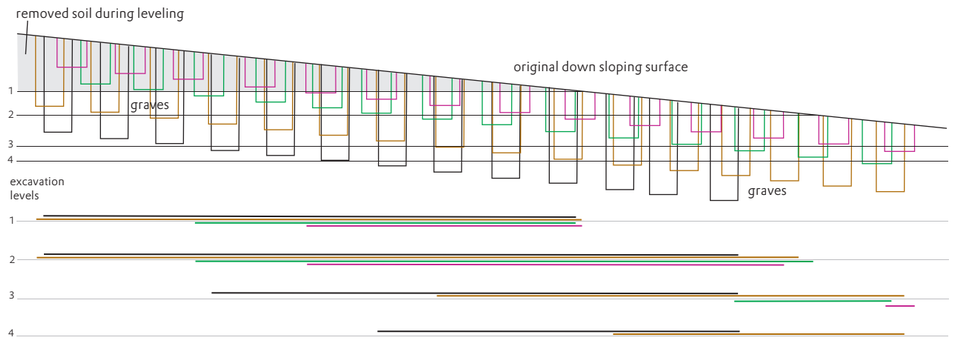
from the absolute height of level 1 in relation to the position of the black layer. The height of level 1 is indicated on the drawing of the section of the east wall of trench 4 (fig. 5.6). It can be seen that in the northern part of zone A (that is from zero to 5 meters on de red line) the black layer was completely removed whereas somewhat further to the south the black layer sloped down somewhat. From that point (c. four/five meters on de the red line) the black layer was visible at level 1. It is in that part of zone A that the graves in the black layer were visible at level 1.

The absence of graves of the upper layer and possibly a number of Merovingian graves in the northern part of the trench might be due to leveling in medieval and modern times. The distribution of graves over the subsequent levels indicates that this is a possibility. In figure 6.9 a schematic illustration of the horizontal and vertical distribution of graves on a slope is presented. Younger graves are expected to be less deep than older graves as it was on the Vrijthof Square. Four phases of burials (black, brown, green and purple) are indicated. The grey part of the section is removed soil. The lines below the section indicate the presence of graves of each phase in each of the four successive horizontal excavation levels.[20] An important part of the youngest graves (green and purple) has disappeared and is not visible anymore at excavation levels 1 and 2.



Fig. 6.8
Trench 5 under excavation. Visible is excavation level 2 with discolorations of Merovingian graves in the yellow soil. The skeletons on raised plateaus of soil in the upper left corner belong to the layer of Carolingian graves. In the foreground one of the stone built containers can be seen.

Fig. 6.9
A schematic representation of the sequence of burials on a slope. Four phases of burials are indicated (black, brown, green and purple). The lower part of the scheme shows what happens to the distribution of graves when the top of the slope (indicated in grey) is removed. The distribution patterns of graves of the green and purple phases are affected at excavation levels 1 and 2.



At the Vrijthof Square graves at level 1 (whatever phase) were found all over sector A, at level 2 graves were found in the central and southern parts of sector A, but hardly in the northernmost four meters of the sector and in sector B. At level 3 the situation is identical to that at level 2.[21] At level 4 graves are found in sector A, B and C, but not in the northernmost part of sector A.[22] In other words, graves disappear more or less from the northernmost part of sector A at the lower levels. The original surface in the northern part must have been higher. Disturbances of the topsoil (for instance leveling in the Late Middle Ages) may have caused the destruction of the upper layers of the cemetery in the northern, higher lying part of sector A.[23] This could have happened because the surface of the cemetery was not raised until the Late Middle Ages or Early Modern Period.[24] Dijkstra and Flamman also suggest

(20) In the following 'level' means the level at which a grave is observed for the first time. If the excavation levels created by the archaeologists in the field are meant I will indicate these as 'excavation levels'. (21) The north-south oriented 'graves' 188 and 191 may not be graves at all. (22) The western graves in trench 4 are an exception, because of the great depth at which they were found. Their great depth and exceptional position is as yet difficult to explain. (23) See also Dijkstra/Flamman 2004, 58, 63.

that leveling in the Late Middle Ages took place because the layer with graves in trench 1 is relatively thin.[25] Another observation seems to support this conclusion. The graves in the northernmost part of sector A belong in general to an early phase of the cemetery, which could mean that higher lying younger graves may have been destroyed in that area.[26] This image makes us realize that graves assigned to an excavation level do in all probability not date to the same period. The assignment to a certain level is just an indication of the first height at which they have been observed, and not an indication of their contemporaneity. Moreover, the distribution of graves over the subsequent levels suggests that there was a topo-chronological development of the cemetery from north to south (left to right in the model). This is not entirely correct. The oldest burials are indeed in the left part of the scheme, but this part remained in use al the time. There can be various reasons why a grave is observed at a certain level for the first time. For instance the graves in sector B could already have been observed at level 1 if that had been excavated (see below). An alternative but less likely explanation for the absence of younger graves in the northern part of section A (left part in the model) is that this area was not subject to later destruction and that it was only in use in an early phase of the cemetery. However the stratigraphic sequence of layers strongly suggest a destruction phase in the Late Middle Ages.

We can conclude that:

a. the top layer of burials was subject to destruction already in medieval times because the surface of the cemetery remained the surface of the terrain during the entire Middle Ages[27] and may not have been recorded completely in the excavated area;

b. the northern part of the excavated area was subject to leveling in such a way that only those graves were preserved that were dug in deep. They are probably the oldest graves in this zone.[28] Because of these circumstances we may not be able to establish the date of abandonment of the cemetery. In fact the layer of younger graves has only been observed in the central and southern part of sector A. From the photographs (21663, 21630, 21582) it can also be deduced that the digging of the grave pits for the upper layer of young burials hardly affected the lower lying horizons of burials. Photograph 21663 is also informative as to the conditions prevailing in sector B of trench 5.

Sector B

In the excavation diary it is stated that at a distance of c. 10 meters to the south the contractor, who removed the soil from the building pit, had dug away the upper layers of the cemetery.[29] This can be seen on photograph 21663 (fig. 6.7). Sector B is in the background (where the plastic foil and the ladder are situated) and lies considerably lower than sector A. It is certain that a number of skeletons were dug away there. The upper layer of skeletons in sector A extents almost as far south as the limit between sectors A and B and it can be assumed that this upper layer extended further south. This means that especially the upper horizon of burials of this cemetery was affected by this accident. In this part at least one and possibly two sarcophagi were found which probably brought the sand extraction to a hold, which preserved the lower layer of burials. In sector B only graves at the same height as level 4 in sector A were recorded. Although it is not certain that the intensity of burial was equal in all parts of the cemetery there is the possibility that at least one layer of graves was dug away, especially the upper horizon. The reconstruction of this layer of burials in sector B on the basis of the density of graves in the southern part of sector A indicates that at least c. 30 graves of this horizon in sector B are lost. As said, the graves found in sector B may not be of the same date as those at a comparable height in sector A because of the presence of a slope.

Sector C

The density of burials in sector C seems to have been comparable to sector A. The general plan however shows fewer graves than sector A, but this is probably due to the choice of the excavators not to excavate level 1 in this sector.[30] The result is of course that the upper layer of burials has disappeared.[31] It is suspected that in this sector at least 10 burials of the upper layer have been lost. At levels 2, 3 and 4 there are hardly any differences in the intensity of burials in comparison to section A.

Conclusions regarding trench 5

It can be concluded that the differences in burial intensity in trench 5 are to a high degree determined by the excavation strategy and by older disturbances (levelling) in the northern part of the trench. This affected especially the upper layer of graves. At least 30 to 40 graves of this layer were destroyed as a consequence of this action. In sectors B and C this layer was removed just before the excavation of the graves started. In the northern part of sector A this younger horizon of graves was hardly present in the excavation. The few graves that are assigned to this horizon indicate that it may have been present but had already been destroyed in medieval or modern times, possibly as a consequence of a levelling of the terrain.

In sector B the graves of levels 1, 2 and 3 were removed. However it is possible that these layers were not present originally. In that case only the youngest (Carolingian) horizon had been dug away.

(24) Dijkstra/Flamman 2004, 40-41, 57-58. (25) Dijkstra/Flamman 2004, 58. (26) See chapter 11 on the topography of the cemetery. (27) Dijkstra/Flamman 2005, 55-58 and chapter 5. (28) They are not necessarily the oldest graves of the cemetery. (29) It is rather 15 meters. (30) There is no drawing of level 1. In the excavation diary no mention is made of this eastern extension and the way it was excavated. (31) The graves of the upper layer in sector A extent in an easterly direction up to the limit between sectors A and C. (32) See chapter 5. (33) See below chapter 11.

The conservation of graves in trench 6

According to the excavation diary the first skeletons in trench 6 were observed at a height of c. 47.70 metres. This is more or less at the same height as the surface of the oldest Roman road although the graves must have been dug in from a higher level. The southern part of level 1 is at an average height of 47.55 meters. The highest lying skeletons in trench 5 were at a height of 48.40 metres. Between trench 5 and 6 there is thus a height difference of c. 70 to 85 cm for the highest lying skeletons. This indicates that the northern part of the Vrijthof not only slopes down in a southern but also in an eastern direction. This seems to be the case even when a horizon of younger graves has been accidentally removed in the hasty search for graves in trench 6. This means that the original surface in trench 6 slopes down from northwest to southeast. This observation must be combined with the observation that the intensity of graves in trench 6 is highest in the southern part and that in the northern part those graves that can be dated belong to the sixth century (fig. 6.3). They may form an older layer of graves that was dug in deep. We suspect that the distribution of the graves in trench 6 is affected by the presence of a slope in two directions and an excavation strategy whereby levels are created that are more or less horizontal. Level 1 slopes down c. 20 cm from north to south. Was this enough to find all graves, especially the younger ones in the northern part of the trench? They may have been dug away while opening the trench with the dragline or they were already destroyed at an earlier date when levelling of the square took place. At level 1 the graves were distributed over a smaller area than at level 2. At that level the graves reach up to the western, southern and eastern limits of the trench. Moreover, the digging of pits in trench 6 in a later period has disturbed the graves considerably. Such pits are not present in trench 5.[32]

It can be concluded that the distribution of the graves in trench 6 is probably to some extent affected by the excavation method used and/or levelling of the terrain, as a consequence of which a horizon of younger graves may have disappeared in the northern part of the trench. Moreover later pits disturbed a number of graves. For this trench it is difficult to estimate the total number of burials lost.

An estimate of the total number of graves originally present in cemetery 4

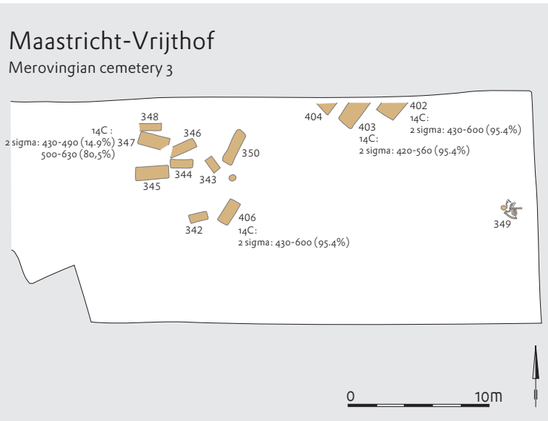
It is almost impossible to calculate the original number of graves present at cemetery 4. In order to make an educated guess a number of presuppositions have to be formulated. The first is that sector A in trench 5 shows how many graves at least must have been present in the western part of the cemetery. The second is that in sectors B and C of trench 5 the density of graves was comparable to the density present in sector A. The third is that the number of burials diminishes in an easterly direction. The number of graves in trench 6 is less than in trench 5. This is probably not only caused by a greater rate of destruction of graves during the excavation. There may have been fewer graves at the location of trench 6, either because originally there were less graves or because of later medieval and modern destruction (pits).

One can make two calculations. One based on the assumption that the density of graves over the entire cemetery was similar to sector A and another based on the assumption that a density similar to sector A was present in the western part only and that the density in the eastern part was only half of that in the west. The number of graves in sector A was c. 140. Sector A was 192 m² large. The density of graves was thus 0,73 per m². When the density of burial over the entire cemetery was as in sector A there must have been at least 1742 m² (square surface) x 0,73 = 1272 burials. If the density in the eastern part was only half the density of what it was in the western part of the cemetery there were 636 + 318 = 954 burials. These calculations are based on the actual number of burials found in sector A. We saw before that in the northern part of sector A graves may have disappeared due to interventions in the soil already in medieval and/or early modern times. The figures just given may therefore be conservative. It is not too bold to state that the original number of burials will have been between c. 900 and 1200 in cemetery 4.

The burials on the central part of the square (cemetery 3, trench 3)

At the deeper levels 14, 15 and 16 of trench 3 thirteen graves and a skull were found at a height of 46.60, 46.35-46.40 and 46.20 meters. These graves seem to form three small separate groups (fig. 6.10). In the west is a group of nine (possible) graves with various orientations and a skull, along the northern limit of the trench was a group of three graves, all with an identical orientation (more or less south-west/north-east) and finally there is a single grave in the eastern part of the trench. The western group was probably excavated completely, although higher lying graves may have been destroyed while lowering the level with the dragline. Level 14 was reached after digging out 40 cm of soil below level 12. Level 13 was skipped. The graves were found amidst other features indicating habitation in later Merovingian times although the burials seem to be much older.[33] The northern burial group was not excavated completely. It must have extended further to the north, although how far is impossible to say. The single burial in the east shows that burials occurred up till the eastern limit of the square.

Fig. 6.10
The distribution of Merovingian graves in trench 3.



In trench 3 a grave may have been present at excavation level 9 (47.58 meters). This feature however cannot positively be identified as a grave.[34]

The cemetery in the northwestern corner of the square (cemetery 5))

In trenches 1, 4 and 5 a number graves was found that were younger than the Merovingian graves of cemetery 4 (fig. 6.11).[35] In trench 5 they are the burials of the upper horizon of graves. In trenches 1 and 4 they are the trench graves of which the excavators supposed that they dated to the Late Middle Ages. There is as yet no certainty that the graves in trench 5 and those in trenches 1 and 4 were part of a contemporary horizon of burials but in all probability they were.[36] The graves were distributed unevenly over the northwestern part of the square. In the northernmost ten meters of trench 1 a compact group of graves was found at a height of c. 48.75 meters. This group is associated with a similar group of graves in the northwestern corner of trench 4 at the same height. These graves in trenches 1 and 4 can be considered a subgroup of its own because of their close association and identical height. The western limit of this group may have been found, almost no graves are recorded along the western limit of trench 1. The southern limit of the subgroup is found at c. ten meters south of the northern wall of the trench. The eastern limit was found in trench 4.

South of this subgroup is an empty space of three to four meters. Then, further to the south, new burials were found over a distance of c. seven/eight meters, which are at a somewhat greater depth (c. 30 cm) than those to the north (at a height of 48.45 meters). This group could also be a subgroup of its own. Hardly any graves were found along the western limit of trench 1, which seems to indicate the western limit of this group of burials. The northern, southern and eastern limits were found in trenches 1 and 4.

A third subgroup of graves was found in trench 5. They are the graves of the uppermost layer in the central part of trench 5 above. There were probably more graves of this horizon in the northern part of the trench as well as in the eastern part.[37] The northern boundary of this subgroup was probably situated along the Roman road. It is possible that graves of this horizon were located in trench 6 too, although the presence of deep pits suggests that the area was no longer in use as a cemetery. The eastern boundary of this subgroup was probably situated somewhere between trenches 5 and 6.

Two (possible) graves (323 and 324) in the northeast corner of trench 4 are difficult to ascribe to one of the subgroups. The identification of these features as graves is however very uncertain.

The burials of cemetery 5 in the northwestern corner of the square might not be a single burial ground. Three subgroups of graves have been identified on the basis of their spatial distribution and heights. It is possible that the limits of all groups have been established, although uncertainty remains as to the western limits of the first two subgroups and the eastern limit of the third. Together the subgroups form a late Merovingian/Carolingian cemetery.[38]

Farmyard burials? (cemetery 6)

In trench 4 (at a distance of c. 23.50 m from the north wall of the trench) a small group of three graves was found at excavation levels 6 and 7 (fig. 6.12). All three have the same orientation. They were found at a depth of c. 47.84 to 48.12 meters. This is somewhat lower than the graves of the Merovingian period in trench 5, but matches the height of grave 314 along the eastern limit of trench 4 that is also at a relatively great depth. Somewhat further to the north a single grave (context 318) was found at the same height. This grave might belong to the same group as the three graves just mentioned although it has a different orientation. These four graves are likely to be related directly to the habitation in (late) Merovingian times at the Vrijthof Square.[39] In that case they are 'farmyard burials'. Farmyard burials have been recorded in several places in the Southern Netherlands.[40] They usually date to the period 650-725, a date that coincides with that of the date of the habitation at the Vrijthof Square.

(34) If it was it would lie at the same level as the graves in trench 6, which would mean that the area must have been raised between the burials at level 9 and 14-16, unless one accepts that the graves at these last levels were dug in extremely deep (more than 2 meters). The nature of the burials (no grave finds) does not suggest that such a treatment took place. Most probably the feature at level 9 is not a grave. (35) This date is based on 14C-dates and stratigraphy. (36) See chapter 11. (37) See the discussion on trench 5 above. (38) See below chapter 11. (39) See chapter 5. (40) Theuws 2000a; Theuws in prep.

Fig. 6.11
The distribution of all graves of cemetery 5 in trenches 1, 4 and 5.

Fig. 6.12
The distribution of graves of cemetery 6 in trench 4. These graves were probably related to the habitation in the southern part of trench 4.





The vertical distribution of early medieval graves on the Vrijthof square

Before we discuss the '*cimiterium*' it is useful to round up the evidence for the vertical distribution of graves on the Vrijthof Square in order to illustrate the great differences in heights at which burials were found and the relation with the height of the Roman road. It gives a crude indication of the relief of the surface in early medieval times of the Vrijthof Square area and it shows the vulnerability of graves to later disturbances. All the evidence has been visualized in a schematic representation that allows perceiving the directions of the different slopes present in the area (fig. 6.13). In the scheme the height measurements of excavation levels at which skeletal remains were found or when available those of the top of skulls or long bones are indicated. A vertical column represents each trench. The columns of trenches 1, 4, 5 and 6 are put in a west east direction so we can have an image of the west-east slope that characterizes the Vrijthof area. The column for trench 3 is put to the right, it gives an image of the north-south slope that characterizes the area as well.

In trench 1 the first graves were found at a height of 49.10 meters. In that trench skeletal material was found to a height of 48.05-48.15 meters. In trench 4 the heights at which skeletal remains were found range from 48.78 to 47.69. Along its eastern limit a number of graves were at a relatively great depth. This coincides with the dept of graves found immediately to the east in trench 5. In the scheme the graves of trench 5 are ordered in such a way that both north-south and east-west slopes can more or less be seen. To the left are the graves along the western limit of the trench of section A from south to north (the skeletal remains in graves 31, 33 (assigned to level 1) and 43 are in the south, 86 and 87 in the north). In the central part of the column of trench 5 the graves in the northern part of the trench are indicated, then further to the right are the graves in the central southern part of section A (graves 133 and 138). Further to the right are graves along the eastern limit of section A (grave 194). The skeleton in grave 187 has been dug in very deep. The grave pit was already observed at level 2 (c. 48.32 meters).

One can make a few interesting observations. First, graves along the western limit of cemetery 4, which are immediately east of the gravel bands (graves 68, 311, 313, 314, 315), are at a relatively deep level, compared to the nearby burials. They are at the same level as burials 128, 133, 138, 139, but these are a bit further south, where the terrain may have been lower. How we have to interpret the deep dug in graves along the gravel bands has to be dealt with in another section. We can also see that the levels created and drawn by the archaeologists seem to be at a random height. Creating horizontal levels might not have been a good excavation strategy at all.

The observed skeletal material in trench 6 is at a relatively lower level than that in trench 5 although some younger and higher lying graves may have been lost. This is an indication for the presence of a slope, unless one accepts that graves in this part of the cemetery were significantly dug in deeper than those in the other parts of the cemetery. To gain an impression of the height and slope of the original surface c. 75 cm was added to the highest lying early medieval skeletons in a trench. These 75 cm might have been the average depth of graves. The scheme clearly indicates that there was a slope down from west to east (from trench 1 to trench 6 and the stairs).

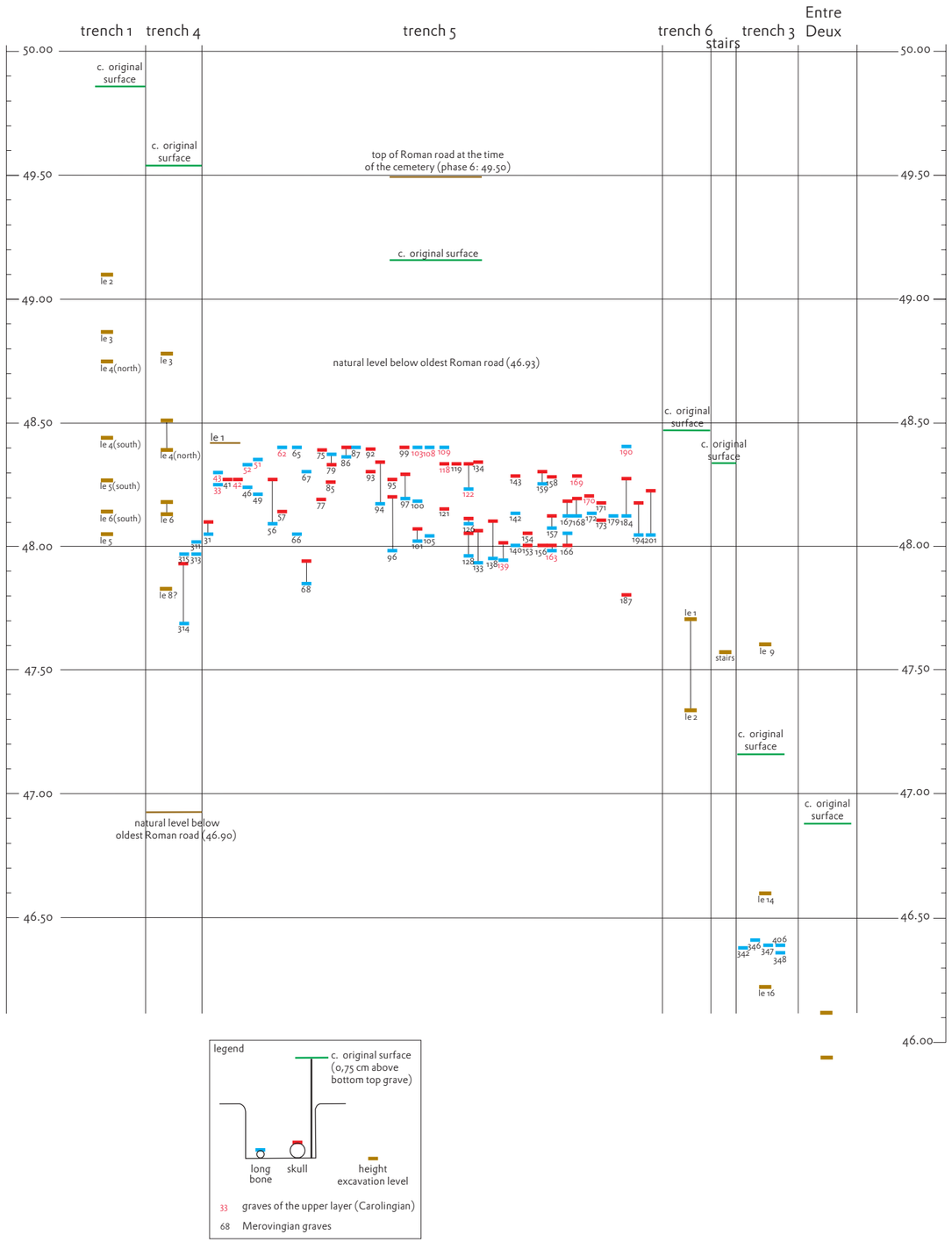
The graves found in the excavation of the Dominicanerplein or Entre-Deux complex on the other side of the Roman road to the north-east of trench 6 complicate the image of the surface level in early medieval times.[41] They show that the surface level at that location must have sloped down considerably from the Roman road in a northerly direction too. The graves are even at a lower level than those in trench 3.

Another slope down is from north to south as is clearly indicated by the height at which burials have been discovered in trench 3. They are almost two meters below the level at which skeletal remains were found in trench 5 and one meter below those in trench 6. This means that over a distance of c. 60 meters the terrain slopes down 2 meters. This had important consequences for the water management of the area and resulted possibly in erosion in the northern part of the Vrijthof area, which interests us here. These differences in height may have caused later leveling of the area. For comparison it is interesting to know that the westernmost burials of the Servatius complex, those found in the Sint-Servaasklooster excavations on the hill to the west, were found at a height of 57.28 meters, that is c. eleven meters above the graves in trench 3. In between are for instance the Merovingian graves found in the present day treasury (which was outside the church in Merovingian times[42]) which are at a height of 48.60 and 48.80 meters which is at the same height as graves in the northernmost parts of trenches 1 and 4.[43]

Cemeteries 4 and 5 were laid out south of the Roman road. Due to the analyses by Dijkstra and Flamman it is now known at what height the Roman road was at the time the cemeteries were in use. The road surface was raised several times in the Roman period. The last improvement of the road took place in the second half of the second century (phase 6).[44] At that time the road surface was brought at 49.50 meters. On top of this surface a new layer of gravel and soil was deposited to improve the road, but this layer only dates from the second half or later thirteenth century. This means that between c. 200 and 1250/1300 the surface of the road from phase 6 was in use. In some places the road was repaired at times that cannot be dated (phase 7). Moreover, during the

(41) They were found at heights of 45.94 and 46.13 meters, that is almost one and a halve meters lower than the graves in trench 6. (42) Panhuysen (R) 2005, 79-90. (43) For the heights of graves in the treasury see Panhuysen 1982, 27 and 47-54. He expects that these graves were dug in about one and a halve to two meters, which is probably too deep. (44) Dijkstra/Flamman 2004, 53-55.

Fig. 6.13
A schematic representation of the heights at which graves were discovered in the Saint-Servatius complex. See the legend in the box at the bottom of the illustration.



creation of the new road surface in the thirteenth century the surface of these repairs as well as some parts of the surface of the road of phase 6 may have been removed, although this cannot have been much (10-20 cm?). In this period (200-1300 AD) the Roman *vicus* along the south side of the road disappeared around 200 AD. No finds except two pottery shards from the late Roman period were found in the 2003 excavation. Finds from this period are almost completely absent from the 1969-1970 excavations too. It is only in the sixth century that the area immediately to the south of the road (from phase 6 at a height of 49.50 meters) seems to be in use again as a cemetery (see figure 6.3). The surface of the cemetery seems to have been a bit lower at c. 49.15 meters. This surface was also the surface of the area until the Late Middle Ages when new layers of raised soil were deposited at the site. This activity may have included a leveling of the northern part of the area. No activities can be identified at the site between the abandonment of the cemetery (in Carolingian times) and the raised soil from the Late Middle Ages (see chapter 5).

The 'cimiterium' in the south-western corner of the square (nr 7 trenches 2 and 3)

The *cimiterium* is known from archaeological, historical and topographical sources (fig. 6.1). On the map of Simon de Bellomonte from 1587 a cemetery to the east of the *basilica* of Saint-Servatius and the church of Saint-John (the parish church) is indicated as *cemiterium*.[45] A closer look at his map shows that the cemetery is divided in three parts: one immediately east of the *basilica*, one part further east separated from the previous one by a wall or track, and finally there is a cemetery east of the church of Saint-John, separated from the two previous ones by a wall or track. Between the cemetery east of Saint-John and that east of Saint-Servatius there is a small triangular part which may belong to either cemetery. The easternmost burials on this cemetery were found in trench 3 at level A at a height of 50.50 meters (not indicated in the scheme just mentioned) (fig. 6.1), which is four meters above the Merovingian burials. Because of later disturbances such as the sewer system across the Vrijthof Square no complete skeletons were found in this trench, just long bones. Some of these seem to lie in an articulated position. Most of them had the same north-east/south-west orientation. Because of the find of these skeletal remains the eastern limit of the cemetery can be established quite accurately. The graves in trench 2 observed at levels A to D at a height of 51.15 to 50.40 meters might belong to this *cimeterium*. Below those graves there is a zone of c. two meters thick without graves, below 48.00 meters until 47.05 meters new burials appeared of which the exact date has yet to be established.

The description of the *cimeterium* concludes this chapter on the size, limits and rate of preservation of the various groups of burials on the Vrijthof Square. Two important conclusions can be formulated. First, early medieval burials were present all over the site of the square be it in different densities and second the vast majority of burials present at the site before the building of the underground car park was destroyed during its construction.

(45) See the reproduction in Ramakers 2005, 26.

Fig. 6.14
Plan of Merovingian cemetery 4. Scale 1 : 200.



7 Grave structures and their analysis: theoretical and methodological considerations

The rich variety of objects deposited in early medieval graves accounts for the traditional appeal of this area of archaeology. These grave goods have long been – and often still are – the focus of research into early medieval graves, with collectors, antiquarians and archaeologists writing about them and the meanings behind their use. In this introduction to the analysis of grave structures in the Vrijthof cemetery, we would like to draw attention to the study of grave structures as an integral component in the analysis of the early medieval burial rite.

Definition of terms

First, we need to define what we mean by grave structure. This study is only concerned with the grave structures of inhumations, in which the body is buried in the ground. A grave structure is most simply defined as the grave minus the deceased and the finds that were interred along with the deceased (grave = body + grave goods + grave structure, or grave structure = grave – body – grave goods).[1] While this appears to be a clear-cut definition, its negative formulation relies on the definition of body and grave goods, giving rise to a number of problems. What are the boundaries between these grave elements?[2] Is the shroud in which the deceased was transported to the grave part of the grave structure or the body's equipment/clothing, or both? Nevertheless, given our current knowledge and understanding of grave structures, a negatively worded definition is still the most workable.

One way to analyse grave structures is to see the various components of the grave structure as 'layers' between the body and the ground. The body may be enclosed by a number of 'containers', in the sense of 'containing' (including, surrounding, enclosing), 3 separating the deceased from the ground in which he or she lies. The deceased's clothing is not included as part of the grave structure because it could also have served as the functional covering of that person when alive, and is not necessarily a layer between the deceased and the ground.[4] A shroud does form part of the grave structure, however, as it is strictly associated with the burial rite. The grave pit can be seen as a space that was created to receive (contain) the deceased; it served as the outermost layer, the interface,[5] between the deceased and the soil. In most cases the grave pit was backfilled and this fill is also part of the grave structure. There was always a pit; it is a precondition for an inhumation grave, a logical premise. Thus the body could be surrounded by one or more layers or containers in a pit – the outermost layer – that was dug and then filled in again, together making up the grave structure.

A second distinction we can make is between structures that were built *in the grave* before the inhumation and ones that were constructed *elsewhere* to be transported with or around the body to the grave site and placed in the grave pit. This is an important distinction because it can tell us something about how people dealt with the body of the deceased and the rituals that preceded and accompanied the burial.[6] Containers that were built in the grave prior to the inhumation and which functioned as an organised space into which the deceased was lowered may have been linked to other representations than the container used to transport and accompany the body into the grave. These two kinds of containers played a role at different times during the burial rite and may have involved different people or groups. The raw materials for the former kind – containers constructed in the grave – usually had to be assembled from around the grave, whereas the materials for the latter were collected and used to construct the container elsewhere. This latter type could not be lowered into the grave until the grave had been prepared. Some researchers have sought to express this difference by the terms *élément mobile* and *élément statique*,[7] but these do not fully cover the meaning. Sarcophagi tended not to be placed in the grave at the same time as the body, but were brought there earlier from elsewhere and were therefore not strictly speaking static, nor constructed on site. The same applies to the phrase 'made outside the grave'.[8] A sarcophagus was indeed made outside the grave, but it was already in the grave before the body was placed there. The old terms make a distinction that does not seem to directly reflect the role played in the burial rite by the different types of container. For the time being we will use the descriptions 'container placed before inhumation' and 'container placed together with the body during the inhumation,' whereby either kind may or may not have been constructed on site, although this will rarely if ever have been the case for the latter category. Besides, it is possible that one and same container can be classified in both groups under different circumstances. As well as these two kinds of container, there is also the mode of transport for the deceased, such as a pallet or litter, to be considered.[9] If these did not accompany the body into the grave, as was frequently the case, they ceased being containers after the ceremony. Nothing therefore remains of structures of this kind in the archaeological record, although we do encounter them in iconographic or historical sources.[10]

The use of grave structures in cemetery research

From the outset, studies of early medieval graves and cemeteries have tended to focus on analyses of grave goods, with the scope broadening in recent years to include human remains. Over the years, typologies, theoretical frameworks and methods have been developed that are based on these elements of the grave, while many aspects of below-ground grave structures have been overlooked.

Few typologies of grave structures have been created and only on rare occasions do we find an article or part of a publication devoted to this subject. These are usually the work of French authors: Salin, Collardelle and Durand have compiled typological overviews, as has Koch for southern Germany.[11] In various publications Collardelle and Durand survey the grave types found in eastern and southern France respectively, looking at their material, structure and archaeological manifestations, but only briefly addressing the chronology of grave structures. These typologies are barely used for interpretation purposes. No typologies or typochronologies have ever been devised for *Germania Prima*, *Germania Secunda* or *Belgica Secunda*. Collardelle's and Durand's typologies cannot be pressed into service for the Meuse region. Hogarth provides a typological overview of grave structures based on a cemetery in north-eastern Kent.[12] Although he recognises grave structures as having significant cultural and chronological value, he does not elaborate any further. Most publications confine themselves to incidental discussions of individual grave structures, focusing on certain details, such as the decoration and forms of one type of grave structure,[13] or construction techniques.[14] In exceptional cases, however, such as the wooden objects in the cemetery of Oberflacht, grave structures are dealt with in great detail.[15] Almost all other publications delve no deeper than naming the structures found at an excavation, without elaborating further on their meaning.

Grave structures have never been developed as the main subject of study, although they are occasionally included in traditional classifications. In his work on Merovingian society, for example, Salin devotes a chapter to the *Nature des sépultures*,[16] where he classifies certain burial containers into a Gallo-Roman and a Germanic tradition.[17] In his view, the use of sarcophagi that varied in kind and quality by region and in accordance with the rank of the deceased was characteristic of the Gallo-Roman tradition. He also regarded stone-built graves, tile graves, lead and wooden coffins, stone slab graves and sometimes trench graves as typically Gallo-Roman. He believed that Germanic people had an aversion to durable, worked and masonry materials and that their burial customs were typified by pit, bier and tree trunk graves and unworked stone casings, sometimes combined with wood. The Merovingian culture, which he sees as a fusion of the above two ethnic groups, displays influences from both traditions in its burial practices.[18] But as with other pronouncements about ethnic identity on the basis of grave goods, this interpretation was neither developed further, nor tested.

In addition to this ethnic interpretation (which to some degree centres on 'rank'), grave structures are often categorised in passing into particular groups according to religious and social position and status. In northern regions, certain containers such as sarcophagi were assumed to have only been used for high-status individuals because of the investment involved in their construction and transportation, and because of their decoration and their presence at high-status locations, such as churches.[19] In traditional studies of individual cemeteries, research was occasionally conducted into the labour investment involved in creating graves (in relation to the grave structure) in order to correlate the outcomes with the quality of the grave goods.[20] Steuer refers to the *Grabbau* as a possible archaeological source for grouping graves: he mentions trench

(1) Here, grave structure is not equivalent to Pader's (1982, 88) 'grave construction', which is the 'skeletal position, artifact class and artifact positioning.' (2) Compare the demarcation between grave goods and clothing accessories (Young 1977). (3) Martin/Tops 1998, 323. (4) Strictly speaking, clothing made especially for the burial comes under this definition of grave structure, but it is not included here because of the difficulty archaeologically of distinguishing between burial clothing and clothing worn by the deceased when alive. (5) 'A vertical feature interface', as defined by Harris (1979, 43-48). (6) Lorans 1996, 260. See also Chapter 3. (7) Durand 1988, 164. (8) Lorans 1996, 162. (9) To be distinguished from a wooden bier placed in the grave, see typology container type 2. (10) Durand 1988, 164-170. (11) Salin 1953; Collardelle 1983 and 1996; Durand 1988; Koch 2001, 89-156. (12) Hogarth 1973, 104-119. (13) For example, the decorations on plaster and stone sarcophagi, Périn 1985. (14) Paulsen 1992. (15) Paulsen 1992; Schiek 1992. (16) Salin 1952. (17) Salin 1952, 92-131. (18) Salin 1952, 92-131. (19) For example Périn 1980; Effros 2003; Panhuysen 2005. (20) Christlein 1966, 13-14; Koch 1977.

graves, wooden structures and stone structures, but only elaborates on grave finds as indicators of social strata.[21]

Because of the differences observed between the types of containers found in churches (sarcophagi, stone-built graves) and 'heathen', or rural, cemeteries (wooden structures), burial containers are also classified into religious groups. Thus sarcophagi were seen as indicators of Christian faith because they were conscious imitations of Roman, urban, and therefore Christian characteristics.[22]

Halsall criticises the emphasis on grave goods as the only important variable in the burial rite. In his conclusions he mentions grave structures as one of the observable elements of the burial rite in Metz and suggests that the form, size and structure of the grave were deliberate choices and therefore important variables in the burial process.[23] However, he makes no use of these variables in his study, and simply observes that the occurrence of trench graves and stone-built graves (without mortar) were constant elements in the Merovingian, late-Roman and earlier Roman periods. His descriptive model, his analysis and his interpretation are all based on grave goods and human remains.

Härke, in his study of early medieval Anglo-Saxon weapon graves, looked for correlations between weapons and other elements of the grave, including age, gender, wealth of the grave and particular grave goods, as well as grave structure, shape and volume. He found a link between the presence of weapons and certain grave structures such as wooden coffins and wooden burial chambers but no relationship between weapons and the form or volume of the grave.[24] Apart from his comment that there is no straightforward relationship between weapon graves and the features of assumed 'status graves', he barely utilises these findings in his conclusions, which primarily criticise the assumption of traditional models that social structure was directly reflected in the burial rite. He suspects that weapon graves had more of a warrior status than a warrior function.[25] In one of his historiographical surveys, Härke also comments that on the rare occasions that grave structures were included as a variable in cemetery research, this occurred in two ways: certain grave structures were equated with high-status groups (judging by the number of grave goods), while certain others were independently regarded as signalling high status, as independent social indicators.[26]

Through their emphasis on context, studies with a symbolic and contextual focus generally pay more attention to grave structures and to features around the grave such as ditches and posts. Stoodley's dissertation on gender expressions in the early Anglo-Saxon burial rite fits within the contextual tradition.[27] In his search for grave elements associated with gender groups, he finds varying degrees of correlation with particular grave structures. These display local variation and are absent from some cemeteries. Because his study emphasises gender and because the patterns he found did not generally correlate with this or were not significant, he says no more about these patterns. Studies that view grave structures as more than just a variable and that provide prior hypotheses about the meaning of grave structures or explain the links found also tend to be missing from post-processual publications.

Publications that focus on perception and memory in the burial rite appear to be mainly concerned with visible, aboveground monuments such as tumuli, memorials[28] or posts, including certain sarcophagi. But it is also acknowledged that parts of a grave such as grave goods, which were briefly visible (remaining underground after the ritual), could play a role in perception and memory.[29] This aspect does not appear to be developed, however. Williams focuses on the dead body and how it influences the mourners' perception and memory in the case of the cremation ritual.[30] He points out that the form the cremation takes helps to shape this perception and memory. Although his arguments do not refer directly to inhumation graves, some of them are nevertheless relevant.

As pointed out above, cemetery research has only ever paid incidental attention to grave structures, and this has yielded almost no pronouncements about the structures themselves. This lack of attention has meant that grave structures are seldom if ever included in theories about the burial rite in the northern reaches of the Merovingian empire. Such neglect is surprising given that it is here that we encounter such a vast synchronous variety, in which both diachronic and geographical patterns and developments can be discerned. The value and potential of analysing and interpreting grave structures can only be explained convincingly if we explore not just the patterns, but also the possible meanings of their variability. Hence the benefits of developing a theoretical framework that includes grave structures, so that a start can be made on studying these patterns. But because nothing exists in the way of a methodological or interpretative foundation, the exploration presented here is open to discussion. Hopefully, the approach selected below and the parts that have been elaborated will amply demonstrate the value of and possibilities for interpreting grave structures.

Grave goods and structures, similarities and differences

Most of the models, methods and interpretations that have emerged from studies of early medieval cemeteries are based on grave goods. The question is to what extent a comparison can be made between grave structures and grave goods. Both these elements of the burial rite display variety: with each, the buriers sought to convey messages in different ways.[31] Short-term visibility is a characteristic shared by below-ground grave structures and grave goods: the ritual (closing or covering the grave) caused the structure to disappear from sight.[32] It is important to remember that all graves featured a grave structure. Each burial involved choices and actions regarding a grave structure, which in all instances enclosed the dead body. In this exploration we have chosen to emphasise two aspects of grave structures: their role in the burial rite and the possible meanings of grave structures in that rite.

Grave structures: actions before and during the burial rite

A grave is the result of a number of actions, ritual or otherwise. When archaeologists consider burial rites, they do so on the basis of the remains they encounter – the skeletal remains, the preserved grave goods and the remains of grave structures.[33] These remains are the end result of the ritual actions, minus what has been lost through decomposition and other factors such as grave reopenings.[34] Explanatory models are drawn up on the basis of these end results and the patterns they reveal. For the buriers, however, the creation of the grave, the actual burial and the different actions that made up the burial rite were imbued with importance and significance. The nature of the burial rite[35] is better understood if it is viewed not as a point in time, but as a process in which people carried out meaningful actions with their material culture. After all, the grave, grave goods and body did not materialise of their own accord, but were actively assembled. In a sense, deriving meanings and intentions from the end point in time, without taking account of the rite as a process, leads to one-dimensional conclusions, no matter how many elements of the grave are included in the analysis.

By adding this time dimension to the study of the burial rite we can demonstrate the importance of making grave structures an integral part of grave research. If we consider only the end result, the grave structure is indeed nothing more than a – sometimes furnished – hole in the ground, where the much more evocative grave goods and skeletal remains are found. If we place the burial rite in time, it is immediately clear that an analysis of the grave structure and its characteristics, such as size, choice of materials, etc., can shed light on ritual processes.[36] The digging of a grave, dealing with, transporting and placing the body, placing the grave goods and closing the grave are significant components of the burial rite, and can all be approached via the grave structure. Differences in these actions and in dealings with the body and grave goods can alert us to differences in the meanings of that burial rite.

The distinction made earlier – between a container usually constructed on site before the inhumation and one constructed elsewhere outside the grave in order to accompany the body to and into the grave – is the first step towards deducing actions within the burial rite from the material remains of grave structures. But other actions and processes will also have occurred before and during the burial that do not apply specifically to grave structures. Below are some of the questions we can ask about aspects and actions within the burial rite when studying the material remains of grave structures.

Assembly

People involved

Who was involved and who was responsible for gathering the raw materials, digging the grave pit, assembling certain transportable containers and containers that were constructed in the grave? Was it the next of kin, neighbours, or specialists who devoted themselves full-time or part-time to making burial containers and structures? Were several people and/or groups involved in the different activities? If so, who?

Materials used

What materials were needed to build a container? How much was invested in these materials? How were they acquired? Where did they come from – locally or further afield? How were they brought to the place of assembly, and by whom?

Time of assembly

When were the containers and structures made? Was there a supply of raw materials and or/ready-made containers available? Or were they not built until a death occurred?

Place of assembly

Where were the containers and structures made?

Manner of assembly

How were the containers and structures made?

Interment of the body

Moment of contact with the body

When was the body placed in the burial container or grave structure? How soon after death did this happen?

Function of the burial container(s) for the body

Was the container constructed before inhumation, usually on site, or was it constructed outside the grave in order to be taken with the body to and into the grave?

Place of contact with the body

(21) Steuer 1982, 445. (22) Simmer 1987, 388; Simmer 1988, 130-135, both as cited in Halsall 1995. (23) Halsall 1995, 247. (24) Härke 1992, 147-149. (25) Härke 1992. (26) Härke 2000, 273-274. (27) Stoodley 1999. (28) Thompson 2003. (29) Williams 2003b; Williams 2004, 271. (30) Williams 2004. (31) The question is also whether the variability within each correlates with the same variables (e.g. gender or age). (32) Situations in which graves were reopened are an exception: Van Haperen 2010. (33) This seems particularly applicable to the study of inhumation graves. Williams (2004) delves deeper into ritual actions, by regarding the dead body as a particular kind of agent that actively influenced the public and their perception of the early Anglo-Saxon cremation ritual. He establishes a possible sequence of mourners' actions during the ritual, exploring the sensory observation that accompanied interaction with the bodily remains during each stage of the ritual. See also Huntington/Metcalf 1991. (34) O'Shea 1981, 40 (35) *Grafritueel* [grave ritual] the standard word used by Dutch archaeologists, is in a sense illustrative of the different approaches because it emphasises the end product (the grave) and not the process (the burial). In this respect, *begrafenisritueel* [burial ritual] is a better term for what took place at burials. In English the term *burial rite* is used, rather than grave rite, although not consistently. (36) The distinction between these actions and actions within the burial rite is vague and perhaps impossible to make. For an analysis of the Christian burial rite, see among others Duval 1988; Paxton 1990; Treffort 1996; Lauwers 1997.

If the body was transported in the container, where was it transported from? From the death bed, place of death or somewhere else?

Closing the grave
When and how was the grave closed? Was it closed immediately or did it remain open for a time? Were steps taken to prevent the grave being opened? What exactly was left behind below ground when the grave was closed? After the grave was closed, were elements built or left behind above ground that were visible for a short or sustained period of time?

General
Who was present during which phases of the ritual? Who was involved in which phases of the ritual? Were several people and/or groups involved?

The answers to these questions differ for each kind of grave structure and it is precisely this variation and the patterns that emerge that provide clues as to how to approach the meanings of the burial ritual. These meanings may have been different for each part of the ritual. Some of the questions, such as the provenance of sarcophagi, have already been examined, but not in relation to the provenance of other grave structures, nor in relation to subsequent phases of the burial rite.

Some questions, such as several relating to sequence, can be answered through archaeological research, provided they are addressed at the time of excavation. The answers to some other questions may be established through written and iconographic sources. Ethnographic studies can also help us understand the significance of the burial rite's diversity and possibilities. This leaves us with some questions that are difficult to answer. However, it should be understood that the actions and events did take place, that they formed an integral part of the ritual and that they were imbued with meaning. The following discussion of the burial rite will show that we cannot understand some of the meaning of the grave structure without examining these actions.

Grave structures: their meaning in the burial rite

It is quite possible to integrate the analysis of grave structures into existing explanatory models. Grave structures can be included as an added variable in studies of, say, social status, gender construction and the expression of social stress, or economic investment. Correlations may exist between certain grave structures and the sex and/or age of the deceased, or between the quantity and/or quality of the grave goods. This demonstrates whether such social factors were presented and communicated through grave structures.

It is probable that meanings, associations and intentions relating to grave structures were evoked in connection with the dead body, whose burial was surely the central action in the burial rite. The dead body had physical dimensions and possible meanings associated with this. It may also have been the focus for remembering and constructing the personality of the deceased.[37] The use of different grave structures can form part of the study of dealings with the dead body.[38] How societies deal with dead bodies says a lot about their attitude to specific deceased individuals, the human body in general, the construction of the person and death in particular.[39] This attitude shapes and is shaped by the treatment of the deceased and assumes various forms. It is important not only to analyse attitudes towards the body; we also need to examine the perception of that body and the effect the body had on the public. Identifying the actions and treatment that the body underwent, where it (or its remains) was placed and how this was done are all ways of gaining an understanding of those attitudes[40] and perceptions.[41] The choice of a particular container also meant a choice about dealing with the body and the meaning and perception of the body.

By being wrapped in one or more containers with specific qualities, the body could be kept away from the world of the living, the public, the mourners. Wrapping thus becomes concealment. The inevitable process of decomposition, the transience and impurity of the dead body and everything associated with this could be avoided and countered by the grave structure. The placement of the body in a container and the moment and manner in which that happened determined the degree of visual and physical (and mental) contact between the dead body and the public/actors involved. In this respect, lowering just a body into a grave pit is a very different matter from carrying a body, clad in a shroud and lying in a wooden coffin, and lowering it into a stone-built grave that is sealed with a lid. Any negative connotations of the body could be allayed by the connotations inherent in the container used to wrap the body.[42] Not only could burial containers help erase qualities of the body that were deemed unpleasant or undesirable, attempts could also be made to create permanence, purity and eternity for the deceased. The containers could consciously shield and protect the body from the living and/or imaginary world, as well as from the ground in which it was interred. The preservation and transformation of the body (and in some cases also the soul) may have been immensely important. We can assume that people knew what influenced the body's decay, what counteracted or hastened it, and that they could therefore anticipate the process and actively intervene.

The removal and protection of the body may have taken different forms in the repertoires of actions surrounding the body. It may have found expression through form, through certain techniques or in the choice of materials, such as wood, stone or textile.[43] Raising particular barriers and/or as many barriers as possible around the deceased may have been a tactical move.[44] These barriers could have physically prevented third parties[45] from entering the grave, through the use of lids or stones in the ground above the grave. They may also have kept out imaginary influences, through the meanings, associations and qualities attributed to certain containers. The fact that even the container could command attention is demonstrated by Ghanaian fantasy coffins (fig. 7.1). One of the qualities of burial containers is materiality. The processual explanation for material choices concerns availability: people with wood at their disposal will use wood for their buildings and grave structures, but if stone is at hand, they will use stone instead. It has been demonstrated that buriers and their societies frequently made choices that were out of step with ecological and practical considerations. These choices could have been prompted by the meanings, associations and qualities of the materials, which may have arisen in different ways. The different materials may have been part of a categorisation of material culture based on ideological/religious grounds. Transience, permanence, purity, impurity and provenance are concepts that could find expression in the choice of materials. Perishable materials that were easy to work with, such as wood and textile, the dead result of living things, and durable, 'eternal', lifeless materials that were harder to work with, such as stone, could have been used for the different parts of the grave structure because of their specific qualities and associations.[46] The preservation of all or parts of the body could have been achieved by encasing it in certain durable materials or materials with preservative qualities. Similarly, the body's irreversible decay may have been emphasised by encasing it in perishable materials or materials that accelerated decay.[47] There is no reason why modern archaeologists should easily comprehend and explain these relationships. Burial in durable sarcophagi often led to the complete decomposition of the body. In such cases, the sarcophagus may have taken over the body's role as the focus of memory.

Another meaning for grave structures is that of spaces constructed around the body where – by virtue of their structures and dimensions – other contexts resonated.[48] Ethnographic studies inform us about analogies between the grave and a house, room or bed, as well as a storage pit. The use of space in a house is often formalised symbolically and Pader therefore suggests that the use of space in a grave could be a useful subject of study.[49] But it is not only the symbolic use of space that merits attention; so, too, does the creation of that space, its qualities and the way in which it influences those who use it. It is the grave structure that creates this space within a grave. It would be interesting to investigate which other contexts are represented by grave structures and how they might be visible to us.[50] If graves represent other contexts in a particular way, they share the associations and meanings of those contexts, while at the same time shaping them. This is because the grave, with its associations, may also have influenced the contexts being referred to. Once again, this may be expressed through form, through certain techniques, such as masonry or wooden joints, or in the materials used, such as wood, stone or textile. Experience with materials, for example using wood for construction purposes, and the use of other contexts, such as a house, may have led to this material being chosen for the grave. The associations that the construction

Fig. 7.1
Coffin in the form of an onion, made in 1989 by Paa Joe te Teshi, Ghana. 70945 Collection World Museum Rotterdam. Photograph: Erik Hesmerg, Sneek (Netherlands). Courtesy World Museum Rotterdam.



(37) Williams 2004, 283; Huntington/Metcalf 1991. (38) Huntington/Metcalf 1991, 61-92. (39) Gittings, for example, has shown that the popularity of coffins in the eighteenth century was connected to a changing, more individualistic attitude, and Tarlow has linked changes in burial practices to changing perceptions of the dead body (Gittings 1984; Tarlow 2002). On personhood in archaeology, see Fowler 2004. (40) Parker Pearson 1999. (41) Williams 2004. (42) It is interesting in this context to mention the 'wrapping paradox' pointed out by Gell. In his analysis of Polynesian tattoos, he says that the wrapping of an object or body, with the purpose of removing it from sight, means that wrapping implicitly takes on the qualities that must be concealed and therefore fails to achieve its primary objective (Gell 1996). (43) And in the types of wood, stone and textile. (44) Gell interprets Polynesian tattoos as layers between the body and the viewer. The decorations and patterns and the messages they convey thus constitute a form of protection for the wearer (Gell 1996). (45) As well as human disturbance, there could also have been disturbance by animals. (46) Numerous ethnographic sources show that these associations played a role in burial rites throughout the world in different ways and to varying degrees; see for example Parker Pearson 1999 and Pader 1982. (47) Materials that hasten decay are not necessarily impermanent themselves. For example, sarcophagi made of certain types of stone strongly accelerated the decomposition of the dead body. It would be interesting to know whether people were aware of this and took advantage of that knowledge. (48) Parker Pearson 1999, 5. (49) Pader 1982, 43-44. (50) Graves could also have represented other contexts in non-material ways, or in material ways that have left no traces in the archaeological record.

and use of that house carried with them could then have been ascribed to the material, possibly making it the 'right' material for containing the body. Interesting connections can be made between burial in hollowed-out tree trunks and wells, which give life (!), and which were also made of hollowed trunks. There may also have been a reverse effect whereby a material used in the context of the living could *not* be used in the grave, in order to create a relative distinction between the two worlds. People could use particular materials in the burial in a particular way to associate themselves with (or oppose themselves to) certain groups and a certain real or imaginary world. These rhetorical strategies may have had an emphasising, reversing, exaggerating or weakening character. Stone is a concrete example of a material choice that may represent other contexts in grave structures. The church occupied a central place in early medieval society and was one of the few stone buildings in the landscape. The association of a stone church with eternity, permanence and the house of God (or other associations linked to the church and its users),[51] but also with the building material's non-local origins (and hence 'foreignness'), may have caused people to want to evoke those same associations in the building of a grave. There was not necessarily a causal link: it is possible that both church and grave referred to a shared association (e.g. eternity and/or foreignness) that was linked to stone.

If we assume that the short-lived visibility of grave goods and their repeated use were part of a memory strategy,[52] we can safely assume that grave structures also played a key role here. Grave structures were the first that had to be assembled on site and hence the first to be seen there. It was the grave structure that contained the body and grave goods each time,[53] possibly when the body was brought to the grave, but certainly once the body had been placed there. Literally and figuratively, the grave structure formed a frame around the deceased and the grave goods, furnishing both with a framework and context. If the body was transported in a container, it was the container that the bearers came into physical contact with. Any sealing of containers and closing of the grave was one of the final moments of contact with the person and his or her dead body and will have been a powerful part of the memories of the ritual and the deceased. It was perhaps because the structure was visible for such a brief period that it became etched in mourners' memories. In this way grave structures could play a part in creating a temporary, idealised picture of the deceased and in the staging of a particular scene that reinforced memory. The decoration, form and material may have represented, emphasised and communicated specific and non-specific qualities of the deceased individual and his or her transformed body, thereby adding each time to the memory that the ritual left behind with the mourners.

A typology of grave structures for the Meuse region between AD 400 and 750

Now that the first steps have been taken towards a theoretical framework for grave structures, it is important to identify the different features and manifestations of grave structures in the Meuse region between 400 and 750. I have developed a typology for this purpose, which seeks to provide clear and systematic definitions of the various containers and grave structures. Using the terms introduced above (container and grave structure), it is possible to name and describe each individual feature of the different parts of a grave structure. This then enables a comparison of the different containers, despite their appearance in different kinds of structures.[54] Moreover, the relationship between the different containers within a single grave structure can be better established because we have information on each container. The typology is largely based on observations contained in publications of cemeteries and the few typologies or subtypologies that have been developed, as well as on observations we ourselves have made while processing cemeteries as part of the Saint-Servatius project.

The typology describes and discusses each type of container and its most common subtypes, and subsequently the most typical and most common grave structures in which these containers occur (see figs 7.2 and 7.3 for illustrations). Of course, combinations other than the examples discussed are also possible. This typology will be added to and improved in the future. The classification usually makes use of types that have already been identified (albeit seldom very clearly) and is based primarily on the type of construction and the material used. The first paragraph on each type describes the container as it might have been used in practice, stating the materials used, the construction techniques and dimensions. The second paragraph discusses the archaeological features and indicators of each type and the problems that arise when identifying the types of containers and structures and their subtypes. Lastly, where necessary, the synonymous German, French or Dutch terms are listed. For grave structures, *possible* practices at the time are discussed first, followed by archaeological practices.

The typology encompasses a very wide range of grave structures, often with various subtypes. One problem is that these various kinds can rarely be derived from the documentation because excavators and others were not sufficiently aware during the excavation and documentation processes of all the potential features of a particular structure. And if information of this kind was recorded, it often failed to make it into the publication.[55] Anyone excavating a grave or cemetery therefore needs to be aware of the kinds of graves they might encounter and the features by which these can be identified. Only then can the nuances that were undoubtedly present be observed by us in archaeological terms. Some types might not occur in the research region. However, this could be because of a failure to observe types that were in fact there.[56] I have included them in the typology in an attempt to break this cycle. Some easily identifiable types of container rarely occur in the Meuse region. These are listed and described, but their various subtypes are not discussed in detail. In what follows I will explain the types of grave structure by describing first the main defining element (pit, shroud, bier, wooden coffin, etc.) and then the various types of graves relating to this element.

0 *Grave pit (the conditio sine qua non)* (fig. 7.2)

A grave pit is a hole in the ground that has been dug to a certain depth and in which other containers may have been built and/or placed containing the body of the deceased. The size may vary enormously, from hardly bigger than the body, extremely long or extremely wide, to potentially large enough for entire families or other groups of deceased, and may depend on the size of any grave structure that is present. Most Merovingian grave pits in the Meuse region are rectangular in shape, with more or less rounded corners, but sharp corners and oval, trapezoidal and anthropomorphic shapes also occur. There are variants with excavated niches in the walls of the grave pit. All grave structures consist of at least a grave pit (the baseline, as it were).

Depending on the soil, the boundary of a grave pit is marked by a difference in colour or texture between the backfilled soil and the soil or rock in which the grave was dug; the grave cut appears as the boundary between the intact soil and the fill. Even if no grave pit can be identified because the distinction between the soil and the fill cannot be discerned and only the skeleton is still visible, there will of course have been a grave pit ('unknown' should then be recorded as the type of structure).

Trench grave

A trench grave is a grave pit in which no other containers are present. The deceased was laid directly on the floor of the pit, after which the excavated soil was thrown back directly onto the body. In an anthropomorphic trench grave, usually only the lowest part of the grave pit was excavated in a shape that closely matched the body of the deceased. As in ordinary trench graves, the body was laid directly on the floor of the pit. In a trench grave with niche, a niche was excavated in the side wall of the pit and grave goods were placed there during the burial rite.

Although this appears to be a clear-cut description, problems arise when this type of grave has to be demonstrated archaeologically. It is virtually impossible to distinguish between a trench grave and a grave pit containing an organic container that has completely disintegrated, leaving no traces behind. In certain geological substrates there are almost no features to positively confirm whether or not a grave is a trench grave; there are only features (i.e. the remains of a container) to show that it cannot be one. We cannot rule out that some graves identified as trench graves were originally graves with an organic container.[57] However, we can assume from the decomposition and position of the bone material that the body lay after burial in either a (slowly filling) open space (e.g. in a coffin) or directly under the backfilled soil. Bone material decomposes more quickly in open spaces, where oxygen makes the bacteria more active. A particular anatomical association, for instance, of the cervical vertebrae, the bones of the hands and feet, and the cranium, can point to a trench grave, where the earth thrown back into the grave fixed the bone material in place, preventing it from rolling away and losing its articulation once the ligaments and tendons had decayed. Another indication is the presence of traces of certain organisms that only live in open spaces.[58] The contours of a grave cut can also be confused with those of a wooden container and vice versa.[59] An anthropomorphic trench grave can be recognised by the manner in which the bottom part of the grave cut follows the shape of the body. The close-fitting shape makes it unlikely that other containers were placed in these graves. Whenever we encounter an anthropomorphic shape, we can be more certain about the label 'trench grave'. However, it is also possible that the body was wrapped in a shroud (see type 1 Shroud). The niche in niche graves is not visible archaeologically at higher excavation levels; it can only be discerned towards the bottom as a small, square bulge in the customary rectangular shape of the grave cut.

The German term for a trench grave is *Erdgrab* or *Körperflachgrab*, the French *sépulture en plein terre* and the Dutch *kuilgraf*.

1 *Shroud* (fig. 7.2)

Shrouds are the cloths (or cloth) in which a dead body was wrapped. A shroud may consist of lengths of fabric, a large piece of textile or a piece of leather. Linen, a textile made from plant fibres (flax), was the most commonly used fabric for shrouds. A shroud could be wrapped around the body, with no additional fasteners, but could also be sewn, or fastened with copper alloy pins, with belts with iron buckles, with iron hooks or with strips of cloth. The shroud could also be draped loosely over the body.[60] Shrouds occur in combination with all kinds of containers, and the body could be wrapped in the shroud either naked or clothed. A shroud is a 'container constructed outside the grave, designed to accompany the body to and into the grave'.

(51) Gilchrist 2009, 395. (52) Williams 2004, 270-271. (53) It could be interesting here to explore whether Miller's (1985) term 'framing' can apply to this situation. (54) For example, the features of wooden coffins placed in a sarcophagus can be compared with those found only in stone-built containers or simply placed in a grave pit. (55) In many cases the plans were shown for selected graves only. (56) This could apply to shrouds, for example; see container type 1. (57) See chapter 8. (58) For a comprehensive discussion of the characteristics of skeletal material buried in open spaces, see Duday 1990. See also Carré/Guillon 1995. (59) In discussions on the processing of cemeteries as part of the Saint Servatius project, some suggested that it is possible to distinguish the contours of wooden containers from the grave cut by looking at the shape of the outline. Wooden coffins reveal an inward-curving outline because of the open space inside the container, allowing the backfilled earth to exert pressure on the walls. The corners of the grave cut could also be less sharp than the contours of wooden containers because of the loose nature of the soil in which grave pits were dug. This last argument in particular is very much dependent on the substrate, but especially on the kind of 'scraping' employed by archaeologists during the excavation. Another question is whether sharp corners might also have been made when the grave pits were dug. An examination of the graves on the Vrijthof has revealed graves with wooden containers, which therefore feature an outline for both the grave pit and the wooden container; either the grave pit had sharp corners or the wooden container had rounded ones. In the absence of a thorough investigation of the relationship between sharp corners in feature outlines and the presence of wooden coffins, it is premature to assume a direct link. If such research should be carried out, however, the data on these features would need to be gathered through fieldwork.

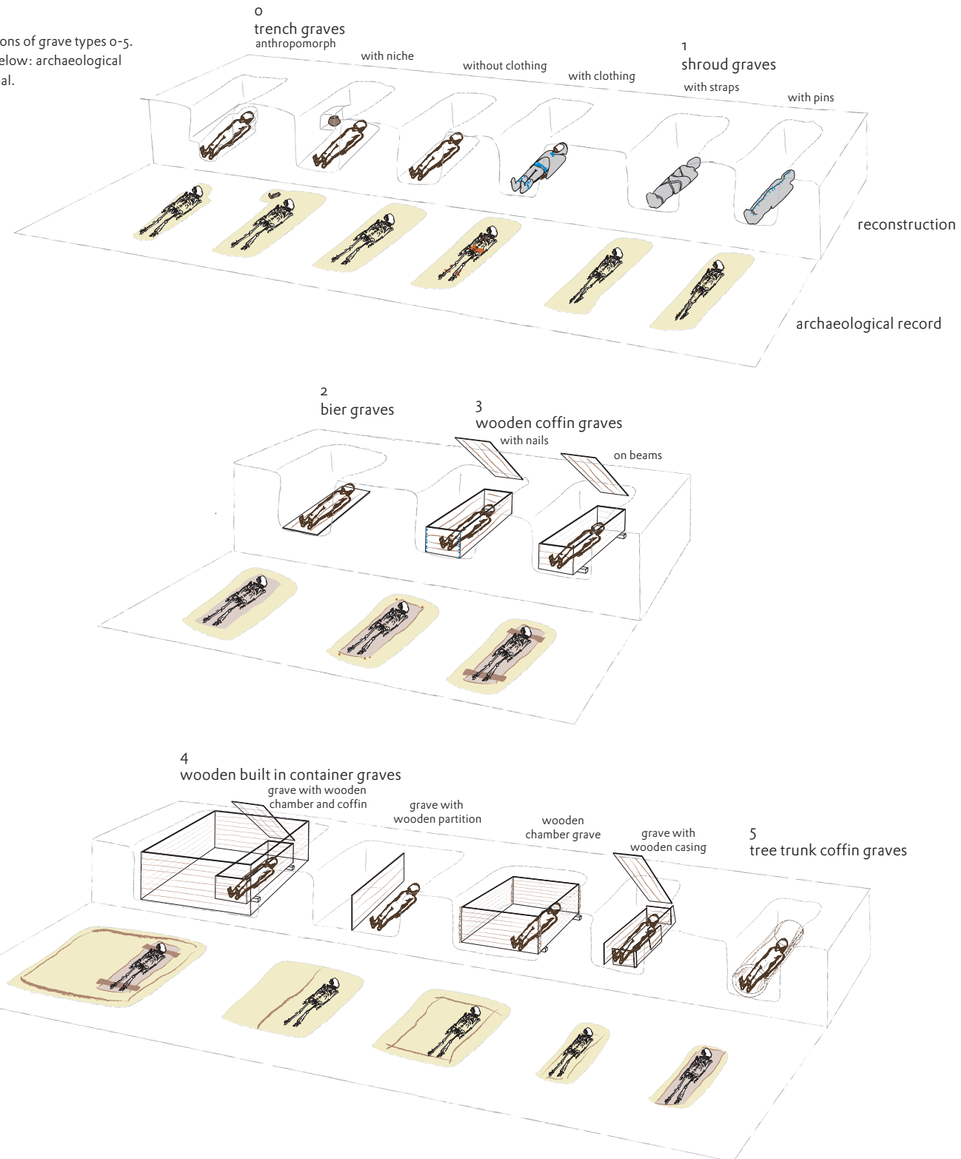


Fig. 7.2
Schematic representations of grave types 0-5. Top: reconstruction; below: archaeological record. Drawing D. Smal.

Shrouds are difficult to demonstrate archaeologically as the textile is only preserved in exceptional circumstances. Sometimes the fibre remains are preserved in the iron oxide of decayed fasteners or grave goods, in which case it is difficult to distinguish between a shroud and clothing. If conditions were favourable, the copper alloy pins and iron buckles and hooks were better preserved (in oxide form) because they were made of metal. The metal fasteners sometimes caused discolouration in certain places on the bone material (e.g. at the head and foot end) or lay in a line across the body. For this container type especially, the absence of shroud remains is no guarantee that there was no shroud at the time of the burial rite, due to the perishable nature of the materials.

The German term for shroud is *Leichentuch*, the French *linceul* or *suaire* and the Dutch *lijkwade*.

Shroud grave
A shroud grave is a grave in which no other containers in addition to the shroud were present in the grave pit.

2 *Bier* (fig. 7.2)
A bier is a flat wooden structure used to carry the body to the grave, after which it was placed together with the body on the floor of the pit or in another container. A bier should be distinguished from a pallet or litter, which although used to transport the body, was not placed in the grave. A bier is sometimes viewed as a simplified wooden coffin,[61] and it displays many of the archaeological features that are also found in coffins. It can be rectangular or trapezoidal in shape.[62] It could comprise one or more small boards, sometimes with transverse joists across the head and foot ends. Sometimes slats were affixed at regular intervals across two lengthwise beams so that the bier resembled a ladder. The wooden planks could be fastened together with nails, hooks or rope. The kinds of timber used for biers have seldom been established because of the lack of research and the generally poor preservation of wood. A bier is a 'container constructed outside the grave, designed to accompany the body to and into the grave'.

A wooden bier can be identified archaeologically through wood remains or discolouration that forms a rectangular shape *beneath* the skeleton, rather than vertically alongside or horizontally on the skeleton. The 'ladder biers' can be recognised by discolouration under the body in the shape of a ladder. The remains of nails, hooks and wooden beams can be preserved in the grave, with iron and copper alloy oxides sometimes leaving their traces on the skeleton. As with shrouds, if preservation conditions were poor and no traces have been discovered, this does not indicate the absence of a wooden bier.

The German term for bier is *Totenbrett*, the French *plancher* and the Dutch *houten baar*.

Bier grave
A bier grave is a grave in which no other containers in addition to the bier were present in the grave pit.

3 *Wooden coffin* (fig. 7.2)
A wooden coffin is a wooden rectangular or trapezoidal grave structure with at least five sides (a bottom board, two long side boards, shorter head and foot boards, and possibly a lid), all fastened together to make a rigid structure.[63] It was made of sawn or split planks, joined with wooden joints, iron nails or iron or copper alloy corner fittings. The body was carried in the coffin to the grave and placed on the floor of the grave, possibly on one or more joists.[64] Wooden coffins could be placed in a pit by themselves (see below), but are also regularly found inside other containers. A wooden coffin is a 'container placed with the body during the inhumation'.

If preservation conditions are favourable, coffins can be identified archaeologically through wood remains or discolouration from wood horizontally beneath, vertically alongside and possibly horizontally on the skeleton, but they are difficult to distinguish from, for example, built-in wooden containers if there is no specific information about possible fastenings. The shape of the remains yields information about the shape of the coffin. Traces of a wooden container sometimes appear simply as a line in the feature, whereby the soil on one side of the line is a different colour from the soil on the other. Even in the absence of wood remains, we can assume that a coffin was present if remains of fastenings (metal remains of nails at the head or foot end or hooks) are found around the corners of the presumed coffin.

The German term for a wooden coffin is *Holzsarg*, the French term *cercueil* and the Dutch *houten kist*.

Wooden coffin grave
A wooden coffin grave consists of a grave pit, usually rectangular, containing a wooden coffin and no other containers (apart from a possible shroud). The pit can fit fairly snugly around the wooden coffin, or be considerably wider or longer, with grave goods placed in the grave pit outside the coffin. The coffin can be placed either in the centre of the grave pit or off to one side.

4 *Built-in wooden containers* (fig. 7.2)
This type includes all containers made of wood that were placed in the grave pit before the inhumation. In general, no nails, hooks or other fittings were used in their construction. The German term is *Holzeinbauten*.

Grave with wooden casing[65]
This grave structure was not a rigid container that could be transported in one piece, like a wooden coffin, but was made up of a number of loose boards placed in the grave pit, possibly secured in place by having stones or fragments of Roman tiles resting against them. A grave with wooden casing comprised two long sideboards, two short head and foot boards, and possibly a lid made up of one or two boards, placed against the walls of the grave pit. There might not have been a bottom board. The casing is rectangular or trapezoidal in shape. The boards were not fastened together and no nails, hooks or wooden joints were used. A wooden casing is similar in size to a coffin, in other words big enough to enclose the body of the deceased, and the grave pit is not usually much larger than the casing.

This type of structure is difficult to distinguish from a wooden coffin grave. The archaeological remains of both containers may be identical, although they occupied a very different place in the burial rite. And yet this type occurs fairly frequently, as evidenced in contexts with exceptionally favourable preservation conditions.[66]

The French term for wooden casing is *coffrage de bois*. Once again

(60) Durand 1988, 164. (61) Durand 1988, 166. (62) Durand 1988, 166. (63) Henrion/Hunot 1996. (64) Theuws 2001. However, a wooden coffin could also be used to simply transport the body (see Durand 1988, figure 236), in which case it is difficult to identify archaeologically. (65) Henrion/Hunot 1996. (66) See for example grave 71 at Cluny in Hunot/Henrion 1996, figure 1.

the German term could be *Holzeinbauten*. The Dutch term is *graf met houten bekisting*.

Grave with wooden partition
A wooden partition is a board, possibly made from a single plank, that was placed in the grave pit to subdivide the space. It is not clear how the partition was held in place. The body was generally placed on the floor of the pit on one side of the partition, with any grave goods placed on the other side. Wooden partitions are often found in wooden chamber graves (see below), but they also appear to have been placed directly in grave pits.

Depending on the preservation conditions, a wooden partition is revealed as a more or less straight line running lengthwise in the centre of the grave pit.

Wooden chamber grave[67]
A wooden chamber grave is a wide grave pit containing a chamber, constructed on site out of wooden planks, with four sides and possibly a bottom and a lid. The major difference between a wooden chamber grave and a wooden casing is that the sides of the chamber were fastened together with wooden joints. In principle, two bodies could fit alongside one another in the chamber, although this type of grave usually contains only one body. The space is sometimes divided into two compartments by a wooden partition. The chamber usually rested on transverse joists.[68]

This type of grave structure can be easily identified if wood remains have been preserved. The larger size of the pit and wooden sides distinguish it from a coffin or casing.

The German term for a wooden chamber grave is *Holzkammergrab*, the French *chambre de/en bois* and the Dutch *houten kamergraf*.

Grave with wooden chamber and coffin[69]
A wooden chamber grave is a wooden chamber containing a wooden coffin. The body was brought to the grave in the coffin and placed on the floor of the chamber. If wood remains have been preserved, this type of grave structure is easy to identify. The rectangular outline of the coffin can be seen inside the walls of the chamber. If wood remains are not preserved, this type of grave can be recognised by an exceptionally wide grave pit and different fills for the pit, chamber and coffin. The coffin may stand on joists. In German archaeology this type of grave is called an '*echtes Kammergrab* (*Typ Morken*)'.[70] No foreign terms are known for this specific type of grave structure, but possibilities are: *Holzkammer mit Holzsarg* or *echtes Kammergrab* in German, *chambre de/en bois avec cercueil* in French and *houten keldergraf* in Dutch.

5 Tree trunk coffin (fig. 7.2)
A separate category of wooden container is a coffin made from the trunk of a tree.[71] The trunk was split and hollowed out, giving rise to two half cylinders. Sometimes the head and foot ends were left intact to create a kind of tube with a lid of the same shape. It is not clear whether the body was transported in this type of container, but it is certainly possible.

Tree trunk coffins can be recognised by the rounded shape of the wood remains visible in a section over the grave, or by the shape of the container feature in the excavation level – narrow in the top and bottom excavation levels, and wider in the levels in between. The presence of metal fittings or other fastenings, or bark[72] are not direct indications of a tree trunk coffin. This type of container can only be established with certainty under good preservation conditions.

The German term for a tree trunk coffin is *Baumsarg*, the French *tronc d'arbre évidé*, *cuve monoxyle* or *sarcophage de bois* and the Dutch *boomkist* or *uitgeholde boomstam*.

This container type is only encountered in the following grave structure:

Tree trunk grave
A tree trunk grave is one in which no other containers in addition to the tree trunk coffin were present in the grave pit.

6 Indeterminate wooden container
An indeterminate wooden container is any container made of wood that displays no positive features of one of the above types of wooden container. For many of these containers there is no information available about joints or about whether they were transportable; they have not been excavated in such a way as to yield definite information about their shape and composition. As with trench graves, this is a kind of 'other' category, but unlike trench graves this type of container is not an independent structure or container type. In other words, when preparing the grave, people did not decide to build an indeterminate wooden container. This characterisation simply describes the inability on the part of archaeologists to shed further light on the nature of the container.

7 Grave with a single stone or stones in no clear order (fig. 7.3)
One or more stones that seem to have been placed haphazardly or in no clear order are found quite regularly in grave pits. This can sometimes indicate a built-in wooden container, with the stones used as supports or wedges to hold the loose boards in place. But another possibility is that these stones form a separate category of burial container. They are often found at the head end directly above or next to the head (perhaps to hold the head in position), or in the corners of the pit. But they are also found elsewhere in the grave pit, sometimes more or less in rows. Sometimes a kind of wall appears to have been built at the head and foot end or corner structures, resembling stone-built containers (without mortar). Stones are quite often encountered both inside and outside wooden containers, whereby 'inside' could also mean that they were lying on top of the container. It is sometimes assumed that these stones ended up there by chance when the excavated soil was thrown back into the grave pit, but the frequency with which they are found in graves, their more or less fixed positions in the pit and around the body, together with their presence in wooden containers would appear to contradict this.

This type can be quite easily recognised archaeologically, although they could be confused with disturbed stone-built containers (without mortar).

8 Stone-built container (without mortar) (fig. 7.3)
A stone-built container (without mortar) is one whose walls were constructed of finished or unfinished smaller stones, perhaps stacked in rows. No mortar was used between the stones to reinforce the structure. Many types of stone were used to make these graves. A wooden coffin could be placed in the grave, and stones were sometimes placed on top of the coffin.[73]

Like other stone containers, a stone-built container (without mortar) is easily identifiable archaeologically because of the less perishable nature of the materials. The containers are usually rectangular. Stone-built containers are 'containers placed before the inhumation'.

The German term for stone-built container is *Trockenmauergrab* or *Steinpackung*, the French *caveau en maçonnerie sèche* and the Dutch *droog gemetselde steenkist*.

Stone-built grave (without mortar)
A stone-built grave (without mortar) is one in which no other containers in addition to the stone-built container are present in the grave pit.

Stone-built grave (without mortar) with wooden container
A stone-built grave (without mortar) with wooden container is one in which a wooden container was placed in the grave in addition to the stone-built grave.

9 Stone-built container (with mortar) (fig. 7.3)
Stone-built containers (with mortar) were often constructed in similar fashion to stone-built containers of type 8, except that mortar was used between the stones. In addition to a wide variety of stones, the walls could be made of Roman tiles and even wood, or a mix of these materials. The interior of the container could be rendered with different kinds and colours of plaster, and the walls could be built using different kinds and colours of mortar (pink, white, yellow). The floor generally consists of a layer of mortar, although this could also be absent. The plan is rectangular or trapezoidal. Stone-built containers are 'containers placed before the inhumation'. A number of gradations in size can be discerned for this type of container, from very large with very thick walls (e.g. 3 m long, 2.5 m interior length) to the size of a wooden container and with thinner walls. A wooden container could be placed inside the stone-built container (this example is shown in fig. 7.3).

The nature of the material makes this kind of container easy to recognise archaeologically. The German term for grave with stone-built container (with mortar) is *Mauergrab*, the French *tombe maçonnée* and the Dutch *gemetselde steenkist*.

Stone-built grave (with mortar)
A stone-built grave (with mortar) is one in which no other containers in addition to the stone-built container were present in the grave pit.

Stone-built grave (with mortar) with wooden container
A stone-built grave with wooden container is one in which a wooden container was placed in the grave in addition to the stone-built grave.

10 Container of stone slabs (fig. 7.3)
This is a type of container whose floor, walls and possible lid consist of loose stone slabs placed vertically and horizontally. These slabs could be made of reused Roman material, schist, slate, limestone, trachyte or sandstone, the first two types split, the last three sawn from the rock.[74] The plan of the container is usually rectangular, rarely trapezoidal. Containers of stone slabs are 'containers placed before the inhumation'. The nature of the material makes this kind of container easy to identify archaeologically.

The German term for container of stone slabs *(Stein)Plattengrab*, the French *sépulture de dalles* or *de lauzes* and the Dutch *kist van stenen platen*.

This container occurs in the following types of structure:[75]

(67) Theuws 2001. However, an examination of the widths of a number of graves at investigated cemeteries raises the question of whether a wooden chamber grave as defined here is indeed a separate type. The widths of graves at Rosmeer, a cemetery that is assumed to contain this type of grave structure, do not permit a breakdown into two widths – wooden containers that were one-person wide and ones that were two-people wide. All container widths occur in roughly equal numbers, suggesting that wide graves and narrow graves were not significant separate groups. Further research is needed to establish whether these types occur at other cemeteries. The problem is that if this type needs to be redefined, no distinction can be made between a narrow wooden chamber and a wooden coffin with wooden joints, and the definition of the latter type of grave will also need to be revised. The traditional classification will be retained for the time being, but this may need to be modified in the future. The distinction between coffins and chambers would not depend on their size, but on whether they were assembled on site or were transported in one piece. Where there are no clues to suggest one or the other, they will be referred to as 'indeterminate wooden containers' (see type 6). (68) It is interesting to explore whether or not these beams show that the container they supported was mobile. A chamber may have been built on top of the beams. Another possibility is that the planks of the wooden chamber were fitted into slots made in the beams that were placed in the grave pit. Indications for this are planks, especially those running lengthways, that are still visible at a level below the top of the beams. The beams formed a support frame on which the planks rested, for example, in specially made slots or in a lower section as wide as the burial chamber (see grave 162 at Oberflacht: Paulsen 1992). (69) Theuws 2001. (70) For a recent discussion of this type of grave, see Peters2011, 20-26. (71) Some good examples are found in the cemetery near Oberflacht (Paulsen 1992). (72) Henrion/Hunot 1996, 200. (73) Fremersdorf 1955, 24. Figure 7.3 shows an example without a coffin. (74) Scholz 2002. (75) Scholz 2002, 21.

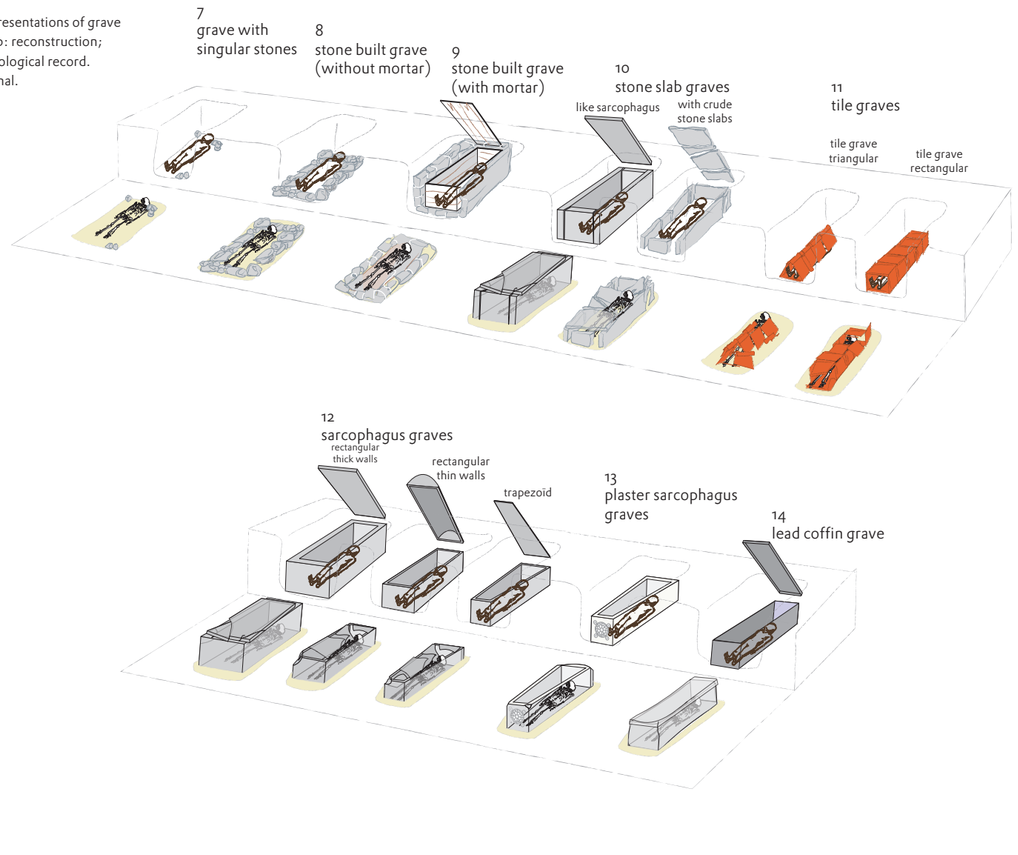


Fig. 7.3
Schematic representations of grave types 7-14. Top: reconstruction; below: archaeological record. Drawing D. Smal.

Grave built out of stone slabs like a sarcophagus
This type of stone slab container was assembled in the grave pit from carefully hewn, often smooth-finished stone slabs, so that the container resembles a rectangular, thick-walled sarcophagus in size and shape (see type 11, sarcophagus).[76] The floor, long walls and lid could consist of a single slab, or perhaps two or three. The slabs were sometimes supported on the side by stones, in a similar fashion to a grave with wooden casing.[77] The slabs could be held together with mortar. Unlike sarcophagi, this type of grave never has a recess for the head of the deceased. Sometimes a wooden container could be placed in this type of grave.

Grave built out of crude stone slabs
This structure is similar to the above type in terms of construction, but is made of stone slabs that are more roughly hewn, less finished and more fragmented. This container therefore looks a lot less like a sarcophagus. The floor, walls and lid were frequently made up of several, often thinner, non-rectangular slabs.

11 Container built out of tiles[78] (fig. 7.3)
This type of container is usually built of reused Roman tiles (*tegulae*), sometimes covered with *imbrices*. Containers built out of tiles are 'containers placed before the inhumation' although the triangular type was finished after the body was positioned.

The German term for tile grave is *Ziegelgrab*, the French term *coffrage en tuile* and the Dutch *dakpankist*.

These containers occur in the following types of grave structure:

Tile grave with rectangular section
In tile graves, the floor, two sides, a lid and usually the head and foot end (sometimes also made of stone slabs) were built of tiles on the floor of the grave pit. The section is rectangular. A wooden container was sometimes placed in these graves.

The tiles are generally well preserved, making this grave structure easy to identify. The presence of a wooden container inside the tile container can be demonstrated through wood remains and/or the remains of nails or fittings.

Tile grave with triangular section
Here, tiles were used to build the container's floor and two sides, and sometimes a head and foot end, on the floor of the grave pit, possibly resting on a wooden frame. The structure had a maximum of five walls, with a triangular section across the width of the grave. In some cases the floor was made of wood rather than tiles, or there was no floor at all, so that the walls simply formed a kind of roof above the skeletal remains.

In archaeological terms, these containers can be identified in the same way as the above type.

12 Stone sarcophagus
A sarcophagus[79] is a container whose floor and walls (together forming the casket) were hewn from a single block of stone. The casket could be made up of one, two or three parts, and was sealed by a lid. The components making up the sarcophagus were sawn or chiselled from the rock and the traces of that working are often still discernible. Lids may take many different forms, from flat stone slabs to gabled. The sarcophagi can be made from a wide range of rock types, such as reused Roman material, (soft) limestone, tuff stone, sand stone or granite. A wide range of motifs may be used to decorate the lid and walls, including on the inside. At the head end of the sarcophagus there is sometimes a stone support with a recess for the head.

Unlike most other grave structures, sarcophagi have attracted considerable scholarly interest.[80] Most typologies of sarcophagi have a very art historical focus, however. Because the present typology is concerned with grave structures in general, it only discusses the different general types of structure, and not aspects such as different kinds of decoration. As already outlined above under Definition of Terms, sarcophagi are the reason why the word 'usually' appears in the definition 'container constructed before inhumation, usually on site'. Sarcophagi were not assembled on site, but built beforehand. Presumably, however, the body was not carried in the sarcophagus and lowered into the grave, as the sarcophagus would have been much too heavy. The sarcophagus is a 'container placed before the inhumation'.

Sarcophagi occur in the following variations:[81]

Grave with rectangular sarcophagus with thick walls
This type of sarcophagus is rectangular in plan, with walls at least 8 cm thick. It is generally larger than what was required for a normal human body. A wooden container could be placed in this type of container.

Grave with rectangular sarcophagus with thin walls
The walls of this type of sarcophagus are thinner than the above type, up to a maximum of 9 cm. The lid consists of a flat stone slab made from a single slab or several slabs of stone. The size usually closely matches that of the body. The floor is usually flat and rarely contains perforations. Sometimes there is a shallow recess for the head. A wooden container may be placed in this type of container.

Grave with trapezoidal sarcophagus
This sarcophagus is similar to the rectangular one, with the exception of the plan. A wooden container may also be placed in this type of container.

13 Plaster sarcophagus[82] (fig. 7.3)
Plaster sarcophagi were made by pouring plaster into a wooden mould and removing the mould once the plaster had dried, leaving behind the hardened plaster walls and floor. They are always trapezoidal in plan. Relief decorations were often added to plaster sarcophagi by incising decorations into the wooden mould. Plaster sarcophagi are 'containers placed before the inhumation'.

The French term for plaster sarcophagus is *cercueil de plâtre* and the Dutch *gipsen sarcofaag*.

Grave with plaster sarcophagus
Grave with a plaster sarcophagus, rectangular or trapezoidal in shape.

14 Lead coffin (fig. 7.3)
This type of container was made of sheets of lead, a heavy but soft and therefore malleable material. The casket is rectangular in plan, and the lid flat. The casket has a raised edge and sometimes two rectangular handles. The walls and the lid may be decorated with geometric images.[83] Because of their weight, lead coffins were probably placed before the inhumation.

The German term for lead coffin is *Bleisarg*, the French *cercueil de plomb* and the Dutch *loden kist*.

Grave with lead coffin
This is a grave with a lead coffin of any shape. A wooden container could be placed inside the lead coffin. The lead coffin may be placed in another container.

15 Unknown type of container
If no traces of a container or grave pit are found around an articulated skeleton, both the grave structure and/or burial container must be classified as 'unknown type'. These were probably graves consisting of grave pits with no further containers, or only an organic one, and where all the remains apart from the skeletal material have disintegrated, including the contours of the grave pit. Clearly, this is not a proper structure or container type. Even more so than with 'indeterminate wooden containers', it reflects the inability of archaeologists to be more specific about the grave structure.

(76) Scholz 2002, 21; Collardelle 1996, 281. (77) Collardelle 1996, 281. (78) Collardelle 1996, 276-278 and 284-285. (79) Old Greek: composed of sarx (flesh) and fagein (to eat). (80) For example, Delahaye 1993, 143-146; Delahaye 1985, 689-698; Thirion 1986; Lammers/Overweel 1989. (81) Collardelle 1996, 280-281. (82) Périn/Renou 1985, 707-737. (83) Collardelle 1996, 278-280.

8 Inhumations: burial pits, grave constructions and disarticulate human remains

A detailed description and analysis of the burial pits and grave constructions serves several research goals. First the construction of the grave is an element of equal importance to the grave finds and skeletal remains in the analyses of the Merovingian burial ritual.[1] Second the construction of the grave and the nature of the grave remains are important in the analyses of grave re-openings.[2] Third the detailed analysis of grave constructions allows a better analysis of the variability in burial customs on the cemeteries in a region.[3] This variability can be compared to repeated or normative behaviour in dealing with the dead. The analysis of grave constructions can inform us on ways of caring for the dead body, on conceptions of the body and social and cultic aspects of burials.[4]

The analysis of the burial ritual, the post burial dealings with graves and the comparison of local variation in burial practices are seriously hampered by an insufficient description of grave constructions and publication of the plans of graves.[5]

Table 8.1 shows which contexts related to burial have been identified at the Vrijthof Square.[6] There are 341 graves and possible graves. Possible graves are graves, or rather outlines on the field drawings, in which no skeletal remains or grave finds were indicated. The number of burials is difficult to establish because many skeletons were disturbed by later activities. The presence of skeletal remains of more than one person in many graves indicates that in a number of graves more than one burial can be expected. There is one animal grave of uncertain date.[7] At 27 locations disarticulate human remains were found which cannot be related to a grave construction. Nine stray finds were recorded as well as seven stones which may be related to burials. Twelve younger pits were given a context number because they are of relevance to the study of the cemetery. Four context numbers were given to the walls and robber trenches of the Roman cellar. Fourteen context numbers were discarded because the features were combined with another context.[8]

Table 8.1
The number of contexts related to burial and the Roman cellar.

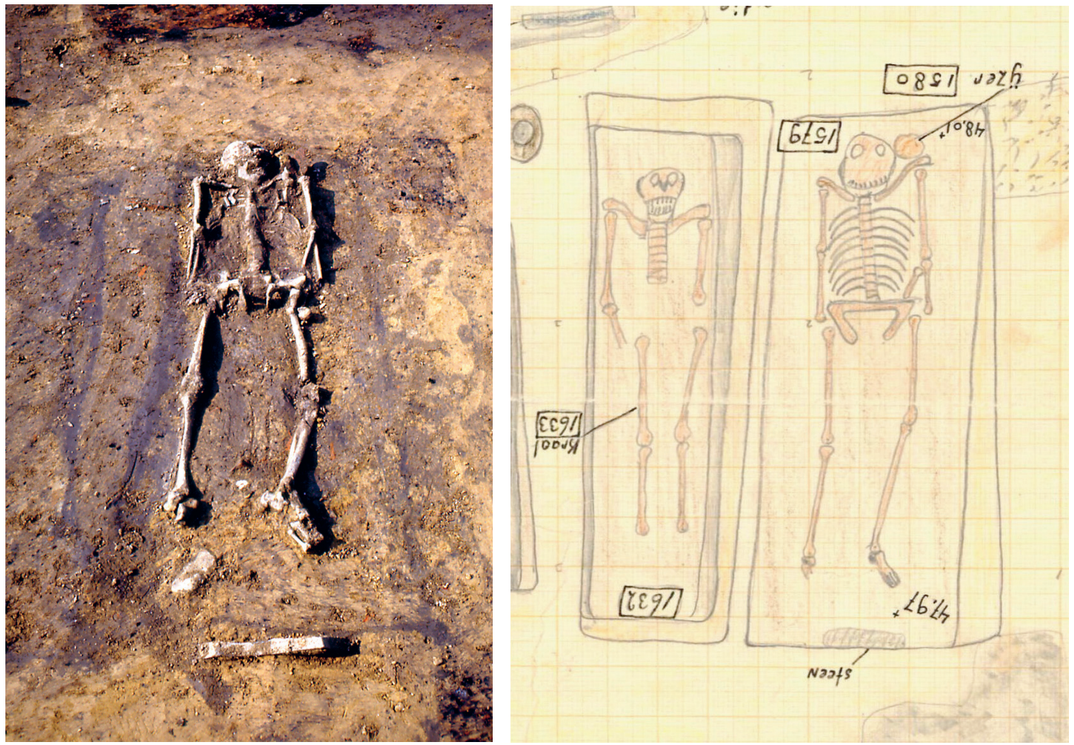
context type	number
inhumation graves	243
possible inhumation graves	98
disarticulate human remains	27
animal grave	1
finds	9
stray finds stones	7
pits	12
discarded contexts	14
Roman cellar	4
	415
graves	341

The nature of the evidence

All graves of the Vrijthof cemeteries were inhumation graves. No graves with cremated human remains were observed. In total 234 inhumation graves and 107 possible inhumation graves were identified in all cemeteries in which an unknown number of persons were buried.[9] The characteristics of the graves in general will be described first and then the variability of grave structures of cemetery 4.[10]

Before doing so it is necessary to explain the difficulties we had in reconstructing the grave plans and what consequences these had for the evaluation of grave structures. First it is important to realize that the descriptions given of the construction of each grave are reconstructions by archaeologists (us) who never saw the evidence in the field. They are based on drawings and photographs. Many times we were puzzled by the evidence presented, which consisted of lines on millimetre paper. Often it was difficult to grasp the meaning of these lines. The drawings of skeletons did not pose many problems; they could easily be identified as indicating whole skeletons or parts thereof. Many times the field technicians drew a rectangle around the skeleton. They might have done so because a skeleton must have been buried in a pit. Today it is often difficult to decide whether these lines indicate the outline of a grave pit, a (wooden) container or are a modern phantasy. No notes were made on which we could rely. Some examples show the dilemmas we had.

Fig. 8.1
Grave 165. Photograph of the lowest level with skeleton and stone at the foot end (left) and field drawing (right).



Grave 165 was observed at level 4 in trench 5. An almost complete skeleton was present. It was drawn fairly accurate except the position of the skull (fig. 8.1, right). The stone at the foot end and an iron object near the skull are also indicated. On the drawing the grave has a light brown shaded area around the skeleton and an oblong triangular band of yellow soil to the right. Without a photograph these soil discolorations are difficult to interpret. Is the light brown area the fill of a coffin? Is the yellow area the fill of the pit? Was there no grave pit outline on the other side next to the other grave?

The photograph shows a different picture (fig. 8.1, left). We see the skeleton and the stone near the feet. There was another stone present in the grave not indicated on the drawing. Around the

(1) See chapter 7. (2) Van Haperen 2010. (3) See for instance Colardelle 1983. (4) We prefer to analyze these aspects first before assigning specific ethnic or cultural labels to different types of burials. Variation in types of graves need not necessarily be related to the arrival of new people. (5) Many publications of Merovingian cemeteries only show the plans of a selection of graves (see chapter 7). (6) These figures include cemeteries 4, 5 and 6. There are other contexts related to habitation and other activities on the square. (7) It is considered to be part of cemetery 5. (8) They were often elements of graves that were later assigned to another grave. (9) It is not even possible to calculate the minimal number of buried persons for skeletal remains of single persons might be scattered over several graves. One can thus not simply add the number of persons of which remains were found in each grave. The only thing one can do is to count the number of articulated skeletons or the number of skulls to obtain a minimum number of buried persons. (10) The variability of grave structures in cemetery 5 will be presented in chapter 12.

skeleton dark lines were present, a straight one to the right and a bent one to the left. Between the feet and the rectangular stone such a line was present too. These dark lines are almost certainly the remains of planks of a wooden container. The line on the left is close to the right arm of the buried person. These remains are difficult to correlate to the lines on the drawing. Moreover between grave 165 and the grave to the left of it dark soil was present in which it is difficult to discover outlines of grave pits. The drawing however shows such outlines. The photograph shows that the stone near the feet was outside the wooden container and stood between the container and wall of the grave pit.[11] This wall is difficult to identify on the photograph. A brown discoloration blurs the outline of the wooden container near the right foot. The drawing of the grave is thus not very accurate. Similar observations on other graves could be made when photographs were made (see fig. 8.2 for other examples of lines drawn through patches of soil with the same colour and composition). For most graves no photographs are available. We decided to use the drawings as they were in the hope that the field technicians were consistent in their interpretations of soil discolorations. However, we often could not decide on the interpretation of an outline around a skeleton: container, grave pit or phantasy. Sometimes outlines around skeletons were so narrow that one suspects that they represented a coffin. In other cases the outline had very angular corners suggesting that it was a wooden container. In the end we cannot be certain. The result is that we have a large group of trench graves of which a substantial number might not be trench graves, but container graves of which the outline of the grave pit was not or could not be observed for instance because the soil in the pit is identical to that of the surrounding area. This problem with describing the graves makes us question the usefulness of this material in a comparison of grave structures with other cemeteries. We thus have to be careful in characterising this cemetery as dominated by trench graves.

Types of graves identified

The typology developed by Smal was the starting point of our analyses.[12] However the problematic nature of the evidence invites to slightly adapt the type identification of graves. We distinguished the following (archaeological) types of graves (between brackets is the grave type indication by Smal):

1. sarcophagi (type 12) ;
2. stone built graves (type 8);
3. graves with a wooden container identified on the basis of soil discolorations indicating the presence of wood and on the basis of a difference between the fill of container and grave pit (type 3);
4. graves with indications for a container and stones outside the coffin that might have supported wooden planks (type 7);
5. a grave with an indication for a wooden partition wall (type 6);
6. trench graves with stones (type 7)
7. graves with just a grave pit and skeletal remains, trench graves (type 0);
8. articulated skeletons or skeletal remains without any indication of grave construction (probably type 0);
9. graves of which only an outline is observed that could indicate a grave pit or container, no skeletal remains recorded (possibly type 0).
10. grave of unknown type;

Next to these archaeological types of graves a number of other features will be discussed:

11. stones at head or feet ends of the grave indicating the presence of grave stones;
12. grave monuments on top of trench graves;
13. contexts with disarticulate human remains without any grave structure;
14. stray finds of Merovingian objects;
15. stray finds of stones;
16. pits as far as they are relevant to understand the Merovingian cemetery;
19. the burial of an animal, not necessarily of Merovingian date.

Some context numbers were given to the remains of a Roman cellar and finally 14 context numbers are 'discarded'. In a later evaluation of the evidence these contexts were considered to be parts of other graves. In order to avoid renumbering the whole administration the 'discarded context' was introduced.

Grave pits: size and construction

In many cases the size of the grave pit could not be established. In other cases, as explained above, it is not clear what the outline drawn around a skeleton exactly represents. In spite of these drawbacks we recorded the lengths and widths of grave pits and outlines around a skeleton that could represent grave pits. Their length varied from 3.19 to 1.01 metres and their width from 1.39 to 0.41 metres (fig. 8.3).[13] Some grave pits seemed relatively long, but this maybe due to an incorrect reconstruction of the grave pit. Some grave pits were exceptionally long compared to the skeleton. Of others only an outline was recorded. The reconstruction of grave pits longer than 2.50 m is thus not necessarily correct. Grave 214 is the first among the long graves that can be considered a truly long grave, its length was 2.65 m. The width of the graves was small compared to the width of graves from rural cemeteries such as Bergeijk and Posterholt (fig 8.4). In those cemeteries most grave pits are wider than one meter, at the Vrijthof Square most graves are smaller than one meter. It is possible that a number of outlines

(11) On these stones see below. (12) See chapter 7. (13) Only grave pits of which both length and width are known are represented in figure 8.3.

Fig. 8.2
Photographs of a grave with lines drawn in the soil by the field technicians.



Fig. 8.3
The relation between the width and the length of grave pits of Merovingian graves.

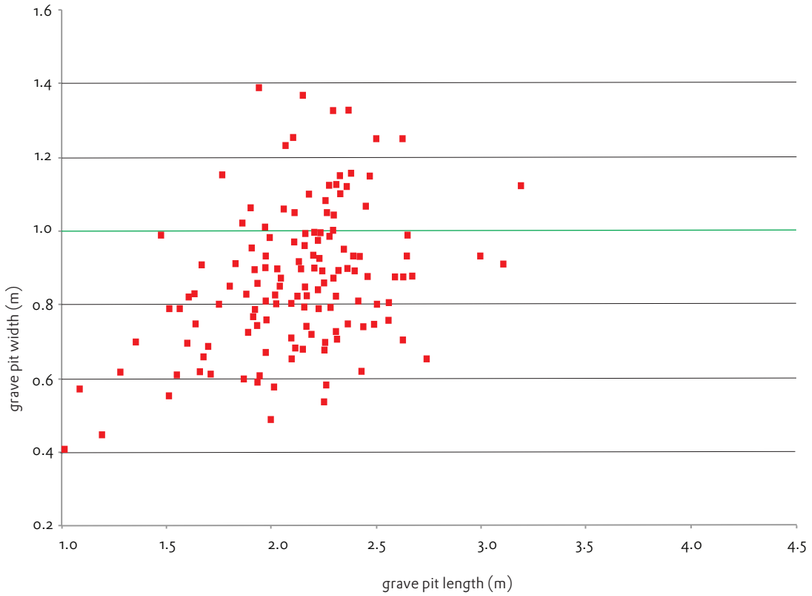
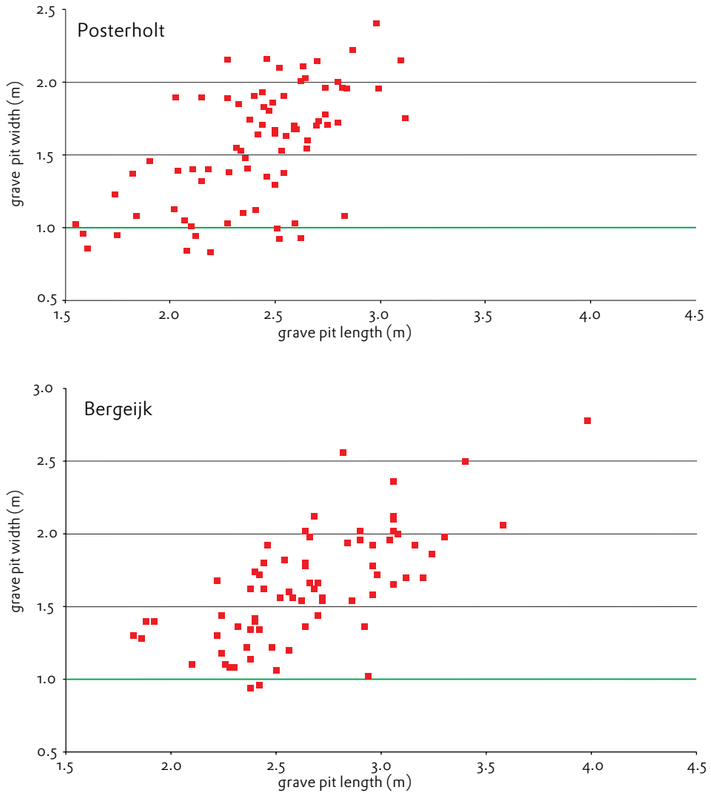


Fig. 8.4
The relation between the width and the length of grave pits in the cemeteries of Posterholt and Bergeijk.



around a skeleton do not represent grave pits but containers.[14] In those cases the grave pit outline was not recorded and is the image represented here not correct. On the other hand we cannot exclude that the grave pits of the Vrijthof cemeteries were relatively narrow compared to those in the countryside. This construction of grave pits was probably related to a preference of burial in trench graves which might be more common in an 'urban' context or to burial near a cult place or possibly burial in a limited space.[15]

Most grave pits were rectangular with rounded off corners and straight walls. The remaining depth of the grave pits was usually small. Information on the vertical form of the pit is not present. It is expected that most of them had almost vertical walls such as the few graves observed in the eastern section wall of trench 4. Although it is not possible to reconstruct the depth of the graves exactly it is expected to be no more than c. 75 cm to one meter. This is based on the analyses of the section walls of the trenches and the assumption that no more than 50 cm of the top of the burials was destroyed in later times. The surface of the cemetery may have risen slightly in the course of time. It is possible that the younger Carolingian graves in trenches 1, 4 and 5 were less deep than those of the lower lying Merovingian cemetery.

Types of graves

Sarcophagus grave

Context 407

One sarcophagus was discovered in the southern sector of trench 5. It was discovered by the crane driver of the building contractor who removed too much topsoil from that area.[16] Determining its exact location poses problems because the position indicated on the field drawing and the height measurements given do not match with the height indications of other graves and excavation levels in that sector.[17] It is a limestone sarcophagus with a trapezoidal form (fig. 8.5). Its external measurements are: 2.16 m long, 48 cm wide at head end, 40 cm wide at feet end. The internal measurements are: 1.96 m, 40 cm wide at head end, 32 cm wide at feet end. No mention is made of a lid. The container was entirely filled with soil when found. This indicates that the lid did not disappear recently. A glass beaker was found in it as well as some skeletal remains which are not mentioned in the documentation. The date of the beaker is wide ranging (sixth – seventh centuries). We can however conclude that the beaker dates to the Merovingian period. The sarcophagus thus will date to this period too unless the beaker was reused in later times. Limestone sarcophagi are a regular recurring feature in the Maastricht cemeteries.[18] They were in use in cemetery 1 at the site of the *basilica* of Saint-Servatius, in the Lage Kanaaldijk cemetery, but not in the Maastrichter Grachtstraat cemetery in the north. The date of trapezoid limestone sarcophagi is a matter of debate.[19] In regions further to the south they already occur in the sixth century.[20] It is suggested that the oldest ones in the Meuse valley date to the later sixth century. It is possible that most of them date to the later seventh and (early) eighth centuries. Some of them were reused in later times.[21] The one from the Vrijthof cemetery dates most likely to the Merovingian period in view of the glass beaker found in it.[22] It is not part of the younger cemetery 5 unless the beaker is an antique deposited in Carolingian times. In the Meuse valley sarcophagi are almost exclusively found on cult sites.[23] The Vrijthof cemetery might be an exception to that 'rule'.

Fig. 8.5
The limestone sarcophagus of context 407 in situ. At the bottom a glass beaker as well as skeletal remains can be seen.



(14) See the discussion of the problems with the documentation of the graves. (15) Päffgen however finds no indications for trench graves in the Sank-Severin cemetery in Cologne and does not expect many trench graves to be present in a bishops' town (Päffgen 1992, 324). (16) See chapter 3. (17) See explanation in the catalogue. (18) Lammers 1989, 398-399. (19) Périn 1985, 689-706; Engen 1986; Thirion 1986; Lammers 1989, 385-390; Delahaye 1991; Otten 2003, 75-76; Finoulst 2012, 46-47. (20) Collardelle 1983, 353-354. (21) Otten 2003, 75. (22) Glass beker find number 1522. See chapter 11. (23) Finoulst 2012, 53.

Fig. 8.6
The plans of the stone built graves at scale 1:50.

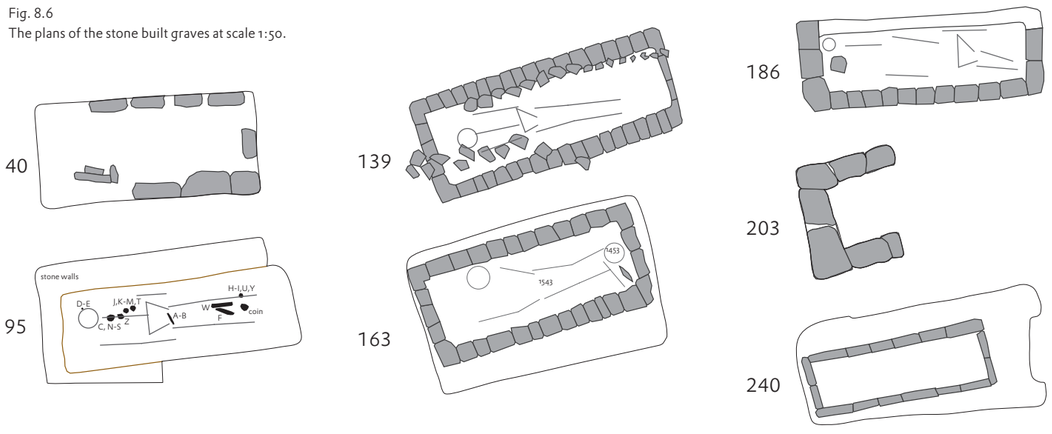


Table 8.2
The measurements of the stone built graves.

grave number	pit length	pit width	container length	container width	container length interior	container width interior	
40			1.97	0.93		0.61	?
95				0.96	2.09	0.70	woman (ph.a.)
139			2.33	0.96	2.16	0.63	woman (ph.a.)
163	2.15	1.37	2.06	0.96	1.83	0.64	woman (ph.a.)
186	2.17	0.80	2.17	0.80	1.83	0.54	man (ph.a)
203				1.01		0.58	?
240	2.18	1.10	1.64	0.59	1.52	0.41	child?
Average	2.18	1.21	2.03	0.89	1.89	0.59	

Stone built graves (without mortar)

Contexts 40, 95, 139, 163, 186, 203, 240

Seven stone built graves were found (fig. 8.6). It is not recorded whether mortar was used for fixing the stones or not. The information from the photographs suggests that it was not. The drawings suggest that the graves were built of regular ashlars, but the photographs show that the walls of most graves were built of stones with an irregular form. They were placed in such a way that the interior wall was straight and flat (see fig. 8.7) The stones of grave 240 may have had a more regular form. They are the only ones of tufa. The photographs show that for the other graves a whitish limestone (probably not the local marl (Dutch: *mergel*) and some black sand stone (Dutch: *kolenzandsteen*) were used. This is probably reused Roman material. The containers have more or less the same dimensions. On average they are 2.02 meters long and 0.88 m wide (table 8.2). The interior space is on average 1.88 long and 0.57 m wide. There are no stone floors in the containers. The tufa stone container (240) is somewhat smaller than the rest. It could have been the grave of a child. It is also one of the oldest stone containers on the basis of its stratigraphic position. The others seem to belong to the last phase of the Merovingian cemetery or even date to

Fig. 8.7
Photographs of stone built graves 139 (left) and 163 (right).



the Carolingian period. Grave 95 could date to an earlier phase in the seventh century. Most containers were damaged in the course of time. No cover stones were recorded. The photographs show that in most cases only one or two layers of stone were preserved.

(24) See catalogue of graves.

The original height could have been five or six layers. Some 30 cm at least should be added to obtain the original height of the container and another 10/15 cm for the cover stones. We cannot establish how deep the top of the container was buried below the surface. Parts of the walls of some graves had disappeared (grave 40: west wall; grave 95: east and part of south wall; 186: north wall; 203: three quarters of the east end). In graves 40, 139, 163, 186, 203 and 240 no grave goods were found. Grave 95 dates to the late sixth or seventh century.[24] In trench 1 a number of stone concentrations were recorded (contexts 395, 397-400). Initially it was thought that they were the remains of stone containers. This was based on the remarks on the field drawings. However as can be seen in the east section of trench 1 they are rather concentrations of stones in the top fill of the deep pits dug in the Vrijthof Square.

Graves with wooden container (without stones)

Contexts: see table 8.3

In only 56 graves remains of a wooden construction were recorded either because soil discolorations indicated the presence of planks or because of a difference between the fill of the pit and the container. In a number of cases these observations are uncertain. Grave 19 was included because of the find of nails. In eight graves stones were found and in one case the construction is probably a partition wall. These graves are discussed in separate sections. Here the 51 remaining graves with wooden containers without stones are discussed. The average length of the grave pits is 2.17 m, the average width is 0.98 m. The pits of the graves with wooden containers are relatively small compared to those of rural cemeteries. In figure 8.8 the size of the graves with wooden containers and the trench graves of the Vrijthof cemetery are compared to those of the Bergeijk and Posterholt cemeteries. The Vrijthof graves are in general not wider than 1.2 meters. The majority of the graves in the rural cemeteries is wider. In the introduction it was stated that it is not always clear what the outline on the field drawing means: pit or container. Now we can see that the pits of graves with wooden container are in general narrow. The idea that many outlines of 'trench' graves might be those of containers instead of the pit because they were narrow may thus not be correct. The trench graves have the same width as the pits of the graves with wooden containers which is an indication that the outlines of trench graves are really those of the pit.

In all cases single wooden containers (coffins) were present. There are no indications for the presence of wooden grave chambers in which coffins were placed. The length of the containers

Fig. 8.8
The relation between the width and length of grave pits of graves with wooden containers and trench graves compared to the width and length of grave pits of the cemeteries of Posterholt and Bergeijk.

Table 8.3
A list of the wooden container graves.

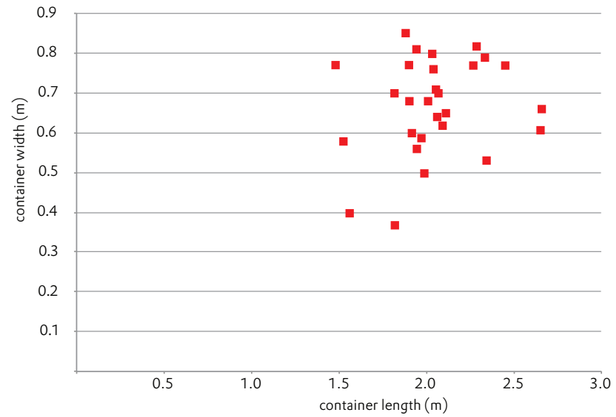
context	context type	length pit	maximum width pit	surface	length container	maximum width container
19	inhumation grave	2.15	0.80	1.72		
29	inhumation grave	2.60	0.88	2.29	2.66	0.66
31	inhumation grave	1.97	1.01	1.99	1.97	0.59
33	inhumation grave	1.75	0.80	1.40	1.52	0.58
36	inhumation grave	2.27	1.05	2.38	2.27	0.77
37	possible inhumation grave		1.10		1.90	0.68
39	Inhumation grave	2,41	0,93	2,2	2,02	0,67
48	inhumation grave	2.31	0.71	1.64	2.01	0.68
51	inhumation grave		1.15		1.99	0.50
59	possible inhumation grave	2.34	0.95	2.22	2.34	0.53
84	inhumation grave	2.45	1.07	2.62	2.45	0.77
85	inhumation grave	2.12	0.82	1.74	1.56	0.40
96	inhumation grave	2.62	1.25	3.28	2.07	0.70
104	inhumation grave	1.91	0.95	1.81	1.82	0.70
105	inhumation grave	2.10	1.25	2.63	2.09	0.62
110	inhumation grave	2.36	1.12	2.60	2.21	0.60
122	inhumation grave				2.10	0.64
126	inhumation grave	2.33	1.10	2.56	2.33	0.79
153	inhumation grave		1.18			0.75
162	possible inhumation grave	1.51	0.79	1.19	1.48	0.77
164	inhumation grave	2.17	0.74	1.61	1.95	0.56
165	inhumation grave	2.13	0.92	1.96		
167	inhumation grave	2.31	0.82	1.89	1.90	0.77
178	inhumation grave		0.99		2.28	0.82
183	inhumation grave	2.03	0.90	1.80	2.03	0.78
187	inhumation grave	2.11	1.05	2.22	2.11	0.65
192	inhumation grave					
194	inhumation grave		1.04			0.72
201	inhumation grave	2.29	1.00	2.29	2.29	0.82
204	possible inhumation grave					
205	inhumation grave					0.81
210	inhumation grave	2.26	1.08	2.44	1.88	0.85
211	inhumation grave	1.51	0.55	0.83		
214	inhumation grave	2.65	0.99	2.62	2.65	0.61
216	possible inhumation grave		0.77			
218	inhumation grave	1.90	1.06	2.01	1.82	0.37
223	inhumation grave	2.16	0.99	2.10	1.92	0.75
230	inhumation grave		1.10		1.92	0.81
237	possible inhumation grave	2.06	1.06	2.18	2.06	0.64
241	inhumation grave	1.92	0.79	1.52	1.92	0.60
244	inhumation grave	1.94	1.39	2.70		
247	inhumation grave	2.33	1.15	2.68	2.04	0.76
277	inhumation grave	2.37	0.90	2.13	2.03	0.80
286	inhumation grave	2.23	1.00	2.23		
295	inhumation grave		1.00			0.54
299	inhumation grave					0.64
305	inhumation grave					
313	inhumation grave				1.94	0.81
346	inhumation grave				2.05	0.71
347	inhumation grave	2.14	0.90	1.93		
365	inhumation grave					0.49

varied between 2.66 and 1.48 m, the width between 0.37 and 0.85 m (fig. 8.9). The average length was 2.05 m; the average width was 0.67 m. This a normal size for coffins. However, in rural cemeteries like Bergeijk and Posterholt wooden containers of considerable larger width were present.[25] In rural cemeteries large wooden (built in) containers and grave chambers in which a coffin was placed were a regular phenomenon. The length of the containers was more or less comparable. This difference in the width of wooden containers between rural cemeteries and the Vrijthof cemetery cannot simply be explained in terms of wealth and social status of the deceased or families involved. Such an explanation would imply that the families burying their dead on the Vrijthof cemetery were in general poorer or of a lesser status than those in cemeteries such as Bergeijk, Posterholt, Meerveldhoven, Rosmeer and Sittard.[26] The grave finds of the Vrijthof cemetery, which are comparable to those of rural cemeteries, do not allow such a conclusion. The difference in the size of both grave pits and wooden containers between the Vrijthof cemetery and the countryside is probably related to the context in which the Vrijthof cemetery is situated.[27] Most wooden containers have a rectangular form. The ones in contexts 59, 104, 162, 164, 178 might be slightly trapezoidal.

An interesting observation is that no cross beams below the coffins were recorded. These cross beams were a recurrent feature in rural cemeteries in both coffin graves as in graves with built in wooden constructions.[28] The absence of such cross beams might be related to other features of this cemetery such as the relatively small size of the graves and the absence of built in containers.

There ar e not many indications for the type of constructions used. As said, in grave 19 two nails were found in the south-east corner that might be related to the construction of a wooden container. Singular nails were found in graves 68, 79, 85, 99, 207 and 293. Their singular occurrence and the location in the grave do not allow an interpretation as coffin nails. There are no indications for wood constructions in the form of protruding planks at the corners of the construction. The wooden containers of the Vrijthof cemetery thus seem to be simple straightforward coffins. In a number of drawings the planks had a rounded off appearance at the corners (for instance contexts 104, 162, 210, 218, 313). They might have been tree trunk coffins, but there is no means of establishing this with certainty. The trapezoidal coffins might also be tree trunk coffins. It is difficult to make solid statements as to the placement of the coffins in the grave pit in view of the quality of the observations made.[29] In some cases the coffin was placed in the centre of the pit. In other cases it seemed as if the coffin was placed against one of the walls of the pit. This observation was based on the presence of only one line indicating the presence of a wooden container. Usually these lines are not in the centre of the pit.

Fig. 8.9
The relation between the width and length of wooden containers.

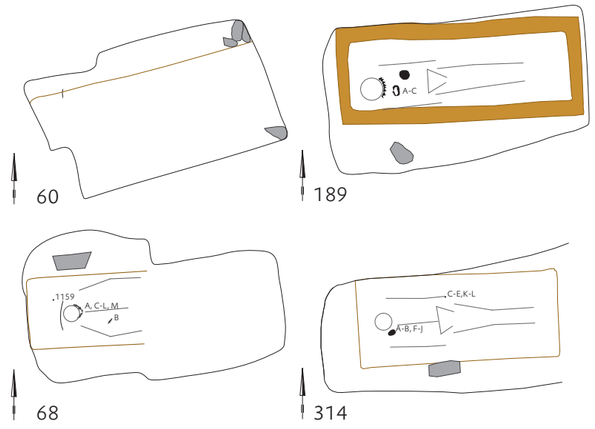


Graves with wooden container (with stones outside the coffin, not being head- or feet stones)

Graves 60, 68, 189, 314,

In four graves stones were found in the fill of the pit outside the wooden container (fig. 8.10). In one case the stones were at the eastern corners of the wooden container suggesting that they supported the planks. In the other three cases only one stone was recorded. Those in graves 68 and 314 can be considered stones supporting planks in the long walls of the container. The one in grave 189 does not seem to have a function in the construction of the container.

Fig. 8.10
Plans of graves with wooden containers and stones at scale 1:50.



(25) Bergeijk: Theuws/Van Haperen 2012, 42 (fig. 3.5); Posterholt: De Haas/Theuws 2013, 62 (fig. 4.8). (26) Bergeijk: Theuws/Van Haperen 2012; Posterholt: De Haas/Theuws 2013; Meerveldhoven: Verwers 1978; Rosmeer: Roosens/De Boe/Demeulemeester 1976; Roosens 1978; Sittard: Kars/De Haas/Theuws in press. (27) See chapter 14. (28) See Veldhoven-Oeienboschdijk (Verwers 1973); Rosmeer (Roosens/De Boe/Demeulemeester 1976); Meerveldhoven (Verwers 1978); Bergeijk (Theuws/Van Haperen 2012); Posterholt (De Haas/Theuws 2013). (29) See above.

Grave with partition wall

Grave 238

In grave 238 a line was observed that might indicate the presence of a wooden partition wall in the grave pit. The interpretation is not certain. This grave was singled out because the line was close to the centre of the grave. The other possibility is that it is a grave with a wooden container.

Trench graves with stones

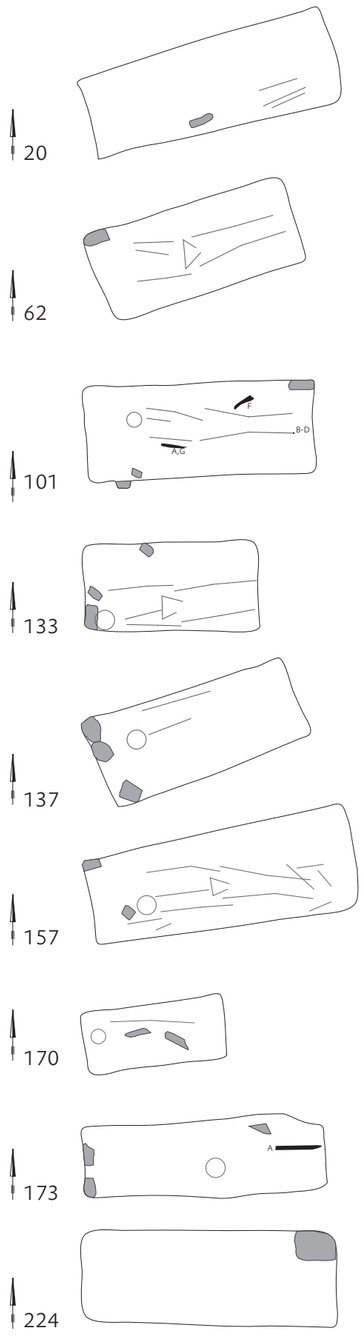
Graves: see table 8.4

In many cases only one outline of the grave was recorded, there are no indications for containers. In 26 cases stones were observed inside the outline. These stones had different functions. Some of them seem to be the lower part of a grave marker (see below), others were next to the skull and yet others were lined along the recorded outline (fig. 8.11). Some were in such a position that no meaningful function can be suggested. In graves 62, 101, 115, 133, 137, 148, 157, 159, 173, 224, 330, 331, 333, 390, stones were placed in the observed corner of the pit or along one of the sides of its outline.[30] One wonders about the use of such stones when no

Table 8.4
A list of the trench graves with stones.

context	context type	length pit	maximum width pit	surface
20	inhumation grave	2.26	0.86	1.9
52	inhumation grave	1.97	0.67	1.3
62	inhumation grave	1.84		0.0
66	inhumation grave			0.0
86	inhumation grave		0.94	0.0
101	inhumation grave	2.04	0.85	1.7
115	inhumation grave	2.49	0.75	1.9
125	inhumation grave	2.44	0.74	1.8
133	inhumation grave	1.56	0.79	1.2
137	inhumation grave	1.88	0.83	1.6
143	inhumation grave		0.63	0.0
148	inhumation grave			0.0
157	inhumation grave	2.4	0.89	2.1
159	inhumation grave	2.3	1.04	2.4
170	inhumation grave		0.55	0.0
172	inhumation grave	1.94	0.61	1.2
173	inhumation grave	2.18		0.0
179	inhumation grave	1.01	0.41	0.4
184	inhumation grave		0.69	0.0
224	possible inhumation grave	2.29	0.87	2.0
330	inhumation grave		0.86	0.0
331	inhumation grave		0.78	0.0
333	possible inhumation grave		1.18	0.0
367	inhumation grave			0.0
388	inhumation grave		0.73	0.0
390	inhumation grave		0.57	0.0

Fig. 8.11
Plans of a selection of trench graves with stones at scale 1:50.



planks were present. Planks may not have been observed because of unfavourable conditions or their remains were fully decayed. Other stones are head- or feet stones (see below), yet others seem to support the head, such as those in graves 86, 133 (with also a head stone), 143, 157, 172, 179, 331 (?). For stones such as those in context 66, 170, 184, 367, 388 no proper explanation can be given.

Trench graves (?)

Graves: see appendix 8.1

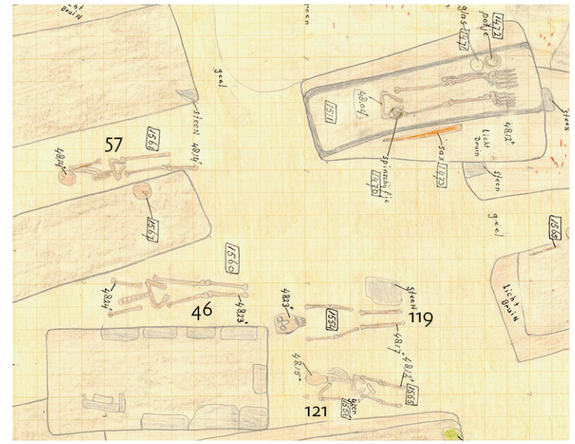
There are 133 inhumation graves of which only one outline is recorded around skeletal remains or grave finds. The presence of skeletal remains and grave finds is an indication that the outlines represent a burial. If such indications are absent the graves are qualified as possible inhumation graves. The absence of indications for containers does not mean that all these graves were trench graves. It is possible that remains of planks or the difference between the fill of the container and the grave pit could not be observed or were overseen. It is unlikely, in view of their large number that this goes for the majority of the 'trench graves'. Moreover they have the same width as the pits of graves with wooden containers (fig. 8.8). This means that a large number of trench graves were present on the cemetery. This sets the Vrijthof cemetery apart from those in rural contexts where trench graves are almost absent. The average length of the grave pit was 2.11 m; the average width was 0.80 m. The grave pits are thus only slightly shorter than those for wooden container graves, their width is on average 19 cm less (0.98 vs 0.80 m). On a total of 243 certain inhumation graves 55% were trench graves (133 of 243). This figure is larger if we include the graves of which only an outline was recorded (the possible inhumation graves, see below). Most of the pits are rectangular with rounded off corners.

Articulated skeletal remains, no grave structure

Graves 1, 2, 3, 46, 57, 87, 92, 108, 119, 121, 156, 270, 271, 273, 283, 284, 285, 297, 308, 315, 337, 338, 349, 351, 352, 353, 373, 374, 379, 383, 385

In 31 cases articulated skeletal remains of adults and children were recorded without any indications of a grave pit or grave constructions (fig. 8.12). Eighteen times skeletons with skull, and articulated arms and legs were observed, 13 times only smaller parts such as legs were recorded. In several cases grave goods were found. As it is obvious that burial must always involve the digging of a pit, the absence of observations of pits and grave constructions must be due to unfavourable conditions for making such observations. However, one cannot expect that these graves had elaborate constructions. So these burials strengthen the image that the Vrijthof cemetery was dominated by simple graves without constructions. Although many skeletons are more or less complete it is curious that in most cases some elements of it were missing. At times no skull was observed on other cases one arm of a leg was missing. It

Fig. 8.12
Part of the field drawing of level 3 in trench 5 with articulated skeletons 46, 57, 119 and 121. Original scale 1:50.



is unlikely that this is due to different conservation conditions for different bones. See for instance the skeletons indicated in figure 8.12. Burial 46 misses the skull, burial 121 the left arm, burial 57 the right arm and the left lower leg. This might of course be due to later disturbances, but then one wonders why only these parts were taken away and not the whole skeleton was disturbed, especially those of children who are small.

Possible inhumation graves

Graves: see appendix 2

A large number of rectangular single outlines (80) with no further indication of skeletal remains, grave finds or construction elements were indicated on the field drawings (fig. 8.13). These features are qualified as possible inhumation graves. Especially at the higher levels such 'empty' outlines were recorded. There are also a number of incomplete outlines indicating that a part of the possible grave was dug away or not observed. Many of these outlines intermingle with certain graves (on fig 8.13 those with skulls) so it is conceivable that most of these possible inhumation graves are graves indeed. No further information can be given on these graves. If they contained any containers it will have been coffins, but many of them could have been trench graves without construction elements.

Unknown grave type

Grave 116

Of grave 116 only an outline around a number of grave finds is indicated. It is not clear what this means.

(30) The phrasing 'observed corner' is given because a circular argument might be present. The corner may have been drawn in this way because the stone was there.

Fig. 8.13
Part of the field drawing of level 1 in trench 5 with outlines of graves with and without skeletal remains. Original scale 1:50.

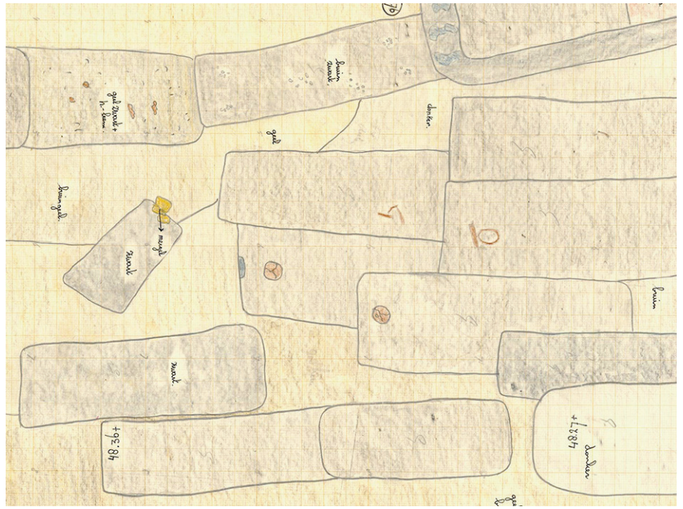
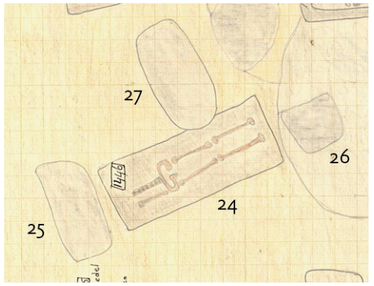


Fig. 8.14
Part of the field drawing of level 2 in trench 5 with pits around grave context 24. Original scale 1:50.



Disarticulate human remains, no grave structure

Contexts 14, 22, 41, 42, 43, 53, 65, 74, 93, 112, 118, 154, 177, 301, 303, 304, 354, 355, 358, 362, 371, 375, 376, 384, 386, 401, 405

Disarticulate human remains were recorded in 27 places. Often single skulls were found, sometimes even two or three with additional bones. This skeletal material indicates that graves must have been disturbed regularly and that bones were put aside or dug into smaller pits that were not recognized by the excavators. These remains indicate that not always human bones discovered when digging a grave were deposited in the new pit, unless they were placed in niches hollowed out in the wall of the grave. In those cases it is difficult to observe pits. However no such features were described or indicated on the field drawings. One cannot add the individual disarticulate skulls to the number of burials discussed in the previous sections because there were skeletons without a skull.[31] Although we cannot conclude that there was a custom of separating skulls from the rest of the skeleton, we can conclude that single separate skulls (or at times two or three) were found regularly.

Single finds of objects

Contexts: 30, 69, 70, 90, 209, 220, 228, 279 and 408

A number of single objects were found. They could not be related to any other structure and were thus considered as contexts on their own. They are a seax, a glass bottle, an iron fragment, a biconical pot, a ceramic bowl, a ceramic jug, a red biconical jug, a red dish and a knife, and a glass bottle. These objects could, like the disarticulate human remains, have been found while digging new graves after which they were deposited again instead of being destroyed and thrown away. The seax of context 30 could be an example of this. The ceramic and glass vessels could be the remains of post-burial activities on the cemetery such as memorial feats or meals. Occasionally such single finds are present on rural cemeteries such as Bergeijk.[32]

Single stones

Contexts: 23, 44, 45, 120, 155, 174, 409

Seven times stones were found that could not be related to another context. The meaning of these stones is not clear. In one case (context 44) two rectangular stones were placed at right angles.

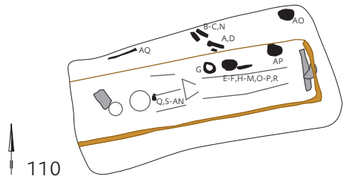
Pits

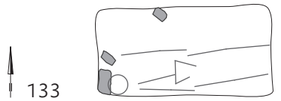
Contexts: 25, 26, 27, 54, 71, 89, 182, 195, 196, 221, 251 and 415.

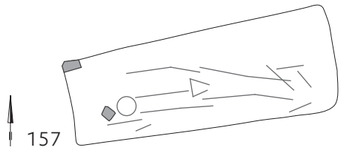
At the site of the cemetery a number of pits were identified. Some of them have the form of an inhumation grave but the information and relation to other inhumation graves is such that we decided not to consider these graves or possible graves. Some pits might be older than the Merovingian graves. An interesting set of pits was found around grave 24 (fig. 8.14). Pit 25 was exactly at the head end, pit 26 at its feet end and pit 27 to the north of it. Pit 27 just cut grave 24 and is thus younger. No finds were recorded in these pits. More pits were found in this part of the site such as context 54, a rectangular pit with two stones and two skulls (context 53) next to it. It is however difficult to establish whether the pits were older (Roman), contemporary with the cemetery or (much) younger.

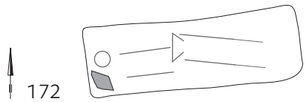
(31) The absence of skulls might also be the result of theft during the excavations. (32) Theuws/Van Haperen 2012, 166-167.

Fig. 8.15
Plans of graves with stones near the head (left) and stones at the head or feet end of the grave (right) at scale 1:50.

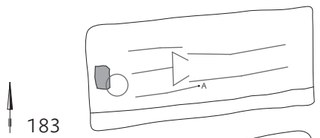


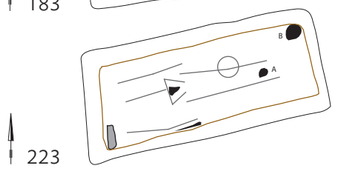


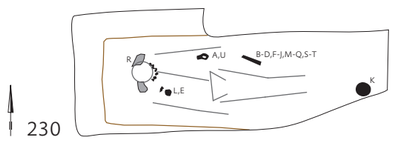












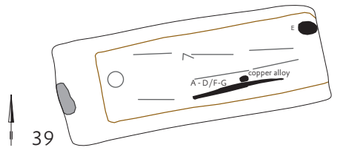
Animal grave

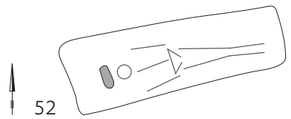
Context 190

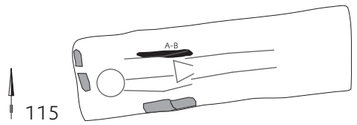
One partly excavated pit with the articulated remains of an animal was recorded. Neither the date nor what animal it was is known.

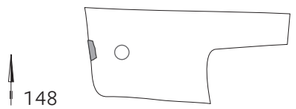
Discarded contexts

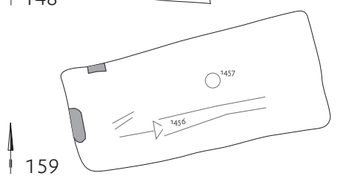
Fourteen context numbers were discarded because the features of these context numbers were assigned to another context number.

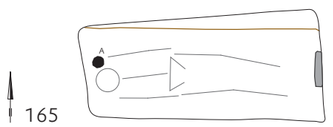












Stones at the head and feet end of graves

Graves: 39, 52,110, 115, 133, 148, 157, 159, 165, 172, 179, 183, 223 and 230

In fourteen graves stones were found next to the head or at the head or feet end of the grave pit in the axis of the grave. The stones placed near the head (fig. 8.15 left column) might have served various functions. They have a rectangular or irregular form and are placed above the head, to the left or right of it or on both sides. They could have supported the head to prevent it rolling aside during decomposition as in grave 230. The function of the stones place above the head cannot be inferred from the present evidence. Some of them (graves 110, 183, 223) seem to have been deposited inside the wooden container. Others are in trench graves.

The stones placed against the wall of the grave pit at the head or feet end (in grave 110 such a stone seems to have been placed in the wooden container) had a different function. They are flat and long rectangular. At least one of them is of limestone (grave 165, see fig. 8.1). Another one seems to be of (reused Roman?) brick (grave 115). There is no information on the other stones. The limestone slab of grave 165 could be the remnant of a vertical stone grave marker that projected beyond the surface. It might even

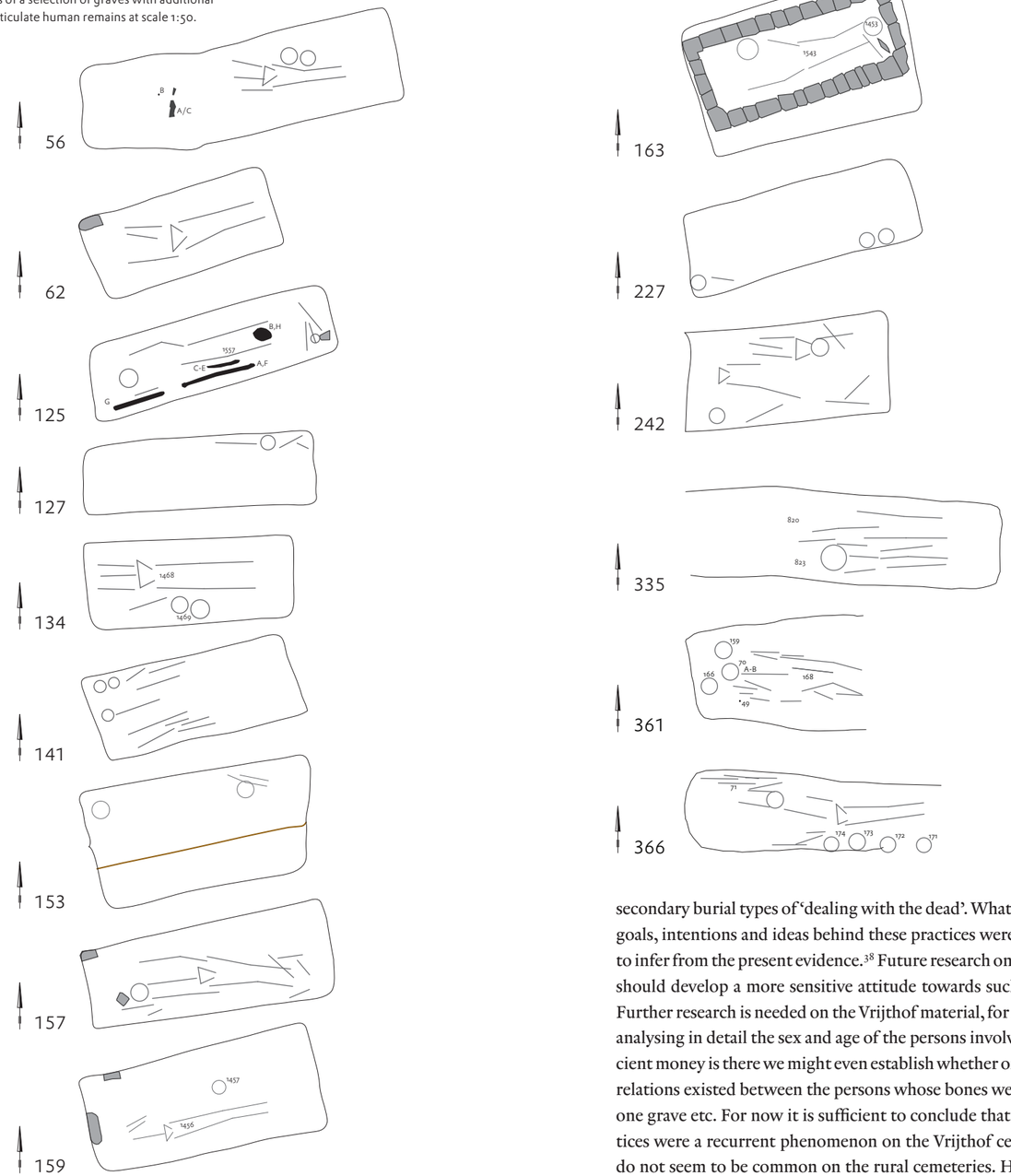
have had an inscription. The other head and feet stones could be the lower parts or the foundations for above ground grave markers. Although we have no further evidence on the nature of these grave markers they remind of the Christian gravestones with inscriptions or of gravestones without a text. These are relatively rare in the Meuse valley but are more common in the Rhine and Moselle valleys.[33] In Maastricht however five of these were found in the Saint-Servatius complex. Such elements (Christian or not) have not been observed on rural cemeteries in the region around Maastricht or in the Meuse valley to the north of Maastricht. Again this characteristic sets the Vrijthof cemetery apart from those of the rural world.

Disarticulate human remains in and outside graves

In many graves human remains were found that do not belong to the primary or secondary burial (see fig. 8.16 for a non-comprehensive selection of graves). Long bones and skulls from other deceased were deposited at the feet end or lined up along the wall of the pit as is the case of grave 366 where four additional skulls were in the grave pit. At times it is difficult to distinguish the proper burial from the additional bones as in grave 361. However there are also cases in which the skull was not in its original position as in graves 56, 134, 159 and 366. It is not always possible to establish whether the skull (or one of the skulls) found belonged to the rest of the skeleton. In two cases (56 and 134) an additional skull was placed next to the primary (?) one. In other cases a whole series of extra skulls were placed in the grave (141, 227, 361, 366). There are also graves in which the skull was missing, grave 62 being an example.[34] To this evidence for additional (or missing) skeletal material in graves we can add the disarticulate skeletal remains discussed above. Often single skulls were involved.

The presence of these 'additional skeletal remains' and the disarticulate remains outside grave pits could be the result of the intensive use of the cemetery and the constant disturbance of older graves when digging new ones. Respect for the ancestors could have urged gravediggers to collect the bones, especially the skull and deposit them in the newly dug grave. However, it is possible that there is more to this than the gravedigger's respect. At the Borgharen cemetery it was observed that bones of children (from their reopened graves?) were interred at the feet of the mother some time after she died.[35] Van Haperen observed that bones were often taken from graves when they were intentionally reopened.[36] Dealing with bones of lay deceased persons for emotional, cultural, religious and social reasons was more common in Merovingian times than has been envisioned up till now.[37] Collecting skulls and other bones to deposit them in graves might just be one of those activities that should be seen in the context of post-burial or

Fig. 8.16
Plans of a selection of graves with additional disarticulate human remains at scale 1:50.



secondary burial types of 'dealing with the dead'. What exactly the goals, intentions and ideas behind these practices were is difficult to infer from the present evidence.[38] Future research on cemeteries should develop a more sensitive attitude towards such practices. Further research is needed on the Vrijthof material, for instance by analysing in detail the sex and age of the persons involved. If sufficient money is there we might even establish whether or not family relations existed between the persons whose bones were found in one grave etc. For now it is sufficient to conclude that these practices were a recurrent phenomenon on the Vrijthof cemetery but do not seem to be common on the rural cemeteries. However we must admit that conservation conditions are bad at rural cemeteries in the region where bone material is hardly preserved. In a case where these were better (Borgharen) a nice example of post-burial dealing with skeletal remains was recorded. Nevertheless we know of no examples where for instance tooth remains, which usually are preserved to some extent, of two persons were found in one grave on rural cemeteries. To conclude this section we can say that additional skeletal material often occurs in the graves of the Vrijthof cemetery. This can be due to the intensive use of the cemetery and the reburial of excavated bones but also because of as yet poorly understood practices in relation to the post-burial care for the dead. Moreover these practices seem to occur more often in the Vrijthof cemetery than on rural cemeteries.

Conclusions

Table 8.5 provides an overview of the contexts discussed above. The graves and buried human remains are above the bold line. Figure 8.17 illustrates the distribution of the various grave types. Of course there are the uncertainties of interpretation. The most important one is that some outlines around skeletons are not necessarily grave pits but containers. In those cases the grave is not a trench grave but a wooden container grave. However we wonder whether this occurs so often that the present image alters totally. A comparison of the size of pits of graves with wooden containers with those of trench graves showed that they are more or less of equal size. The grave structures of the Vrijthof cemetery have some characteristics that we discuss in this section.

The Merovingian cemetery was characterized by the large number of trench graves, articulated skeletons with no grave structure, which are likely to be trench graves and possible inhumation graves which are also most likely to be trench graves. So, trench graves made up 75% of the grave contexts! Wooden container graves made up only 15,5 % of the grave contexts. The wooden container graves were however relatively narrow and without exception coffin graves. There was only one sarcophagus and only seven stone built graves. This means that the grave structures of the Vrijthof cemetery are relatively simple. This distribution of grave types is different from all other cemeteries in Maastricht and its environs.

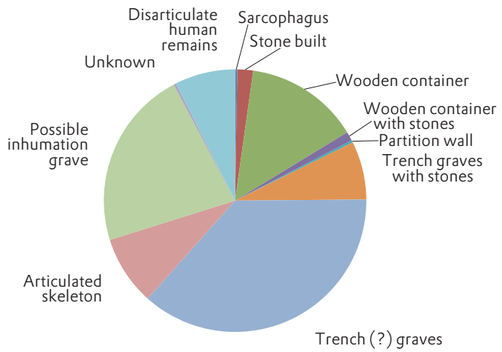
On rural cemeteries the dead are usually buried in a wooden container or at times in two wooden containers (a built in grave chamber and a coffin). This is clearly illustrated by the evidence of the cemeteries of Rosmeer, Borgharen, Sittard, Posterholt and Bergeijk.[39] Trench graves are almost absent in those contexts. On rural cemeteries narrow wooden coffin graves only occur on a regular basis in the late seventh and early eighth century.[40]

(33) Boppert 1986. (34) It is possible that this is due to theft during the excavation 1970. (35) Lauwerier/Müller/Smal 2011, various contributions on grave structures, skeletal remains and DNA analyses, conclusions pp. 130-131. (36) Van Haperen 2010. (37) We know of course of dealing intensively with the bones of saints. See the discussion on this by Van Haperen (2010) in the context of the debate on re-opened graves. (38) Van Haperens present research on grave re-openings will shed more light on this. (39) Rosmeer: Roosens/De Boe/DeMeulemeester 1976, Roosens 1978; Borgharen: Lauwerier/Müller/Small 2011, Lauwerier/De Kort 2014; Sittard: Kars/De Haas/Theuws in press; Posterholt: De Haas/Theuws 2013; Bergeijk: Theuws/Van Haperen 2012. In Engelmanshoven (Vanderhoeven 1977) wooden containers were observed in only one third of the grave. This might be due to the high frequency of reopening graves and the bad conservation conditions. (40) Nice examples of rows of coffin graves were observed in Bergeijk and Posterholt (Theuws/Van Haperen 2012; De Haas/Theuws 2013).

Table 8.5
The number of different types of graves in the Merovingian cemetery.

Context type	Number
Sarcophagus grave	1
Stone built graves	7
Wooden container graves	51
Wooden container with stones outside	4
Grave with partition wall	1
Trench grave with stones	26
Trench (?) graves (inhumation graves)	133
Articulated skeleton no grave structure	31
Possible inhumation graves	80
Unknown	1
Disarticulate human remains	27
Finds	9
Stones	7
Pits	12
Animal grave	1
Discarded contexts	14
	405

Fig. 8.17
Graph showing the share of each type of grave in the total number of graves.



Sarcophagi and stone-built graves are rare on the Vrijthof cemetery. In Maastricht at the Saint-Servatius cemetery and the Lage Kanaaldijk cemetery sarcophagi and stone built graves were found in greater numbers.[41] In fact Maastricht is more or less at the northern limits of the distribution area of sarcophagi and stone built graves in the Meuse valley in Merovingian times.[42] Further to the south stone built graves were a regular phenomenon at cemeteries along the Meuse river. Away from the river, further inland, graves with wooden containers again dominate the spectrum. River transport will have played an important role in the distribution of (imported) sarcophagi.[43] Maastricht is directly situated on the river banks, so transport and availability will not have been a major problem in procuring stone sarcophagi. The small number of sarcophagi at the Vrijthof cemetery thus must have been the result of a choice made by the families who buried their dead on this graveyard. What motivated this choice is difficult to deduce from the present evidence. To the north of Maastricht stone sarcophagi were not used at cemeteries along the Meuse river. Why is this? It is difficult to imagine that the non-availability or insufficient navigability of the Meuse river were responsible for this situation. Finoulst already observed that many sarcophagi were found on Christian cult sites.[44] The absence of Merovingian cult sites to the north of Maastricht in Merovingian times could thus be one of the reasons for the absence of Merovingian sarcophagi further north. Although only one sarcophagus was found at the Vrijthof cemetery, next to stone built graves, one could see this as a, be it a weak indication for the nature of the cemetery. Is it related to a cult place? Another characteristic of the cemetery is the horizontal and vertical distribution of graves on the Vrijthof cemetery.[45] The graves at the Vrijthof cemetery are closely packed together and many times several graves were placed on top of previous ones. This too occurs only exceptionally on rural cemeteries but is a common phenomenon of burial grounds near cult places.[46] Another interesting phenomenon is the presence of stones at the head and feet end of some graves. At least one of them is the lower part of a limestone slab. Finally the large amount of disarticulate human remains is unfamiliar at rural cemeteries.

When we overlook the specific features of the graves of the Merovingian cemetery we have to conclude that it is a type of cemetery that does not share many characteristics with rural cemeteries. It shares some characteristics (stone built graves, sarcophagi, closely packed together and piled up) with cemeteries near cult places although the number of sarcophagi and stone built graves is relatively small.

Later we will come back to the characteristics of the Vrijthof cemetery in relation to its position in early medieval 'Maastricht'.[47]

(41) The Saint-Servatius cemetery is studied in the context of the Saint Servatius project and the Odyssee-Anastasis project. The final publication of the results are still due. See for now: Panhuysen 2005. For the Lage Kanaaldijk cemetery see Hulst/Panhuysen 1995 and Panhuysen 2005 (42) Lammers 1989; Finoulst 2012. In Carolingian and Ottonian times they are found further north as well. (43) Finoulst 2012, 52. (44) Finoulst 2012, 53. (45) See chapter 11. (46) In singular cases graves are put in exact the same place are a previous grave. Such a practice was observed in the, not yet fully published, cemetery of Ophoven (Roosens 1975, 1976a, 1976b, 1977a, 1977b, 1978b). The packing together of graves is a phenomenon that occurs in the late seventh century in rural cemeteries such as Posterholt and Bergeijk (De Haas/Theuws 2013; Theuws/Van Haperen 2012) and on farmyard burial grounds such as those in Dommelen and Geldrop (Theuws in prep.). (47) In this discussion the sharp boundary to the west of the Vrijthof cemetery is also an important element.

9 The typo-chronological analysis of the grave goods: methodology

The analysis of an extended and complicated archaeological dataset, such as that of Vrijthof cemetery 4, generally starts with the reconstruction of the chronological and topographical development of the associated site/cemetery. The typo-chronological analysis of the grave goods contributes to this reconstruction. The main goal of the thesis ' A cultural perspective on Merovingian burial chronology', which included the study of the Merovingian grave goods from the Vrijthof cemeteries, was to illustrate that a chronological analysis of grave goods from a cultural perspective results in the reconsideration of the accuracy of chronological methods and the pursued chronological refinement.[1] The 'cultural perspective' implied a reflection on the connection between grave goods and the deceased and the pre-burial circulation trajectories of those grave goods.

Chronological methods as a practical exercise need a concrete-theoretical background in which cultural-theoretical backgrounds should be integrated and which, in short, relates to the structure and meaning of the created classification schemes and the established chronological phases, short or long, on the basis of these schemes.[2] How should a chronological analysis be performed with regard to all the theoretical aspects of chronological methods and the pursued chronological refinement? The Vrijthof dataset does not meet the requirements for a state of the art seriation or topo-chronological analysis, and an independent typo-chronology of graves and grave goods for Maastricht or its hinterland is not available yet. Existing typo-chronologies (which were for the majority obtained by the method of seriation) have to form the basis for the (first) chronological analysis of Vrijthof cemetery 4. The typo-chronologies, selected for this purpose, are 'independent schemes'; they are created for one cemetery or a group of cemeteries on the basis of a distinct chronological method (seriation and/or topo-chronology). The suitability of the selected typo-chronology schemes for the chronological analysis of the Vrijthof finds will be discussed, together with the underlying assumptions of the produced typologies and the length of the absolute chronological phases. Their theoretical backgrounds (both the cultural-theoretical and concrete-theoretical backgrounds) will also be made explicit. The conclusions contribute to the final choices with regard to the actual chronological phasing of the grave goods from the Vrijthof cemetery and future analysis of the other cemeteries of the Servatius complex.

The construction of the typo-chronology of the Vrijthof grave goods

The conservation of cemetery 4 and its finds

The Vrijthof site was excavated from the end of 1969 till the beginning of 1970.[3] Trenches 1, 3, 4, 5 and 6 revealed early medieval burials and is here referred to as cemetery 4 (fig. 6.1). The Merovingian cemetery 4, which was the only one that produced a lot of grave goods, was not completely excavated; only the borders to the south and west were identified. It is plausible to expect that the cemetery stretched to the Roman road in the north. The excavation north of the road (Theatre site[4]) did not reveal any early medieval burials. The cemetery could have expanded more to the east than we know. Moreover, the section between trenches 5 and 6 was not excavated. This section was destroyed and the soil (with the finds of the graves from this section) were discarded somewhere outside the city of Maastricht. Some of these finds were recovered, and are published in the catalogue as 'soil heap finds'. No further context information is available for these finds. The excavation of the early medieval cemetery in trenches 4, 5 and 6 took around three weeks, which raises some doubts about the quality of the administration of the considerable number of graves, grave goods, skeletal remains and other features. The Vrijthof cemetery knows next to a horizontal lay out also a vertical stratigraphy, which is an unusual feature for early medieval cemeteries. The analysis of the vertical layers of graves offers, at first sight, possibilities for the comparison of the typo-chronological results with the vertical positions of the graves (see chapter 11).

The identified outlines of the graves, their stratigraphic relation to other graves and the final assignment of the associated grave goods and skeletal remains to the excavated graves formed the basis for the typo-chronological analysis of the Vrijthof grave finds.[5] The post-excavation processes resulted in the absence of some of the finds that were recorded during the excavation. For some finds it is unknown what happened to them, for others it is known that they were stolen from an exposition in the seventies. An important source of information for some of the absent finds is the Ypey-archive.[6] A number of finds that are missing can be described, more or less accurately, and classified on the basis of the information in this archive. The missing finds which cannot be described in detail anymore, but of which it is known that they were found in a grave, are also incorporated in the overview of the grave finds. Their description only consists of general terms such as 'pottery' or 'metal'. With all the documentation available the most complete overview of grave finds was obtained.[7]

The Vrijthof cemetery forms the basis for the first typo-chronological analysis of the Servatius complex.[8] The Servatius cemetery on the plateau (in the Pandhof and inside the church) contains more graves than the Vrijthof cemetery. The majority of the graves and grave goods of both cemeteries can be dated to the sixth and seventh centuries, but on the basis of the available documentation it can be concluded that the Servatius cemetery started to be a burial ground some time before the Vrijthof location. Some of the Pandhof graves can, on the basis of the grave goods, be dated to the late Roman period and to the transition period (broadly the fifth century) from the late Roman to early medieval period.[9] Late Roman objects were also reused in Merovingian graves and the only hard evidence for the assignment of these graves (without early medieval finds) to the late Roman period is provided by the stratigraphic analysis which will be published in the Servatius cemetery volume. A considerable number of the graves from the Vrijthof contained, next to the grave goods, skeletal remains.

The typo-chronological analysis of grave goods

The chronological methods seriation and topo-chronology both require a relatively complete and extended dataset since they should be executed with a classification scheme of types that occur repeatedly in a series of graves. As such these methods can produce an independent typo-chronology scheme. These requirements are not met by the dataset of the Vrijthof cemetery, not even in combination with the graves of the Pandhof and church excavations. An independent typo-chronological scheme cannot be produced for these cemeteries, and neither can they be incorporated in an existing one, since such a scheme is not available for the Middle Meuse Area (which is considered to form a distinct cultural area, of which Maastricht was one of the centers, in early medieval times). Other choices with regard to the classification of the grave goods from these cemeteries had to be made, and the resulting typo-chronological ordering of the graves has to be seen as preliminary, since the relation with other cemeteries from the Middle Meuse area is not yet established. The use of existing typo-chronological schemes of cemeteries in more or less distant regions was in the first stadium of research the only option for the phasing of the graves from Maastricht. The evaluation of the typologies that stand at the basis of these chronological schemes and their suitability to form the basis for the classification and dating of the grave goods from the Vrijthof square, but also the identification of their specific cultural perspective on dating methods and chronology, is therefore the main discussion in the following sections.

The typo-chronological debate has been dominated mainly by German and French research schools and is evaluated in detail in numerous publications.[10] Böhner's publication of the cemeteries from the Trier area forms the origin of this debate.[11] It was different from preceding publications because it introduced a distinct method for relative dating, the so-called combinational analysis.[12] This method distinguished itself from the foregoing dating methods in that it is based on the complete range of grave goods known from early medieval cemeteries. Before that, the dating of graves was mainly based on comparisons with historically dated assemblages or on just a specific selection of grave goods.[13] This last method in fact formed the basis of Werner's publication *Munzdatierte austrasische Grabfunde*.[14] His dating method was based on coin-containing graves of which the development stages of the variety of associated finds were established. These development stages (*Stufen*) were subsequently dated on the basis

(1) Kars 2011, 2014. (2) Kars 2011, 13-33. (3) See chapters 3 and 6 in this volume for an extended and more detailed discussion of the excavation history of the Vrijthof square and the conservation of the early medieval cemetery. (4) Hulst 1994. (5) See chapter 4 for a detailed discussion of the available documentation and how the diverse sources of documentation were made available. For the problems with the outlines of graves see chapter 8. (6) Ypey studied a selection of the finds from the Vrijthof cemetery and made photographs and pictures of them, which he kept in his archive. (7) One category of objects from the Vrijthof excavation was already published in detail: the finds of bone and antler (Dijkman/Ervynck 1998). (8) One of the first research goals of the analysis of the Servatius complex was formulated as the description of the chronological and topographical development of this complex during the late Roman and the early medieval period. (9) The excavations also revealed graves from later periods, but these are not the subject of investigation here. (10) Kars 2011, 13-33. For Germany see also Koch (2001), and for France see Périn (1980). (11) Böhner 1958. (12) Böhner 1958, 15-34. (13) See Böhner (1973, 7-12) for an outline of the development of dating methods going back to the discovery of Childeric's grave in 1653. (14) Werner 1935.

of the associated coins. Böhner's objections to this method were related to the selective character of the material (only the objects associated with 'coin-containing graves') on the basis of which the *Stufen* were constructed, and on the complexity of the circulation of coins and the associated dating problems. Böhner, in his turn, considered the cemeteries from the Trier area suitable for the development of a method of relative dating and for the establishment of a more elaborate relative and absolute chronology, which should have validity for Merovingian cemeteries outside the region of Trier.[15]

A typology of grave goods is the basic condition for the realization of relative and absolute chronologies. Böhner's typology, as he mentions himself, is relatively crude. A refined subdivision would blur the general picture of the chronological change of the grave goods he wished to develop on the basis of the available dataset.[16] The great diversity in grave goods and the number of undisturbed graves from the cemeteries of the Trier region were sufficient to obtain a certain object variety for every *Stufe*. *Stufen*, according to Böhner, should be interpreted as periods during which certain object-types were used as grave goods on the basis of which graves can be dated. The lifespan of the object-types were represented in his graphic representation of the five *Stufen*. The definition of multiple object-types for all the categories of grave goods was new in the chronological research on Merovingian cemeteries, as was the definition of five *Stufen* on the basis of the lifespan of object-types. Before Böhner, chronological research was focused on the dating of graves, not on the dating of the life-span of object-types.

After the introduction of Böhner's combinational method the propositions for new typo-chronological schemes and discussions of their refinement gained a prominent position in the chronological debate.[17] The obtainable degree of chronological refinement on the basis of methods such as seriation can only be grounded on considerations from a cultural/social perspective.[18] It is, however, generally thought that the multi-facetted social backgrounds of object-human relations and object deposition with the dead are of little distorting influence. Apart from the social considerations it can be stated that the definition of criteria for typological purposes is a subjective and random exercise if the choices made are not substantiated according to the formulated research goals. For chronological research it is therefore necessary to establish a typological scheme that is defined on the basis of chronological significant criteria in order to diminish the influence on the obtained chronological orderings of parameters other than time as much as possible.[19] In the following it is explored to what degree the typology schemes that are used for the chronological analysis of the finds from the Vrijthof (and also those of the Servatius cemetery) meet this requirement, how the chronological phases in the resulting relative orderings of graves were created, and whether in this process some thoughts were expressed which relate to the creation of chronological significant typologies, to the social backgrounds of the objects which were selected as burial objects, and to the choice for relatively short or long chronological phases.

The published cemeteries of the Middle Meuse area (Belgium) and the Netherlands

Recent archaeological research established the cultural homogeneity of the Middle Meuse area (the area along the river Meuse from Maastricht to Namur) during the early medieval period regarding trade and artisanal production (fig. 1.4).[20] It can therefore be suspected that the grave goods from the Servatius complex display more similarities with the grave goods from the Middle Meuse area than those from other regions. The analyses of grave goods of the majority of the published Middle Meuse cemeteries are based on Böhner's typo-chronology, which is mainly due to the fact that they were nearly all published some time ago (mainly in the sixties and seventies of the previous century). Next to methodological objections with regard to the application of typo-chronological schemes from other regions, it can also be stated that this work, published in 1958, is outdated by now in terms of chronological analysis. The published cemeteries of the Middle Meuse area are therefore of little use for the choice of descriptive criteria and for the dating of the finds from Maastricht, but are required for insights in distribution patterns of resembling objects in order to find additional proof for the hypothesis that the Middle Meuse area was a homogeneous cultural region regarding material culture in Merovingian times.

From the relatively small number of Merovingian cemeteries that are known from the present days Netherlands, only few have been published. It appears that for a long time the typo-chronological analyses of the published cemeteries also depended on the work of Böhner. An exception is the publication of the cemetery of Lent.[21] Although the typology of Böhner is often used, much effort was put in an overview of numerous parallels for the grave goods. The publication as a result offers a thorough discussion of the majority of the grave finds. The last publication of the cemetery of Rhenen aimed at the reconstruction of the fifth century phase of this cemetery.[22] The burials of the fifth century were dated according to the Rhineland phases of Siegmund and were related to four generations (generations of 30 years; the short phases represent the subsequent generations) who formed the burying community in order to shed some light on the structure and size of the communities that were living there in the fifth century (since not much settlement evidence is known from the fifth century).[23] The cultural/social aspects of object deposition with the dead in relation to the refinement of typo-chronological schemes have scarcely been a matter of debate in the Netherlands. The authors of the publication of Lent, however, showed considerable interest in the reconstruction of the production (centers) of the grave finds, their exchange and the distribution patterns of resembling objects.[24] The results of their research can shed some light on various forms of object circulation and the consequences for chronologies.

Three recent publications of cemeteries in the Netherlands, those of Bergeijk,[25] Posterholt[26] and Sittard, Obbicht and Stein[27], present a more up to date approach to the typo-chronological analysis of grave goods.[28] Recent typo-chronology schemes are used and a wide range of parallels are incorporated on the basis of which burial phases are established, which are not as narrow as they can be found in several publications of early medieval cemeteries over the last few years (see below). These three publications were partly based on the considerations with regard to typo-chronological analysis formulated in the research project on the Servatius complex cemeteries, of which some are discussed in the following sections. Parallels and similarities with finds and features in Maastricht are referred to in these publications.

The typo-chronologies of the Rhineland Area (Germany)

The research history of early medieval burial chronology in the Rhineland area has already been discussed in detail in publications by French and German scholars.[29] In the following sections the most recent contributions (which are also used for the analysis of the Vrijthof finds) to the typo-chronological debate are reviewed.

Siegmund (1998): Lower Rhineland

Siegmund offers a classification scheme of grave goods of which the chronological significance of the defining criteria are tested in several ways and are therefore claimed to have been selected in an objective way.[30] His research is based on Merovingian finds and sites of the *Niederrhein* area (Lower Rhine area), which includes the districts of Düsseldorf and Heinsberg (fig. 9.1).[31] The creation of a complete overview of the very scattered and sometimes summarily published Merovingian finds of one restricted area was one of the main goals of this research.[32] The period covered is specified as the Merovingian period, but the burial evidence that can be identified as 'Germanic', from 400 AD on, is also included.[33] The study of the Merovingian period in the lower Rhine area ends with the abandonment of the rite of grave goods deposition and of the cemeteries themselves; in Siegmund's typo-chronological scheme this point is fixed at c. 740 AD (table 9.1).[34]

Fig. 9.1
The research areas of the consulted typo-chronology schemes compared to Maastricht and the middle Meuse area.



Table 9.1
The length of the chronological phases of Siegmund (1989 and 1998) and the Franken AG (2003).

Siegmund (1989) 1998		Franken AG (1992) 2003		Nieveler / Siegmund 1999	
1: 400-440	40	1+2: 400-460/80	60/80	1: 400-440	40
2: 440-485	45			2: 440-480/90	40/50
3: 485-530	45	3: 460/80-510/25	30/65	3: 480/90-530	40/50
4: 530-555	25	4: 510/25-±565	40/55	4: 520/30-550/60	20/40
5: 555-570	15	5: ±565-580/90	15/25	5: 550/60-570	10/20
6: 570-585	15			6: 570-580/90	10/20
7: 585-610	25	6: 580/90-610/20	20/40	7: 580/90-610	20/30
8: 610-640	30	7: 610/20-640/50	20/30	8: 610-640	30
9: 640-670	30	8: 640/50-670/80	20/40	9: 640-670	30
10: 670-705	35	9: 670/80-±710	30/40	10: 670-710	40
11: 705-740	35	10: ±710-740	30	11: 710-740	30

Other research goals were also formulated. Siegmund concludes, after a short introduction of the produced chronologies until then, that an all-inclusive and reliable basis for the chronological analysis he intended to perform for the Lower Rhine area was not available. Typological and chronological schemes were for the majority developed on a very local level and are, as a consequence, very re-

(15) Böhner 1958, 15-16. (16) Böhner 1958, 12-13, 16. (17) Kars 2011, 13-33. (18) Kars 2011. (19) An obvious example is the separate analysis of assemblages of men and women; it was suggested that also age at death is of influence on the ordering. (20) Plumier et al. 1999, 4. (21) Van Es/Hulst 1991. (22) Van Es/Wagner 2000, 116. (23) Van Es/Wagner 2000, 116-117, table 1. (24) Van Es/Hulst 1991, 173-198. (25) Theuws/Van Haperen 2012. (26) De Haas/Theuws 2013. (27) Kars/Theuws 2016. (28) Those publications were the product of the so-called ANASTASIS project that has as its goal the analysis of unpublished Merovingian cemeteries. (29) See for example Périn 1980; Koch 2001. (30) Siegmund 1998, 17. (31) Siegmund 1998, 5 (*Quellenlage*: a detailed description of research area and number of finds). (32) Siegmund 1998, 4. (33) Siegmund 1998, 5. (34) Siegmund 1998, 5, 204-205.

fined, which makes a comparison between the cemeteries and unification of the typo-chronology schemes problematic. Siegmund observed that Böhner's work, which has been, and still is, used extensively, was based on a smaller diversity and amount of material so that this typo-chronological scheme also was, among other reasons already discussed, an inadequate basis for the analysis of the Rhineland cemeteries.[35] These comments are in fact comparable to the actual research situation in the Meuse valley. It was therefore Siegmund's ambition to classify the finds of the Lower Rhine area in a uniform and systematic way. This was achieved, for most categories of grave goods, with metrical characteristics and statistical procedures. Siegmund claims that, by doing so, the high degree of subjectivity in the selection of the defining criteria for typological groups is avoided and that these procedures provide a transparent typological scheme which is applicable on cemeteries of other regions.[36] The chronological significance of Siegmund's typological criteria was tested with two procedures.

The various belt elements offered the first testing possibility, the so-called 'combinational testing'.[37] It is generally accepted that a crude classification of this group of finds has chronological significance on a supra-regional scale.[38] This knowledge is used to prove the chronological significance of the whole range of defined typological criteria for nearly each group of grave goods from the Lower Rhineland, but will itself also be tested on chronological significance.[39] The other testing method consists of the combination of the chronological results of the seriations with the results of the chorological or topo-chronological analysis, for which the cemeteries of Krefeld-Gellep, Köln-Müngersdorf, Köln-Junkersdorf, Düsseldorf-Stockum and Duisburg-Walsum were used. These cemeteries were completely excavated and their development or deposition phases are generally acknowledged as chronological phases.[40] The obtained relative phases of graves with the method of seriation are compared with the chronological phases of these cemeteries. The discovered consistencies and discrepancies were used to adjust and justify the created chronological sequence of the graves from the Lower Rhine area.

On closer inspection it appears that the defining criteria for some types are tested on their chronological significance more accurately than those for other types. Siegmund's work resulted in very refined typological subclasses for certain categories of grave goods and more general ones for other categories. The category of pottery for example shows a very detailed typological scheme (especially for the biconical pots and the dishes/bowls), which is extensively tested on its chronological significance, in contrast to some other categories of grave goods, which are without evaluation only described according to the typological criteria used in previous publications.[41]

Another problem relates to the actual contents of some typological groups. It is observed that the inner coherence is questionable for especially the type-groups that are based on metric criteria, such as the biconical pots. Moreover, evident criteria such as the height or size of pots and their colour were not incorporated in the classification and not considered as chronologically significant.[42] These problems can also be observed in a category such as the iron belts fittings with silver and copper alloy inlays, which are basically defined on the basis of decoration patterns. These decoration patterns show a considerable variability, and each typological group of Siegmund contains examples with substantial differences. These remarks pose questions regarding the chronological significance of such groups. Should the suggested accuracy of the positions of graves in a seriation not be questioned, since they are based on a classification scheme of which the chronological accuracy can be questioned?

The typo-chronological discussion of the Vrijthof grave goods (see the descriptive catalogue of grave finds), shows that individual objects can be assigned to a Rhineland type on the basis of a number of criteria, but that their specific characteristics, which might indicate another chronological place in the Middle Meuse valley, become disguised as a consequence.[43] Siegmund's ordering of graves on the basis of the chronological classification was divided in eleven Rhineland phases.[44] In the description of the phases and their characteristics it is explained how the seriations of the graves of men and women were integrated and on the basis of which observations the phases were distinguished from one another.[45] The absolute dating of the phases is based on the coin-containing graves and the available dendro-chronological dates.[46] Siegmund created relatively short phases, especially for the sixth century, on the basis of the results of the seriations (table 9.1). The chronological phases in the seriations show the dating of graves to one phase; the majority of the object-types are dispersed over more than one phase. The boundaries in the seriation were mainly drawn on the basis of the occurrence and disappearance of certain types together with the information of the topo-chorological analysis of the associated cemeteries.[47] This result is graphically represented in the '*Typentafel mit den chronologisch wichtigen Beigaben*', in which per phase only the significant object-types are depicted.[48] By doing so, a simplification of the development of grave goods deposition is presented.[49] Some types have a circulation period which covers two or more phases, but are in this scheme represented as if they belong to one phase. This table seems to suggest that groups of objects occur and disappear suddenly at more or less the same time.[50] Siegmund is aware of this simplification, but saw nevertheless enough grounds for the construction of relative short phases and profound cultural conclusions on the basis of these short phases.

Siegmund's cultural point of view with regard to the deposition of objects with the dead consists, in short, of the conviction that the dead were buried with their personal belongings, but that these personal belongings were in life rapidly replaced, instigated by what was fashionable at that time. This 'cultural conclusion' can, according to Siegmund, be drawn from the appearance of short chronological phases and the general absence of old objects in younger assemblages.[51]

It seems as if Siegmund's 'cultural conclusions' are based on objectively achieved chronological results. These may, however, have been presuppositions he already had with regard to the material culture of the living. The exactness of the position of a grave in a seriation, even if it can be validated as a chronological seriation, should, however, be questioned due to the incompleteness of the dataset, the average character of the results achieved with seriation and a number of social aspects such as extended transmission which are not necessarily visible in chronological seriations.[52] It is therefore dangerous to create such short burial phases, especially as Siegmund did for the sixth century, and draw such far reaching conclusions on the basis of this specific chronological result. It becomes apparent that the focus on the dating of graves to specific burial phases masks the underlying circulation periods of the objects that form the assemblage. The underlying variation in circulation periods will be illustrated in the conclusion of this chapter. It will appear that Sigmund's cultural conclusions require some reconsideration.

The Franken AG (2003): between the lower Rhine area and the Eifel (Kölner Bucht)

Despite these critical notes, the work of Siegmund must be acknowledged for the consequently tested chronological parameters of a number of object-types. The typo-chronological results of Siegmund's work (his thesis (1989), which includes the typo-chronological analysis that was published in 1998) were evaluated and to some degree modified in the work of a group of researchers who collaborated in the so-called '*Franken Arbeits Gruppe Bonn*' (1991). They aimed at the publication of the excavated Merovingian remains (both habitation and funerary remains) of the region '*Von linken Niederrhein bis zur nördlichen Eifel*', or the *Kölner-Bucht* (fig. 9.1).[53] Although published in 2003, their typo-chronological model is the unchanged model already established in 1992 and which was used as the basis for the dissertations of the researchers involved. Siegmund worked closely with the members of the Franken AG, from which an article in the edited volume *The pace of change* (1999) appeared.[54] This article can be seen as the latest consensus between Siegmund and the Franken AG, although it was published before 2003.

The main differences between the work of Siegmund and the Franken AG relate to the classification of the belts and biconical pots.[55] The seriations of the Franken AG were performed on the basis of the changed classification of finds. The Franken AG, in contrast to Siegmund, inserted the 'neutral' graves in the seriations of the graves of both women and men (Siegmund inserted the neutral graves in the seriation of the graves of men), what improved the statistical basis of the seriated graves of women and on the basis of which scarce types combined better. The Franken AG decided to exclude the objects that date two or more phases earlier than their associated grave finds (the so-called Merovingian *Altstücke*), because they would influence the position of the graves in question incorrectly in the resulting sequence.[56] The Franken AG created ten phases whereas Siegmund created eleven, and the dating of these phases is somewhat different too (table 9.1).

Siegmund established both the length of the phases and the circulation period of the types on the basis of their predominant occurrence in certain phases of the seriation. The Franken AG established the length of the circulation period of the object types from the beginning to the end of their occurrence in the seriation, but the borders of the phases in which the graves are dated are based on the most frequent occurrence of the object-types.[57] The Franken AG is well aware of statistical limitations, especially regarding mixed datasets, such as those from cemeteries. Although longer circulation periods of objects were regarded as a better representation of reality, reflections on cultural backgrounds with regard to circulation periods were not expressed by the Franken AG.

Nieveler and Siegmund (1999): The pace of change

The synthesis of the typo-chronologies of Siegmund and the Franken AG is presented in this article as the 'Rhineland typo-chronology'.[58] It is different from the publication of the Franken AG 2003 in that the eleven phases as formerly defined by Siegmund were maintained with more or less the same absolute dates (table 9.1). The main characteristics of each phase are discussed in this article, and in the graphical depiction of each phase with their main chronological representatives it is possible to distinguish Siegmund's types from those of the Franken AG. The data-structure of Siegmund's seriation (1998) is tested on the basis of a multi-dimensional correspondence analysis and this forms the main discussion in the article.

This correspondence analysis is a multidimensional technique, opposed to seriation, which is a one-dimensional technique. It reveals the underlying structure of the dataset. Or in other words it "…reveals the structural relationship between units/variables on the basis of their average similarity".[59] A seriation always produces a linear result, even if such an underlying structure is not

(35) Siegmund 1998, 14-17. (36) Siegmund 1998, 17. (37) Siegmund 1998, (38) Siegmund 1998, 18. See also the discussion on belts in the analysis of the grave goods from the Vrijthof and Pandhof cemeteries in Kars 2011, 225-260. (39) Siegmund 1998, 17. (40) Siegmund 1998, 17, 178-195. (41) This discussion is elaborated on in the description and discussion of the various groups of grave finds from the Vrijthof and Pandhof cemeteries in the next chapter. (42) Thus the typology of pots cannot be used to analyze social aspects of pottery use. (43) See for example the section on garnet disc brooches in the next chapter. (44) The seriations were performed separately on the graves of men and women. The 'neutral' graves were seriated together with the graves of men. (45) Siegmund 1998, 196-200. (46) Siegmund 1998, 176-180, 200-203. (47) Siegmund 1998, 196. (48) Siegmund 1998, 204-205, Abb. 81. (49) Theuws 2001b. (50) Theuws 2001b. (51) Siegmund 1998, 200. (52) Kars 2011, 13-33. (53) Müssemeier *et al.* 2003, 11-12. (54) Nieveler/Siegmund 1999. (55) Müssemeier et al. 2003, 13. (56) Müssemeier et al. 2003, 13. (57) Müssemeier et al. 2003, 14. (58) Nieveler/Siegmund 1999. (59) Jensen/Nielsen 1997, 38.

present in the analyzed data.[60] A seriation never shows the 'clusters' of graves (on the basis of their similarities) or the distance between these clusters. The linear result always suggests that there is a gradual change in grave goods repertoire, even when the structure of the data tends more towards clusters of graves with similarities with considerable differences between the clusters. It is claimed that when the result of a seriation is the outcome of the analysis of a dataset of which the structure can be characterized as gradual change on the basis of relative similarity, the result of a correspondence analysis of the same data results in a nearly 'perfect parabola'. It was exactly this result that was obtained with the data on the basis of which Siegmund performed his seriations. This implies that the grouping of the graves is consistent and that no other underlying structure than the gradual change of morphological features is present. Groupings that appear in cluster-analysis indicate that other variables, such as for example differences in status, also structured the available dataset. But even if we can conclude that variables other than time are of limited influence on the result of the Lower Rhineland seriation, it can still be questioned what the chronological validity of the ordering and of short chronological phases is. A gradual change in material culture can be represented in the burial data to be seriated, but this does not mean that it guarantees the exact (or nearly exact) chronological positions of graves. Resembling graves, as it is reasoned, do not necessarily have to be contemporaneous.

For example, seriations performed with the graves of men and women simultaneously result in their representation on a diagonal line with the graves of women clustered at one extremity, and the graves of men clustered at the other extremity. The correspondence analysis on the other hand, would show two separate groupings because men and women have nearly divergent sets of objects. If we assume, for example, that the assemblage one is buried with is created or acquired in one's twenties, then similar graves could have different deposition times. Such a 'break' does not become visible in a seriation, nor in a multi-dimensional correspondence analysis. This is of course a hypothetical example.[61] It shows that, even if the change in material culture from graves changes gradually without obvious secondary groupings of graves, the moment of burial is still not captured and absolute short phases give a misleading picture of the rapidity of change in grave goods repertoires in the Merovingian period. It does show that the assemblages within one chronological group' can be relatively homogeneous. The period in which the graves are created are, however, not captured. The homogeneity of the assemblages can also be the result of a process which takes longer than only one generation. Furthermore, even if a seriation represents a gradual change in grave goods assemblages, the drawing of lines in a sequence of graves is a hazardous undertaking; it can be questioned on the basis of which observations the boundaries of the phases are established. That a change over time in material culture is captured in the seriations of Siegmund and the Franken AG can be accepted; it is the presumed degree of chronological detail and the exactness of the positions of the graves in a seriation which are questioned. The typologies of both Siegmund and the Franken AG can be validated as tested chronological typologies in which the general gradual change of a selection of the material culture of the Merovingian period is represented. The circulation periods of the object-types, however, are based on the position of the grave goods assemblages in a seriation, which can provide a misleading image. The length of the circulation periods of the object-types, however, can be perceived as more accurate than the established short burial phases.

The find typologies of Siegmund and the Franken AG are for now the most favorable for the classification of the grave goods from the Vrijthof cemetery, although the specifics of the grave goods from Maastricht need to be considered, and the dating of the graves on the basis of these find dates remains another discussion (see chapter 11).

The find typologies of Northern France

Some of the studies of Merovingian cemeteries in Northern France evidently focused on methodological considerations. With the introduction of the possibility to order the graves and their contents by '*permutation matricelle*' it was claimed that an objective method for chronological analysis was finally available.[62] After that, adjustments and refinements were proposed, which eventually led to a '*chronology normalisee*'.[63] The backgrounds of this typo-chronological debate, as it took place in France, will be discussed in short here.

Périn (1980): The Ardennes and Meuse area in Northern France

Périn offers a typological and chronological synthesis of several cemeteries which are located in a restricted area: the Ardennes and Meuse regions in Northern France (included in the research area 'entre Manche et Lorraine') (fig. 9.1). By doing so, he introduced a new statistical method (*permutation matricelle*, which equals the method of seriation) in the scholarly debate in France in order to obtain a relative sequence of graves in an objective way.[64] This method results, according to Périn, in fewer uncertainties with regard to the obtained results than the topo-chronological analysis performed up to then.[65] Périn's methodological principles are less obvious than those of Siegmund despite the title of his book.[66] Although Périn shows thorough methodological insights in the problems of dating graves and grave goods, in the end it seems that the only consideration that was taken into account with regard to his classification scheme was its statistical workability. Périn and others published several other works with generally the same background after this publication, but the publication from 1980 records the extended methodological discussion that did not change dramatically thereafter.[67] The complete process and considerations will not be repeated here; only some remarks with regard to the '*choix des types*' and the cultural considerations regarding the construction of relative and absolute phases will be commented on.

Because of Périn's focus on methodological issues it can be expected that the defining criteria of the typological classes would be discussed in detail, both on a practical and a theoretical level. Indeed, Périn states that typological choices have a direct influence on the obtained chronologies.[68] The typological process is subjective, is not universal and should be experimented with.[69] The type *archeologique* is an object-type which is defined by an optimal number of criteria that are representative for a series of objects and can change depending on the research goal pursued.[70] The problem of the *type archeologique* is that it needs to contain a sufficient number of specimens in order to show a meaningful distribution; if objects occur infrequently then a simple classification is required, and vice versa.[71] Although Périn is well aware of the fact that every research goal demands its particular *types archeologiques*, his main concern relates to the necessity of effective statistical groups of object types in order to obtain a sequence of graves that shows an ordering that can be divided in chronological phases. This statistical discussion is briefly about the number of objects that should represent an object-type.[72] Although discussed at great length, Périn's theoretical awareness did not form the basis for the construction of his classification scheme. His exercise resulted in less refined classes of grave goods than Siegmund defined for the Lower Rhine area (table 9.1 and 9.2). An advantage of such a typological scheme as Périn proposed, and which was later adjusted by Legoux, Périn and Vallet, is that the majority of the grave goods from other Merovingian cemeteries can be classified accordingly.

With regard to the length of chronological phases, Périn illustrates his cultural perspective with the possibility-scheme of Steuer.[73] Whereas Steuer claims that more precise dating than 50 years is questionable from a theoretical perspective, Périn thinks that one is interred with predominantly personal possessions, which were gathered in the course of life. Inheritance was, according to him, not a common practice. The circulation period of the grave goods will generally not exceed the length of a lifetime/generation.[74] Although these considerations can be compared to those of Siegmund, the length of the chronological phases of Périn exceeds those of Siegmund. Périn is in this sense more loyal to the fact that the boundaries in orderings of graves do not have to represent cultural reality, but are merely an analytical tool.[75]

Legoux, Périn and Vallet (2004): entre Manche et Lorraine

The publication in 2004 of Legoux, Périn and Vallet is the 'final' correction of the typo-chronology scheme that can be found in Périn (1980) and several publications thereafter (fig. 9.1).

It is claimed that this scheme has more validity than the preceding ones since it is based on a more extended dataset (new graves and cemeteries that could be incorporated within the analysis) and the number of '*tombes-référénces*' has increased.[76] It is also claimed that this typo-chronology scheme is applicable on regions outside 'between Manche and Lorraine'. The typo-chronology scheme is based on 1,200 grave goods assemblages from 70 cemeteries. Approximately 400 types are defined, which incorporate at least five to ten examples.[77] The absolute phases are borrowed from Ament and translated into French (table 9.2).[78] One phase is added, the pre-Merovingian phase. The main difference with the preceding work of Périn is the slightly increased length of the phases. No further comments with regard to changing perspectives of cultural reality and methodological issues can be found in this publication.

The typologies of Périn and Legoux, Périn and Vallet do not, in contrast to those of the Rhineland area, consist of tested chronological types but of groups that were constructed especially to meet statistical requirements. This resulted in more broadly defined typological classes of which a majority has nearly a universal (Merovingian) value. The result of seriations and the horizontal plotting of this classification scheme, the considerable length of time in which the objects are dated and the length of the absolute phases, however, relate better to the theoretical considerations with regard to the social backgrounds of the relation between objects and persons. As it was argued in the discussion of the article of Nieveler and Siegmund, the gradual change of material culture from graves is probably more or less reflected in fine or less refined classifications and in the resulting seriations. This point is made also by Périn, with the additional comment that although a relative ordering of graves is considerably certain and does represent the evolutionary change of material culture, the absolute dates of the

Table 9.2
The length of the chronological phases of Périn (1980) and Legoux/Périn/Vallet (2004).

Périn (1980)			Legoux/Périn/Vallet (2004)		
ABD 1	450-475	25	PM	440/50-470/80	20-40
ABD 2	475-525	50	MA1	470/80-520/30	40-60
BCD/DE	525-550	25	MA2	520/30-560/70	30-50
DEF	550-600	50	MA3	560/70-600/10	30-50
DEFGH	600-620/30	20/30	MR1	600/10-630/40	20-40
EFGH/GHI	620/30-650/60	30	MR2	630/40-660/70	20-40
GHI/HI	650/60-690/700	40	MR3	660/70-700/10	30-50

(60) Jensen/Nielsen 1997, 37-38. (61) Kars 2011, 18-21. (62) Périn 1980. (63) Legoux/Périn/Vallet 2004. (64) Périn 1980, 206, fig. 45. (65) Périn 1980, 129. (66) *La datation des tombes mérovingiennes. Historique- Méthodes-Applications*. (67) Périn 1980, 99-200. (68) Périn 1980, 119; 131. (69) Périn 1980, 120. The experiment is regarded as an ongoing process of changing the defining criteria of types until a workable distribution over the cemetery plan (or in a seriation) is obtained. (70) Périn 1980, 119, 131. (71) Périn 1980, 119-120. (72) Périn 1980, 131. (73) Steuer 1977. (74) Périn 1980, 195. (75) Périn 1980, 248-253. (76) Legoux/Périn/Vallet 2004. (77) Legoux/Périn/Vallet 2004, 5. (78) Ament 1976.

phases, and therefore the dating of the types, do not unambiguously reflect cultural reality.[79]

The typologies of Southern Germany, Switzerland and the Mediterranean world

A selection of cemeteries from Southern Germany, Switzerland and further south, from the Mediterranean region, were used for the analysis of the grave goods from the Vrijthof cemetery. Some of the objects from Maastricht appear to have close parallels in these distant cemeteries. Such comparisons can also be observed in other cemeteries in Northern Gaul, which indicates that next to the identification of cultural homogeneous regions, as for example the middle Meuse area and the Lower and Middle Rhine area, outside influences should be considered. Koch presented an elaborate overview of the research history of chronological analysis in Southern Germany and Switzerland.[80] The majority of the publications was based on the chronological method of topo-chronological analysis and address methodological questions that relate to the process of classifying and dating.

The choice for the selected typo-chronology schemes from Southern Germany was based on their availability, clear and numerous parallels and the efforts to compare the results with other research areas and to reach a certain degree of generality. The method of horizontal stratigraphy or topo-chronology, in order to obtain a relative and absolute chronology, was developed on the basis of the cemeteries of southern Germany and neighboring regions in Switzerland.[81] One of the most important publications, in which the methodological backgrounds are thoroughly discussed, is Koch's final publication of the cemetery of Schretzheim (fig. 9.1).[82]

Various scholars worked on the excavation results of the cemetery of Schretzheim, excavated from 1890 to 1901, and from 1927-1934, but Koch published a complete overview in 1977. The introduction of this publication concerns the chronological divisions of the cemetery (*Stufen* 1-6: 525-680 (125 years)), which was created on the basis of distribution of object-types on the cemetery plan. The grave objects were classified by means of pursuing the highest degree of differentiation possible for each reoccurring sort of object (that means creating as many types as possible).[83] No thoughts are expressed regarding the chronological meaning of the created classification. The *Leitformen* (index finds) are the finds which are restricted to one development phase or *Stufe*, in fact they define the borders of each phase. Next to these index finds Koch identified finds that are characteristic for each deposition phase, but which can appear also in other deposition phases. The creation and contents of each *Stufe* are discussed in six clearly identifiable steps. After drawing up an inventory of the index finds and typical types (showing a high concentration within the by the '*Leitformen*' bordered area) of the *Stufe*, the distribution of the graves in the deposition phases are discussed. The remaining steps are the discussion of anomalies (the graves which are located within a limited area but of which the inventories are characteristic for another area (deposition phase)), the presentation of a list of datable graves, and the insertion of chronological relevant graves from cemeteries nearby (Sontheim an der Brenz and Niederstotzingen). Thereafter, within the list of dated graves and their contents, Koch makes a distinction per grave between the *Leitformen*, *Langlebigeren Neue formen* (these appear for the first time in the deposition phase concerned, but appear also in graves of the deposition phases thereafter), and *Langlebigeren Ältere formen* (these appear also in the graves of the deposition phases before the phase concerned).[84] The data that provided the absolute dates of each phase form the last discussion point. The absolute dates are based on the coin-containing graves and dated parallel finds. Eventually, this resulted in a very thorough discussion of the contents of each deposition phase and each grave.

With regard to the length of the phases, Koch comments that they form the average of the period of production and use of the objects. The period of use is considered to be the period in which the objects were used by the person they are buried with; Koch assumed that the majority of the grave goods represent the personal belongings of the deceased which were accumulated over the course of a life time. Numerous phrases point towards this underlying assumption: "*Ebenfalls in der Jahrhunddertmitte erwarb die Frau aus Grab 26 eine Cyprea*….", and "*Wohl schon bald nach der Mitte des 6. Jahrhunderts gelangte eine Bügelfibel* […], *in den Besitz der reichen Frau aus Grab 513*".[85] Koch assumes that extensive delay in circulation did not occur, at least not regularly, and that as a consequence graves can be dated to restricted phases without too many problems. Koch's phases have a range from 20 to 35 years (table 9.3). The anomalies in the distribution groups are discussed, but not explained, only perhaps in one instance: graves of children can contain objects of which the custom to deposit them became regular some time later (when the majority of the girls/young women who acquired such objects were grown-up and died). In fact the discussion of these incidences that are visible on cemetery plans (assuming that they represent a gradual development in time), elucidate the problem of seriations: these graves of children would be placed in relation with the elder women with comparable grave goods and thus dated to the same chronological phase. The cemetery starts at the beginning of the sixth century. The sixth century in Schretzheim is divided into relatively short phases (20-30 years), which have different dates than those of the sixth century in the Rhineland and Northern France.

(79) Périn 1980, 99. (80) Koch 2001, 26-44. (81) Werner 1953 (cemetery of Bülach) and 1955 (cemetery of Mindelheim); Neuffer-Müller/Ament 1973 (cemetery of Rübenach); Koch 1977 (cemetery of Schretzheim). (82) Koch 1977. (83) Koch 1977, 15. (84) Koch 1977, 35-47. (85) Koch 1977, 186. (86) Koch 2001. (87) Koch 2001, 43. (88) Koch 2001, 27. (89) Koch 2001, 44. (90) Koch 2001, 363. (91) Werner 1953 (the method of topo-chronology on the basis of the chronological change of belt fittings from the graves of men). (92) Martin 1976 (the method of topo-chronological analysis). (93) Stare 1980. (94) See the section of belt fittings in chapter 10. (95) Kars 2011, 63-88.

Recently, Koch executed a seriation with the burial evidence from the cemetery of Pleidelsheim (fig. 9.1).[86] After a detailed discussion of the research history of chronological analysis in Southern Germany, the seriation of the finds from the cemetery are discussed. They are integrated in the seriations of women and men of several cemeteries from Southern Germany, on the basis of which a new chronological phase system for the early medieval period in Southern Germany was introduced (SD phases 1-10: 430-670). Koch used the method of seriation for this cemetery because the cemeteries of the first phases of the early medieval period are not characterized by the neat development phases as the later period is (such as in Schretzheim).[87]

Koch is well aware of the fact that a classification of finds forms the basis of all chronological analysis, and that the establishment of such a scheme is subjective and is until now theoretically poorly founded.[88] The change in material culture can be fast or slow; this, however, cannot be read in a classification of finds and a seriation of graves on the basis of this classification. Koch thinks that the seriational ordering of graves is not only a reflection of the variable time, but that socio-economic and ethnic influences should also be accounted for.[89] The chronological results of the Pleidelsheim seriation, but also the variety of grave structures and the relative richness of the graves, are plotted on the cemetery plan, on the basis of which, according to Koch, groups of families can be identified.[90] Koch thinks that the connection with a family group was displayed in funerary rites. Whether this was the outcome of the deposition of grave goods for the after-life, or that one was buried with their objects which represented him/her in life, is not finalized by Koch. However, in these remarks a careful change in opinion compared to the ones expressed with regard to grave goods deposition in the cemetery of Schretzheim can be observed.

The most important cemeteries from Switzerland for comparison with the finds from Maastricht are the cemeteries of Bülach [91] and Basel-Bernerring, [92] and from the Mediterranean world the cemetery of Kranj in Slovenia (fig. 9.1).[93] It appeared that a number of grave goods from Maastricht are identical or nearly identical with the objects from these cemeteries. The use of these publications was not sought in typo-chronological possibilities, but merely with regard to the connections that Maastricht has experienced during the Merovingian period. Another interesting discussion regarding similar objects from such distant cemeteries concerns their 'origin' and the decision to consider them as 'exotics'. The details of this discussion can be found in the section on the exceptional bronze and silver plate buckles with fixed plate in chapter 11. These plate buckles show striking similarities with plate buckles from for example Kranj and Basel-Bernerring.[94]

The topo-chronological method, which has been developed mainly on the basis of the cemeteries from Southern Germany,

Table 9.3
The length of the chronological phases of Koch on the basis of Schretzheim (1977) and other cemeteries from Southern Germany (2001).

Koch 1977 (Schretzheim)		Koch 2001 (Southern Germany)	
		SD-phase 1: 430-460	30
		SD-phase 2: 460-480	20
		SD-phase 3: 480-510	30
		SD-phase 4: 510-530	20
Stufe 1: 525/30-545/50	15/25	SD-phase 5: 530-555	25
Stufe 2:545/50-565/70	15/25	SD-phase 6: 555-580	25
Stufe 3: 565-590/600	25/35	SD-phase 7: 580-600	20
Stufe 4: 590/600-620/30	20/40	SD-phase 8: 600-620	20
Stufe 5: 620/30-650/60	20/40	SD-phase 9: 620-650	30
Stufe 6: 650/60-680	20/30	SD phase 10: 650-670	20

cannot be applied to the Vrijthof cemetery; too much is missing for the reconstruction of reliable development phases. Moreover, the vertical stratigraphy of the Vrijthof cemetery complicates the reconstruction of clear-cut development phases. And although the cemetery seems to show a certain chronological development from north to south (see chapter 11), the separate burial phases are not confined to a specific section of the cemetery. The cemeteries from Southern Germany are useful for generating distribution patterns of finds that resemble the finds from Maastricht. The dates of the objects are used when other dating possibilities are absent. The value of such dates for the burials from the Vrijthof can be questioned.

Towards a typo-chronology of the Vrijthof grave goods

The above-discussed studies form the basis for the chronological analysis of the grave goods from the Vrijthof cemetery. That the deceased were buried with their inalienable personal property, and therefore that a relatively regular and rapid change in the grave goods repertoire after approximately one generation can be observed, is the predominant perspective in all the studies discussed. Using the classification schemes from these studies for the actual dating of the Vrijthof objects and the eventual dating of the graves stands apart from this particular perspective, but the final chronological results for the Vrijthof finds and graves include references to the variety of possible relations between material culture and the deceased and their consequences for the validation of the chronological results.[95] The application of already existing typo-chronology schemes (when independent schemes cannot be established on the basis of the available dataset, as it is the case for Vrijthof cemetery 4) involves two aspects, each with

different problems. First, a classification of the (Vrijthof) finds has to be made on the basis of these schemes (which can be from other regions, remote from the cemetery to be studied); secondly, the actual dating of the graves on the basis of these 'borrowed type date ranges' come into question.

It was stated that a chronological typology is required for chronological analysis. Both Siegmund and the Franken AG made considerable effort to meet this condition. Their typological classes are for the majority relatively refined. The typological scheme of Legoux, Périn and Vallet, which is the 'final' result of each of their previous works, is less 'objective', and resulted, in comparison with Siegmund and the Franken AG, for the majority of the objects in broader typological classes (compare for example their classification of pottery). Although the published cemeteries of the Middle Meuse area are at first sight the most qualified to form the basis for the classification and dating of the grave goods from Maastricht, it was concluded that the grave goods from these cemeteries are for the majority classified and dated on the basis of Böhner's typology, which is considered to be outdated for chronological analysis. The available publications of the cemeteries from the Middle Meuse area are useful for insights in distribution patterns of resembling Maastricht objects, but not for typo-chronological analysis. The typo-chronological analysis of Siegmund and the Franken AG are recent studies in which the typologies are explicitly based on the chronological significance of the object-types. Their typology schemes do not cover the dataset from Maastricht completely, and their research area (the Lower and Middle Rhine area) is considered to be culturally different from the Middle Meuse area. The classification and dating of the grave goods on the basis of these schemes alone is therefore insufficient. The objects from the Vrijthof will also be classified and dated, where possible, on the basis of Legoux, Périn and Vallet, but also on the basis of specialized studies of categories of objects (for example the garnet brooches of Vielitz[96] and the glass beakers of Maul[97]) and on more distant typo-chronologies from Southern Germany, Switzerland and the Mediterranean world. The resemblances of the grave goods from the cemeteries in these areas with the Vrijthof grave goods justify the conclusion that all these regions have a, although for now not exactly identified, connection with Maastricht. They are distant cemeteries compared to the cemeteries of the Lower and Middle Rhine area and the research areas of Northern France, which surround, although with some distance, the location of Maastricht (fig. 9.1).

The above discussed classification schemes are made on the basis of the available objects from the entire or a considerable part of the Merovingian period, a period of approximately 300 years. The classifications of the objects will therefore always reflect the gradual change in material culture over time. This can be assumed to be a given characteristic of each considerable dataset which covers a substantial period. On the other hand, the orderings of graves are based on the resemblances between combinations of object types (assemblages of grave goods). The gradual change in material culture is therefore not reflected to the same degree in the obtained sequence of graves: the processes in the period between production and deposition (distribution, acquisition, use and exchange and transmission) are of influence on the distribution of objects over the graves. The discussions on the many dimensions of object circulation, depending on the variety of relations between people and material culture, elucidate the complexity of circulation trajectories and thus the questionable degree of exactness of the position of graves in seriations and thus the chronological significance of this position.[98]

That objects were the permanent possessions of the persons with which they were buried stands at the basis of the presumed gradual change in material culture that is supposed to be reflected in a seriation of graves in the above-discussed works. Observing the circulation periods of various objects in one grave more closely reveals that a considerable chronological variation can be observed in single graves (a date range of more than 150 years can be identified for one grave goods assemblage).[99] These wide date ranges are only sporadically discussed. This is a consequence of the predominant focus on the reconstruction of burial phases in publications of the chronology of Merovingian cemeteries.

The problems of complex processes of circulation (exchange, acquisition and transmission) in relation to the burial evidence were already discussed.[100] This complementary image of social reality contests the alleged unaltered status of grave goods as lifetime personal property. Several researchers who are primarily concerned with chronological analysis expressed this last perception (life-time property) of grave goods and that material culture changes from generation to generation. But on the basis of which considerations are the boundaries of the chronological (generation) groups of graves established? It appeared to be a rather subjective process, based on scanty evidence.[101] For Siegmund, this process resulted in eleven so-called Rhineland phases, of which the sixth century consists of phases of 15 years. The typo-chronological scheme of Legoux, Périn and Vallet consists of nine phases with more or less the same length (40-50 years). Does this mean that the rapid change in grave goods assemblages as it was observed in the Lower Rhine area of the sixth century did not occur in the Ardenne-Meuse region, or is it that certain methodological choices underlie this observed phenomenon? The process of classifying, seriation and/or topo-chronological analysis, and relative and absolute phasing, involves so many steps and choices that the final chronological results are hardly connected to the already selective burial evidence.[102] A high degree of accuracy is difficult to accept for these results. This problem is especially urgent for the acceptance of short burial phases. It appeared that the associated circulation trajectories of the majority of the object-types comprise longer periods than the short burial phases. Despite these being averages and the impossibility to grasp the individual circulation periods of objects, they can be a starting point for another perspective on burial chronology; a perspective that accentuates the variation in circulation of individual graves (the reconstruction of the biography of a grave) and shows less preoccupation with the reconstruction of burial phases of graves.

The continuous transmission of objects, in which Merovingian grave goods were involved, is not extremely extended but will exceed more than one generation. But how can these limited prolongations and variability in circulation be identified in the burial evidence?

Probably they were already manifest in the publications of Merovingian cemeteries; the circulation periods of objects are hardly ever confined to one phase (generation), although the graves themselves are dated to restricted phases. The publications of the results are considerably focused on the burial phases, which mask the variation of circulation within each grave. Moreover, seriations of graves average the various circulation periods. This is why researchers can claim that old objects (objects that clearly date some phases earlier than the average circulation periods of the other grave goods) can only sporadically be observed in the investigated graves. A closer inspection of individual graves, however, shows that older objects, although not necessarily extremely old objects, are on a regular basis present in graves.

Acknowledging that the variety in circulation is informative for the understanding of burial chronologies requires typological and chronological refinement. However, the variety in the transmission period of individual objects cannot be captured through modeled averages, such as those provided by chronological methods as seriation. This implies that circulation has to be addressed differently and that the circulation periods of isolated object-types should be obtained differently than only on the basis of chronological analysis of graves. The grave can be seen as a construction of variable circulation and as evidence for object transmission. This requires further research. The variation in circulation within individual graves offers possibilities to address questions regarding various processes of distribution, exchange, acquisition, keeping, transmission and burial, or in other words the social component of the variety of early medieval objects prior to their selection and deposition as grave goods. 'Independent' data such as the results of physical anthropological analysis and scientifically obtained dates are essential for such analyses.

The dataset of the Vrijthof is too small to offer significant patterns of age at death and associated grave goods assemblages. A number of research questions can however be thought of, which in the first place investigate whether burial with inalienable personal possessions can either be accepted or rejected as general practice.[103] The suggestion for now is that burial with personal possession is an insufficient explanation for furnished burials. The relation between people and objects was more complicated and several connections in life can exist together. The moment of burial, however, is a moment in which it must be decided whether this connection was maintained, transformed, created or dissolved. A general conclusion is that the older one got, the less likely it is that furnished burial was accorded, but these correlations should be investigated for each cemetery again.[104]

And how can the examples of possible variation of circulation in one grave be interpreted? Variability in circulation within one grave can indicate that something as the transmission of objects existed. Various research questions can be thought of with regard to transmission and failure of transmission on the basis of the burial evidence:

- Which life-cycle stages can be identified for the Merovingian period on the basis of the burial evidence, or what are the moments of acquisition/transmission?
- Beads for example were mentioned as objects that are associated with children. This could indicate that the transmission and acquisition of (a selection of) beads that were considered family heirlooms was structured around a major transformative event in a child's life (which is most probably its death).
- What are the associated objects of acquisition/transmission?
- Can these objects be found in other age-groups? Does this imply that this specific transmission has failed? For example: does the occurrence of beads in graves of older women indicate that an opportunity for their transmission had not occurred?
- Empty graves can be a sign of successful transmission. They require further investigation, for example their distribution over the cemetery can be informative, as can the determined age and gender of the deceased.
- Etc.

But before posing and answering such questions, a chronological overview of the Vrijthof graves has to be obtained; one which avoids the problems of the discussed narrow date ranges of burial phases.

Conclusion: the final dating of the Vrijthof graves

It seems that various choices resulted in the transformation of certain objects into grave goods. A connection between the dead and their grave goods did exist one way or another, but this connection is more complicated than the concept of 'inalienable personal possessions' pictures it to be.[105] Certainly the process of objects distribution, acquisition and transmission was more complicated than this connection implies. The examples of the Vrijthof graves revealed a variety of circulation periods for each assemblage. The factual circulation of the objects is not necessarily represented with the widest date range of the assemblage, but narrow date ranges of graves underestimate the underlying circulation processes. An alternative perspective on Merovingian

(96) Vielitz 2003. (97) Maul 2002. (98) Kars 2011, 63-93; 2014. (99) Kars 2011, 117-122. (100) Kars 2011, 2014. (101) Kars 2011, 16-23. (102) Kars 2011, 16-27. (103) Kars 2011, 115-116. (104) Halsall 1995, 1996. (105) It is even possible, but hardly ever considered, that the objects were gifts to the dead by other persons. This is because we depart from our own individualistic conception of personhood (Van Haperen 2010).

burial chronology which complements the concept of permanent possession should investigate the nature of the relation between grave goods and the deceased, and should focus more on the variation of circulation in a grave with grave goods than on the dating of the complete assemblage to a restricted period of time. Therefore, as a conclusion, it is argued that more effort should be put in the creation of independent chronological sequences of the various object-types other than on the basis of the chronological phasing of assemblages. How this should be obtained on the basis of objects, which are predominantly known from the specific contexts of graves, remains a challenge for future research. The objects of the Vrijthof cemetery are still dated on the basis already existing typo-chronology schemes from other research areas. The difficulties that were encountered with regard to the application of this chronological framework, however, created a chronological discussion which is partly summarized in this chapter.[106] Some basic conclusions, however, stand at the basis of the final dating of the Vrijthof graves.

First, it is avoided to date the graves to restricted phases of 15/20/30 years; 50 years or more is considered preferable. As a consequence, it will be relatively difficult to describe the changes in ritual repertoires over the course of the Merovingian period in detail. The changes, however, that are framed in approximately 50 years, over a time span of more or less 300 years, do provide insights in these matters. Secondly, if the pre-burial circulation of grave goods is considered, the chronological debate would be enriched. It requires more research to find a method that offers reliable results with regard to the establishment of the circulation periods of various objects and objects-types. This will probably be one of the challenging subjects of the future chronological debate.

Some choices with regard to the classification and dating of the objects from the Vrijthof cemetery had to be made with these conclusions in mind. These choices are the following:

1. The classification of the grave goods on the basis of the discussed typologies
   The grave goods from the Vrijthof and Pandhof cemeteries are classified according to Siegmund's typology scheme in which the alterations made by the Franken AG will be followed. The classification will be extended with typological discussions from other cemeteries or specialized studies of certain object groups when relevant.
2. The absolute dating of the grave goods on the basis of existing typo-chronologies
   The dates of the types of Siegmund and the Franken AG will be used. These will be compared with the dates of Legoux, Périn and Vallet, and others when relevant. A relatively broad date range for each individual object will be aimed at, not the narrowest possible.
3. The absolute dating of the graves on the basis of this result: relatively broad date ranges are preferable.
   The Franken AG burial phases are for now translated into Maastricht phases (table 11.1). This phasing does more justice to reality than Siegmund's phasing (the phases are (slightly) broader than those of Siegmund for the Lower Rhineland), and the Kölner Bucht is not far from Maastricht. The result is an ordering of the grave goods in Maastricht phases 1-10 on the basis of which the final dates for the graves are realized. In this stadium the graves will be dated relatively broadly, not as narrow as the date range of the youngest objects (see the introduction to the grave goods catalogue). As a result, graves are scarcely dated to just one Maastricht phase; the majority is dated to two or more phases.
4. Vrijthof burial phases (see chapter 11)
   Because the majority of the Vrijthof graves were dated to two or more Maastricht phases, it was difficult to reconstruct specific burial phases. Bounded groups of a significant number of graves with similar date ranges could not be established on the basis of the Maastricht phases. The Vrijthof burial phases were introduced as a solution to this problem (see chapter 11, table 11.1). These burial phases encompass a considerable date range to which a significant number of graves could be allocated. These burial phases serve to reconstruct the topo-chronological development of the cemetery and were for this purpose plotted on the cemetery plan (chapter 11, figures 11.2-11.9). The burial phases comprise date ranges of which it can be expected that they match more with historical reality than the narrower Maastricht phases.

The final conclusions of this chapter relate to the creation of a new typo-chronology scheme for the Middle Meuse area. Should such a scheme be aimed at, should it be based on a refined classification in order to obtain reliable chronological results, and which chronological method should be used? It was stated that every dataset of a considerable number of objects from a substantial period of time will always represent a gradual morphological change of features through time. A seriation of assemblages of grave goods will distort the picture of this gradual development to a certain degree due to complex cultural processes of object distribution, acquisition, use, transmission and finally the choice to bury them with the dead. Despite the findings of Siegmund and Nieveler that cluster analysis proved that the underlying structure of the dataset on the basis of which Siegmund performed his seriations shows a gradual development of the complete grave goods assemblages, it is stated that the interpretation of a chronological seriation is the most reliable when relatively long phases are created (c. 50 years). Such a scheme, based on a chronological classification of the grave goods, offers relatively reliable chronological phases of graves on the basis of which the development of the burial rite in the Middle Meuse area can be analyzed. There exists a difference between the process of dating graves and dating objects.

For separate categories of objects, such as for example biconical pots, refined classifications of their characteristics can be seriated. The dating of refined classes of objects should preferably not be based on a seriation of graves, but on separately performed seriations of various object groups from a restricted region. Such orderings can provide insights in the chronological change of their characteristics, but attaching absolute dates to them will still be a challenge. The various circulation periods of the objects which are associated with each other in a grave, however, provides more insights in burial strategies than the dating of complete assemblages to one specific phase and thus the reconstruction of burial phases of graves alone.

(106) Kars 2011.

10 Finds

Belt fittings

The former presence of belts in graves can be identified on the basis of a variety of metal fittings. Belts had, next to a buckle or plate buckle, additional fittings such as counter plates, back plates, supplementary plates, slotted plates (*Riemenöse*), belt studs, belt loops and strap ends. These mounts are usually made of iron or bronze and, exceptionally, of silver or gold.[1] Generally, only the metal fittings are preserved and these form the basis for the reconstruction of complete belts. Remains of the leather belts themselves are only sporadically preserved. The appearance of belts shows a considerable variation throughout the Merovingian period and a significant difference between belts of men and women can also be observed in specific periods of time.

Buckles, plate buckles and other belt fittings can usually be attributed to leather belts that were worn around the waist. Similar metal fittings, however, were also part of purses, shoes, leg wear or supplementary belts. Information about the position in the grave is required to ascribe a function to a metal fitting. Measurements and typological parallels are the main indication for their function when this information is not available.

The study of the changes in the morphological features of belt mounts is an important element in chronological studies of Merovingian cemeteries after Christlein's analysis of the belts of Marktoberdorf.[2] It is now generally accepted that the morphological development of belt fittings is more or less known, and that this development has supra-regional validity.[3] The key position of belts in the chronological analysis of cemeteries is commonly acknowledged. The typo-chronologies of belts are, next to the material used, decoration and shape, also based on the presence of all the relevant fittings of a belt set.[4] Excavation and post excavation processes create uncertainty about the completeness of the ensemble of mounts, and it is quite likely that a considerable number of the sets are incomplete. Classifications that are based on these sets should therefore be dealt with cautiously, and have to be related to knowledge of the condition of the grave and the post excavation processes; the degree of completeness or incompleteness of the belt set needs to be established. The Vrijthof belts will be identified first on the basis of their main fitting: the buckle or plate buckle. The additional fittings will be discussed in relation to the main fitting and an assessment of the completeness and classification of the belt set will follow.

Belts with simple buckles

Simple buckles have been used for different purposes and this category is therefore probably the most difficult one to deal with. Next to their function as fastener of the waist belt, simple buckles were also part of shoes, leg wear, purses or leather straps that were attached to the waist belt. Here only the buckles of waist belts are discussed. Twenty-nine simple buckles of waist belts were found in the Vrijthof and Pandhof cemeteries, of which the majority in the Pandhof cemetery (table 10.1).

Buckles are in generally classified on the basis of material, shape, size, decoration and characteristics of the tongue. Périn considered only the bronze buckles in his study of Merovingian cemeteries in the Ardenne-Meuse region. The iron buckles were very common, and therefore chronologically insignificant.[5] Only some types of iron buckles are incorporated in the later typological work of Legoux, Périn and Vallet.[6] Siegmund acknowledged the common occurrence of simple iron buckles throughout the Merovingian period and the difficulties to date them.[7] More detailed typologies are available for bronze and silver buckles; these are mainly based on the belt width and tongue shape.[8] The broad belts (widths of 2.5 to 3.6 cm) are considered to belong to the later phases of the Merovingian period and the simple buckles, of bronze or silver, with a shield- or club tongue are typical for the waist belts of men and women in the early sixth century.[9]

Table 10.1
The distribution of various types of simple buckles over the Vrijthof and Pandhof cemeteries.

	Silver	Bronze	Iron	Total
Vrijthof	1	7	1	9
Pandhof	5	13	3	21
Total	6	20	4	30

Fig. 10.1
Simple buckles: silver, copper alloy and iron (scale: 1:2).



Silver buckle with garnet

Vrijthof: 0 (1487-5).

A silver buckle with garnets was found in the Vrijthof cemetery, the context is unknown (fig. 10.1). The rod and tongue of this buckle are lost. Silver buckles with garnets have either oval or rectangular loops. A close parallel is found in grave 10 of the cemetery 'Vieux Cimetière' in Arlon (Belgium, prov. of Luxembourg). The grave goods assemblage (sword, glass beaker, purse-lid with garnets, axe, pottery, bronze basin, bucket, knife and tweezers) points to a date to the second quarter of the sixth century.[10] Another buckle with garnets from Maastricht is among the finds with a 'Maastricht' provenance that were bought by the National Museum of Antiquities (Leiden).[11]

Legoux, Périn and Vallet only classified plate-buckles with garnets, which date predominantly to their phase MA1 (470/80-520/30) and sporadically to the second half of phase PM (440/50-470/80) and in MA2 (520/30-560/70).[12] These plate buckles often have kidney shaped or rectangular plates, as the examples of for instance the Picardy (France) illustrate.[13] Siegmund and the Franken AG did not identify buckles or plate-buckles with garnets. It is unknown whether the buckle of the Vrijthof was part of a plate buckle, but it can be assumed that it dates to the same period as proposed by Legoux, Périn and Vallet for plate buckles with garnets.

Copper alloy buckles: oval/round loop with shield/round tongue base

Vrijthof: 89 (1428-1); 95 (1481-1, 2); 214 (1761-1); 286 (1810-1).

Three complete bronze buckles with an oval or round loop and shield tongue base were found in the Vrijthof cemetery, of one buckle only the tongue is present.

The buckle from context 89 is the only specimen with elaborate decoration (fig. 10.1). The punched in or engraved geometric decoration is applied on both the loop and tongue; such highly decorated buckles are rare. The belt width is approximately 2.3 cm. This buckle was found in a pit that also contained early medieval pottery fragments. It is likely that this buckle got detached from its original grave context. Böhner classified a similar specimen as type A6, which dates mainly to his Stufe III (525-600).[14] According to Legoux, Périn and Vallet decorated buckles of this kind belong to their type 116 which dates predominantly to phase MA2 (520/30-560/70) and more sporadically in phase MA3 (560/70-600/10).[15]

(1) Other materials like *meerschaum*, rock crystal and bone are also known, but are very rare. (2) Christlein 1966. See also Siegmund (1996, 698-699) for a discussion of chronological sequences of belts. Numerous other studies could be mentioned here. The chronological features of iron belt fittings with inlays are for instance discussed in the publication of the cemetery of Erlach (Marti/Meier/Windler 1992, 34-52) and Switzerland (Moosbrugger-Leu 1967) which are interesting for the Vrijthof and Pandhof belt fittings (see also Marti 2000, 82-109). Other chronological studies which are related to the analysis of individual cemeteries will be used in the analysis of the Vrijthof belts as presented below. (3) Ament 1976; 1977. The typo-chronology schemes as proposed by Ament in order to refine the Stufen system of Böhner (1958) was mainly based on the morphological and decorative change of belt fittings. (4) Siegmund 1998, 18-41. Belts are, depending on the belt fittings present, classified as 1-partite, 2-partite, 3-partite or multiple-partite belts. The simple buckles are the exception; they are not classified as such. (5) Périn 1980, 231. (6) Legoux/Périn/Vallet 2004. (7) Siegmund 1998, 21-22. (8) The width of the belt is reconstructed on the basis of the inner width of the buckle loop. The extremity of a leather belt (which passes through the buckle and fastens the belt) can, however, be considerably less wide than the rest of the leather belt. This is especially a feature of belts that consist of multiple (relatively large) fittings. (9) Siegmund 1998, 21-22. (10) Roosens/Alénus-Lecerf 1963, 52, fig. 30-8, 143-144, fig. 84, 162. (11) Rijksmuseum van Oudheden (Leiden), invt nr. I 1995/12.3. Theuws in prep. (12) Legoux/Périn/Vallet 2004, 16, 31, 53 (type 142). This type is defined on the basis of the presence of a plate buckle, although a number of buckles without plate are also depicted as examples of this type. (13) Bayard 1986, passim. (14) Eisenach grave 07/10 (Böhner 1958, 181-183, Taf. 36). (15) Legoux/Périn/Vallet 2004, 15, 30, 52 (type 116).

The Franken AG classified this type of buckle as Gür 2.6/7c which belongs to their phase 4 (510/25-565).[16] A close parallel was found in grave 85 of the cemetery of Rübenach (Germany).[17] This grave belongs to phase A3/B1-2 (c. 525/35-600).[18] The elaborately decorated bronze buckle from grave 224 of the cemetery of Kleinlangheim dates to Stufe AM III (560/70-600).[19] The shape of the shield tongue and the decoration are, however, not exactly similar to the specimen from the Vrijthof cemetery, a remark that also applies to the buckle from grave 25 of Basel-Bernerring.[20] The mentioned buckles originate all from graves of men.

The loop of the buckle from grave 286 shows a simple decoration of cast lines that follow the shape of the loop (fig. 10.1). The belt width is approximately 1.9 cm. The buckle was found at the upper body, just above the pelvis, what makes a function as fastener of the waist belt likely. No other finds, except some pottery fragments, are known from this grave. A parallel for this buckle is known from Rittersdorf grave 102, although it has a more pronounced tongue base. Böhner classified this buckle as type A6.[21]

The third complete shield tongue buckle was found in grave 95 (fig. 10.1). It belongs to a belt with a width of approximately 2.5 cm and was found with a bronze belt stud, which is identified as part of this belt. The buckle and belt stud are found just below the pelvis, which makes their identification as elements of the waist belt likely. These belt elements are part of the grave goods assemblage of a woman, which furthermore consists of two earrings, a garnet disc brooch, a fragment of a 'La Tène' bracelet of glass, a knife, a string of beads and a comb.

The bronze tongue from grave 214 (fig. 10.1) was associated with a string of beads and a bronze buckle (lost). It is remarkable that two different find locations were indicated for the tongue and the buckle in this grave. The buckle was found on the pelvis, the tongue on the left knee. No information is available on the lost bronze buckle. It is uncertain whether they originally belonged together. Bronze tongues are difficult to date: they can both belong to a buckle and a plate buckle. Dating it to Rhineland phases 4 to 6 (530-585) is a plausible option.

Copper alloy buckle with club tongue

Vrijthof: 187 (1643-1).

One bronze buckle with a tongue with a relatively broad base can be described as a buckle with a so-called '*Kolbendorn*' or club tongue (fig. 10.1). The tongue is narrowed towards the top, which is a feature with chronological significance. This buckle is part of a relatively 'rich' grave goods assemblage of a woman (garnet disc brooches, earrings, finger ring and a string of beads). It was found on the pelvis, which makes a function as fastener of the waist belt likely.

Buckles with a club tongue are frequently found in Merovingian cemeteries.[22] The Vrijthof buckle was part of a belt with a width of less than 2.5 cm, and can be classified as Siegmund type Gür 2.4. This type is dated to Rhineland phase 4 (530-555).[23] Buckles with club tongue that belong to a belt with a width of more than 2.5 cm are generally part of the grave inventories of men in Siegmund's research area and date also to Rhineland phase 4.[24] For this reason the Franken AG did not maintain the division that was based on the belt width. Buckles with club tongues date to their phases 3-4 (460/80-565).[25] Legoux, Périn and Vallet classified these buckles as type 109, which predominantly dates to their phases PM-MA1 (440/50-520/30) and sporadically to phase MA2 (520/30-560/70).[26]

Copper alloy buckle with iron tongue

Vrijthof: 68 (1149-1).

The bronze buckle has an oval loop with a rod and an oval loop section (fig. 10.1). It was found, together with a string of glass beads, near the neck of the deceased. This buckle was part of a belt with a width of approximately 3 cm.[27] It can be assumed that the iron tongue is a replacement of a missing shield tongue or club tongue, because the broad bases of these sorts of tongues require a rod for their fixation to the buckle. This buckle is part of an assemblage of grave goods of a woman, which consists of a string of beads and a late-Roman bow brooch.

Siegmund classified bronze buckles with a simple iron tongue and a belt width of more than 2.5 cm as Gür 2.9 and dates them to Rhineland phases 5-7 (555-610). The Franken AG discarded this type because the specimens from their research area have too many differences to classify them as a single type.[28] Legoux, Périn and Vallet classify bronze buckles with simple iron tongues as type 112, which dates sporadically to phase PM (440/50-470/80) and more frequently to phases MA1-MA3 (470/80-600/10).[29]

Copper alloy buckle loop

Vrijthof: 230 (1766-1).

The loop of the buckle from grave 230 has a round section and a rod but cannot be classified more precisely (fig. 10.1). The buckle has a belt width of approximately 2 cm. All tongue shapes are possible for this buckle. The buckle was found near the left hand. The gender identification on the basis the associated grave goods remains uncertain. Next to a string of beads (missing), a decorative disc of antler and a comb with case, pieces of flint and a series of 'neutral' objects (shear, knife pottery) were also found.

Iron buckle with simple tongue

Vrijthof: 168 (1533-1).

The iron buckle from grave 168 has a simple iron tongue, and was part of a belt with a width of approximately 2.2 cm (fig. 10.1). It was found with a seax, knife, two iron ring rods and two pottery vessels. The buckle was found between the upper legs on the basis of which it is identified as a waist belt. Iron buckles are known as grave goods throughout the Merovingian period. Characteristics to date them more precisely are difficult to find, although the width of the associated belt is considered to be somewhat indicative.[30] In view of the width of the belt (less than 2.5 cm), the iron buckle with simple tongue can be classified as Siegmund type 2.2.b. This type dates to Rhineland phases 2-3 (440-530).[31] If this is correct the buckle from grave 168 is an old piece in the associated assemblage of grave goods. The Franken AG, however, have some reservations regarding the early date of this type. Moreover, they think that the diversity in this group is too large to classify them as a single type.[32] Legoux, Périn and Vallet do not classify simple iron buckles.

Belt fittings: plate buckles

Numerous plate buckles (or counter plates, which in all probability indicate the former presence of plate buckles) were found in both the Vrijthof and Pandhof cemeteries (table 10.2). Silver plate buckles are rare, which is in line with the single specimen known from the Pandhof cemetery.[33] The difference between the number of belts with iron mounts in the Vrijthof and Pandhof cemeteries is remarkable. Iron mounts with inlay are rare in the Pandhof cemetery, but rather frequent finds from the Vrijthof cemetery. Iron belt fittings with inlays generally date to the seventh century, which seems to indicate that the deposition of belts became rare in the Pandhof cemetery during this period, whereas it was still a popular practice for burials in the Vrijthof cemetery. The final typo-chronological scheme of all the Vrijthof and Pandhof belts will illuminate the exact nature of the differences between the two cemeteries.

The loops of plate buckles show the same variety in shapes, material and tongues as simple buckles. Material, decoration technique and patterns, and the construction with which the plate is fixed to the loop show a significant development during the Merovingian period. The plates are attached with a wrapped or a hinged construction (the hinged construction is earlier than the wrapped construction) or they form one part with the loop, the so-called fixed plates. Plate buckles with a fixed plate that are part of a waist belt are not as common as plate buckles with wrapped constructions and are usually considered to be of an 'exotic' provenance.[34] This, however, seems to be a problematic assumption which will be discussed further on. On the other hand, small buckles with fixed plates, often interpreted as purse- or shoe elements, are quite common in Merovingian graves. The buckles and the plate buckles are considered to be the main elements of the waist belt, and the associated belt mounts will therefore be discussed in relation to the plate buckles. The belt mounts without associated buckle or plate buckle will be discussed separately.

Table 10.2
The distribution of plate buckles over the Vrijthof and Pandhof cemeteries.

	Silver	Bronze	Iron, undecorated	Iron, inlays	Total
Vrijthof	-	9	2	8	19
Pandhof	1	12	1	1	15
Total	1	21	3	9	34

Plate buckles: silver and copper alloy with fixed plates

Vrijthof: 194 (1503-1); 222 (1648-1).

Two nearly identical buckles are known from the Vrijthof (1503-1) and Pandhof (10799: 128-1) cemeteries (fig. 10.2 and 10.3).[35] The outlines of the plate buckles are nearly identical but the Vrijthof plate buckle has an open plate, whereas the Pandhof specimen is closed and has inlays of gilded silver foil. It is difficult to establish whether the Vrijthof buckle originally had decorated middle fields or not. Moreover, the Vrijthof buckle is bronze and the Pandhof buckle silver. Both buckles have a vertical middle rib and a shield tongue, but the shield at the base of the tongue of the Vrijthof specimen is smaller than that of the Pandhof buckle. The Pandhof specimen was found in the grave of a woman, the Vrijthof buckle in the grave of man.

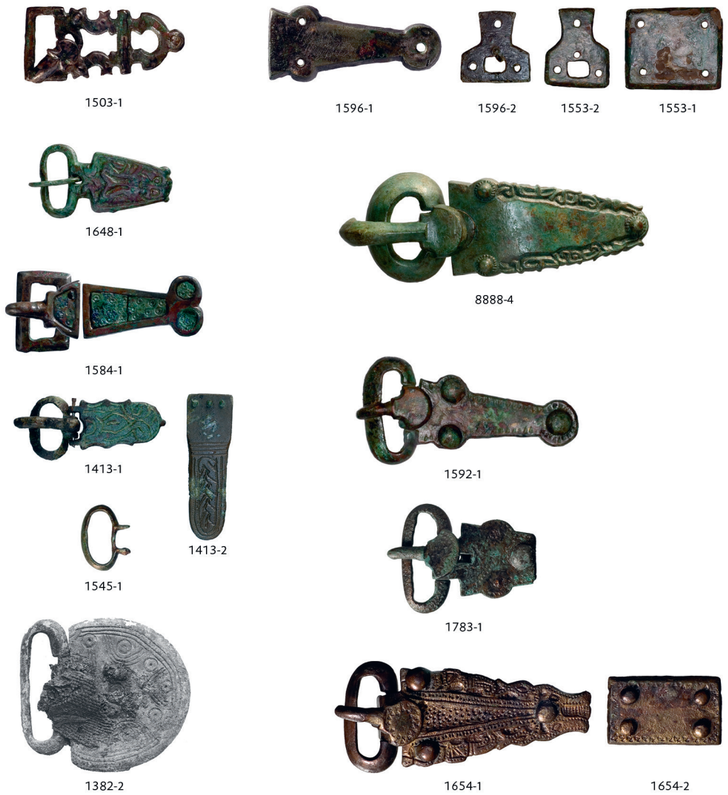
The Vrijthof specimen was attached to the belt with the help of three fasteners on the back of the plate. The three rivets on the top of the plate are 'fake' (they did not serve to attaché the buckle to the the leather belt).

Fingerling introduced the term 'Mediterranean buckles' for a specific group of plate buckles to which the Maastricht examples

(16) Müssemeier et al. 2003, 17, Abb. 6 (*Schilddornschnalle*). (17) Rübenach grave 85 (Neuffer-Müller/Ament 1973, Tafel 6, 85.33). (18) Wieczorek 1987, Abb. 25. In his classification the buckle has code 75 (see Abb. 7, 75). (19) Pescheck 1996, 48, 252, Taf. 51-2. (20) Martin 1976, 61-62, Abb. 21-8, Taf. 1,5.6. Martin also mentions other parallels for this buckle. (21) Böhner 1958, 181-183, Taf. 36. (22) Parallels for the specimen from Vrijthof grave 187 are for example known from Köln-Müngersdorf (Fremersdorf 1955) graves 19-6, 76-7, 84-5, 105-12, 102-2, Junkersdorf (La Baume 1967) graves 352-1, 494-1, and Schretzheim (Koch 1977) grave 35. Bronze buckles with club tongues are in short discussed by Martin. He dates them to the middle and second half of the sixth century, although they might occur earlier in the sixth century (Martin, 1976, 62-63). (23) Siegmund 1998, 23. (24) Siegmund 1998, 23. (25) Müssemeier et al. 2003, 16. (26) Legoux/Périn/Vallet 2004, 15, 30, 53 (type 109).

(27) Siegmund mentions that large bronze and silver buckles (with a belt width between 2.5-3.6 cm) are characteristic for the period after the early sixth century to which the smaller buckles are dated. (Siegmund 1998, 21). (28) Müssemeier *et al.* 2003, 17-18. (29) Legoux/Périn/Vallet 2004, 15, 30, 52 (type 112). (30) Siegmund 1998, 21-22. (31) Siegmund 1998, 22-23. (32) Müssemeier et al. 2003, 15-16. (33) Another silver plate buckle was found in Pandhof grave 10435. This specimen is identified as an element of weapon gear, and is described as such (see the section on seaxes). (34) Fingerling 1967. (35) The Pandhof buckle has been published before: Glazema/Ypey 1956, afb. 69; Vinski 1967 [1974], Tab. XLII, nr 1.

Fig. 10.2
Plate buckles: copper alloy (scale 1:2).



belong.[36] The distribution of this group, however, is not just limited to the Mediterranean world, but also extends into the Merovingian world (fig. 10.4).[37] The main characteristic on the basis of which this group of plate buckles is defined as Mediterranean is the fixed attachment of the plate to the loop. As Fingerling mentions, this characteristic is not common among the plate buckles from Merovingian graves.[38] Other characteristic features of the Maastricht buckles are the profiled outline of the plate, the bulge at the extremity of the plate, the shield tongue, the vertical rib on the plate and the rectangular loop.

Fingerling refers to the wish of scholars of Merovingian material culture to place this group of plate buckles in the typological development of Merovingian belts, because these 'Mediterranean' plate buckles could be seen as an intermediate form between the simple bronze or silver buckles with shield tongue, accompanied by belt studs, and the chronologically later plate buckles of which the plate is attached to the buckle with a wrapped construction.[39] Such a chronological development of Merovingian belts is, however, only known from the belts found in graves of men. Women continued to be buried with simple buckles throughout the sixth century. Fingerling's article is somewhat dated, but the observation that these 'Mediterranean' plate buckles occur in graves of both men and women is still valid. Therefore this group of plate buckles can be considered an exceptional group in the Merovingian world and should not be placed in the general development of Merovingian belts. The main questions

(36) Fingerling 1967. He explicitly mentions the Pandhof example. Vinski (1967 [1974]) also dealt with this type of buckles. He too refers to the Pandhof specimen (Vinski 1967 [1974], tab. XLII). Several authors before them already suggested a Mediterranean origin for these buckles or suggested that they were 'imitations' of Mediterranean buckles, but did not carry out a systematic survey of these types. (37) Fingerling 1967. See also Pescheck (1996, 42) who does not distinguish in the distribution pattern between the types Kranj and Maastricht. (38) Fixed plates are only known from shoe- and purse buckles and from belts with multiple fittings from the late Merovingian period (Fingerling 1967, 159). (39) Fingerling 1967, 161.

Fig. 10.3
Overview of plate buckles similar to the plate buckle from grave 194 (1503) (scale 1:1).

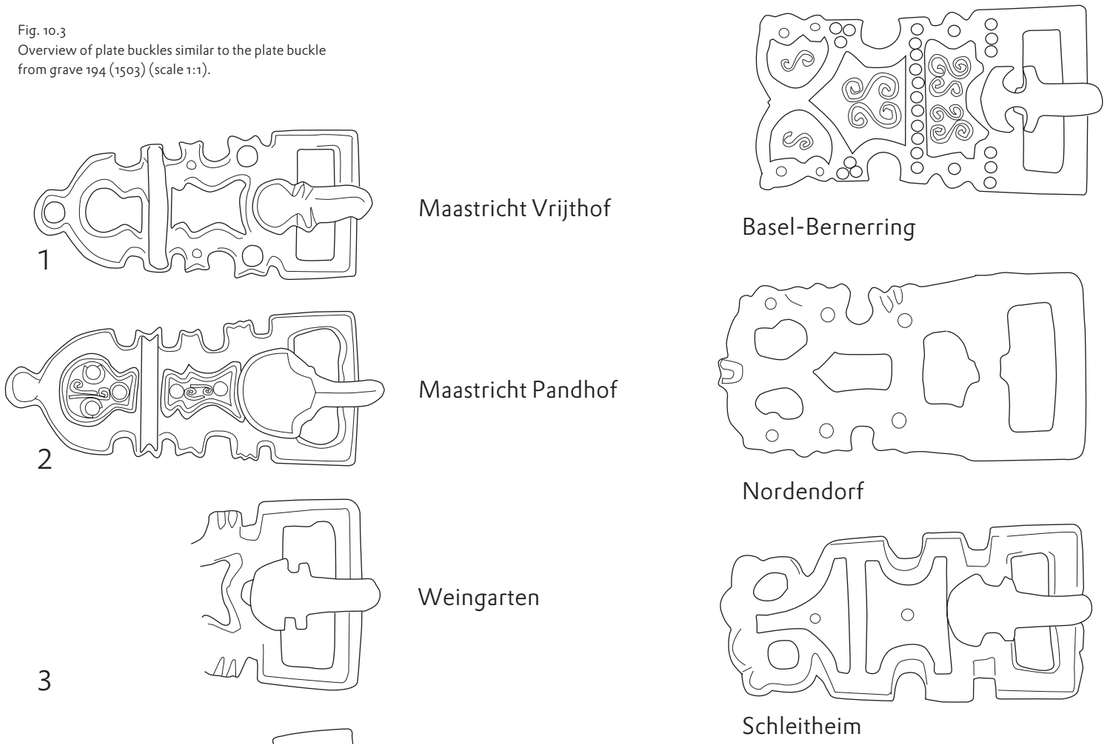
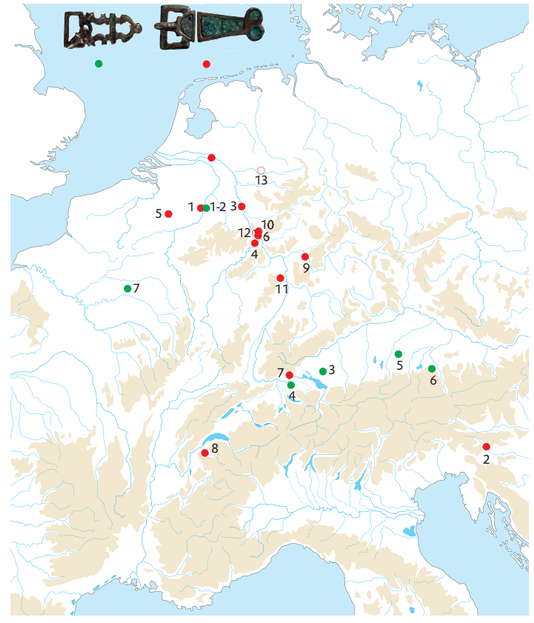


Fig. 10.4
Distribution pattern of plate buckles similar to the plate buckles from grave 194 (1503) and grave 73 (1584-1).



Fingerling addresses in his article are about the provenance (production place) and dating of these specific plate buckles, using the find of Güttingen (Germany) as a starting point of the analysis. He offers an overview of all 'Mediterranean' plate buckles with fixed plates known at the time of publication. It seems to be useful to create subgroups, each comprising more or less identical specimens, for the group of buckles with open plate. Within the group of 'Mediterranean' buckles a subdivision is made whereby the finds from the Pandhof and Vrijthof are characteristic of a specific subtype (figs. 10.3 and 10.4, numbers 1 and 2).

For the Vrijthof specimen (with open plate) an exact parallel, although in silver, is known from the cemetery of Bülach (Switserland), grave 18 (grave of a man) (4)[40], and from Altenerding (Germany) grave 755 (grave of a man) (5), although the last specimen is of bronze.[41] A near exact parallel is known from Reichenhall (Germany) grave 136 (6),[42] a somewhat degenerate example is known from Caranda (France) (7).[43] Finally a fragment of a specimen from the cemetery of Weingarten (Germany), grave 757, probably belongs to this group, although the end of the plate with the characteristic vertical rib is lost (3).[44] It is the grave of a man (anthropologically determined) in which also a sword, a pot, a knife, some flint and a flint iron and some bronze foil was found. Werner dates grave 18 of Bülach to the first half of the seventh century. The grave of Altenerding is difficult to date exactly. Next to this buckle a sword, a seax, two simple rectangular buckles, strips of bronze foil and two pieces of flint were found in it. The seax is small, pointing to an early date. The grave probably dates from the second half of the sixth century, but it is not of great help in dating this type of buckles. The grave of Weingarten too is difficult to date exactly.

These buckles belong to Fingerling's group of the form 'Maastricht' to which he also adds a buckle of uncertain provenance, but possibly from Engers (Germany).[45] His Maastricht group was designated after the specimen found in the Pandhof, which however has not an open plate (see below). At the time of his publication the Vrijthof specimen had not been found yet. The designation as Maastricht group can however be kept, but the name giving specimen should be that of the Vrijthof cemetery. Other buckles with open plates that are related to the Vrijthof specimen are known from Kranj (Slovenia) grave 6,[46] Palazuelos (Spain),[47] Langenenslingen (Germany) grave 4, in which a sword has been found that is dated by Menghin to his phase 6 (middle of the sixth century),[48] Charnay (France),[49] Cologne (Germany),[50] Kruft (Germany),[51] Carpio de Tajo (Spain) grave 45,[52] Castiltierra (Spain),[53] Alarilla (Spain), 3 specimen,[54] Kleinlangheim (Germany) grave 140,[55] and a specimen from Spain of which the provenance is unknown.[56] More examples than are listed here may be present in Spain. These buckles belong to Fingerling's subgroup 'Kranj' of the group of buckles with open plate, next to a subgroup 'Mindelheim' of which the examples differ too much from those of Maastricht to deal with them here. A buckle that is related to the Maastricht and Kranj groups is the one found in grave 33 of the cemetery at Basel-Bernerring.[57] This buckle with open plate, closed off at the back by a silver plate, however differs in its form of the Kranj group (see below). Fingerling came to the conclusion that none of his types with fixed plates predated the Lombard period, which implies that they must date after the Lombard conquest of Italy (after 568). Most of these buckles date, according to Fingerling, around 600.[58]

The silver buckle from Maastricht-Pandhof is in its outline identical to the one from the Vrijthof cemetery, although its plate is not open (fig. 10.3). It is inlaid with foil of gilded silver on which filigree is attached. The filigree runs along the edges of the foils. Comma-like motifs ornament the inner fields. The bronze foils are attached to the plate with the help of five small rivets. The rivets of the foil near the end of the plate are encircled with filigree; the two of the oblong foil near the tongue are not. This buckle thus formally does not belong to the buckles with open plates (Fingerling's group 'Maastricht') that are named after this buckle, but obviously there are close connections with this group. The buckle was attached to the belt with the help of three fasteners on its backside.

This Maastricht buckle has already been discussed several times. It is related to the one from the cemetery of Basel-Bernerring grave 33, which is also decorated with filigree ornamented middle fields (fig. 10.3).[59] In many respects, however, this buckle also differs from the one in Maastricht-Pandhof. The specimen from Basel has in fact an open plate that is closed off on the back with a silver foil. Moreover, the plate itself is decorated with heads of dolphins and horses, which relates it to Mediterranean products. The filigree ornament of the Maastricht buckle remotely reminds of the S-ornaments on the Basel buckle. Martin dates the Basel buckle to the second or beginning of the third quarter of the sixth century.[60] Moreover he mentions two other buckles comparable to the one from Basel (fig. 10.3). They come from Nordendorf (Germany) and grave 22 of the cemetery of Castel Trosino (Italy).[61] Because both are of a lesser quality he expects them to be somewhat younger than the Basel specimen.[62] A last example that should be compared to the Maastricht-Pandhof specimen is the silver buckle found in grave 766 of the cemetery of Schleitheim (Switserland, Kanton Schaffhausen).[63] It is the grave of a man of c. 40-49 years old, he '*war wohl ein fränkischer <Beamter>*'.[64] A sword, a shield, a lance and a seax were deposited in the grave along with pottery (food), a purse and some other small objects. The buckle was found at the height of the waist. It has a rectangular loop and the plate of the buckle has lower lying fields inlaid with gold foil, ornamented with filigree. The outline of the plate differs a little from that of the Maastricht examples, although a vertical bar reminiscent of the vertical strip of the Maastricht examples separates the two inlaid fields. It is dated on the basis of its parallel example in Basel-Bernerring grave 33 to the middle and the third quarter of the sixth century. The end of the plate also differs from the Maastricht examples. These buckles can be found in graves of both men (Basel-Bernerring) and women (Maastricht-Pandhof, Castel Trosino). If the Maastricht specimen is somehow related in an art-historical sense to those of Basel-Bernerring, Schleitheim and Castel Trosino then a date for the Maastricht examples in the second half of the sixth century seems most plausible.[65]

The plate buckle from grave Vrijthof 222 has a fixed plate, but is very different from the ones discussed above (fig. 10.2). The plate buckle is made of bronze with a crude cast (degenerated?) animal style decoration and two cast fasteners at the back of the plate. This plate buckle is the only object uncovered in the grave and was found at the right side of the pelvis. It is therefore likely that this plate buckle was part of a belt worn around the waist. No exact parallels were found for this buckle. Its decoration is possibly related to that on shoe buckles with cast plates found in the region around Basel and Freiburg.[66] These buckles are however of a different type and construction. The grave in Sissach in which such a shoe buckle was found is dated to the *Jüngere Merowingerzeit* IIa (c 620/640-660).[67] In the typology of Legoux, Périn and Vallet types 133 (fixed plate) and 138 (attached plated) can be compared with the Vrijthof specimen. These types are dated to the seventh century.[68] If the ornamentation of the Maastricht-Vrijthof buckle is indeed a degenerated animal II style then it might be expected that the buckle dates somewhat later in the middle or second halve of the seventh century.

Plate buckle: silver and copper alloy with foil inlays
Vrijthof: 73 (1584-1).

One example of another kind of so-called Mediterranean or 'exotic' buckles was found in the Vrijthof cemetery. The bronze plate buckle from grave 73 has a rectangular loop and triangular plate with two circular bulges at the end of the plate (fig. 10.2). The tongue has a trapezium shaped base. The central field of the plate, one of the round circular ends and the base of the tongue are inlaid with bronze foil with a dot-in-circle decoration. In one of the circular round ends the foil is gone. Corroded remains of the foil show that it was once present. The plate was fixed on the belt with the help of two fasteners at the back of the plate

Almost exact parallels (with two circular bulges at the end of the plate, here defined as group A) are known (fig. 10.4) from the cemetery of Kranj (Slovenia) grave 337 (2), Cologne, Saint Severin (Germany) grave IX,93B (3), Gondorf (Germany) find 1580 (4), Grez-Doiceau (Belgium) grave 305 (5), Kärlich (Germany, Kreis Mayen-Koblenz) grave 'F' (6), Schleitheim (Switserland Kanton Schaffhausen) grave 592 (7), La-Roche-sur-Foron (France, Haute Savoie) E74 (8), Niedernberg am Main (Germany) (9), Unteren Wied grave 338 (Germany, Neuwieder Becken) (10), and possibly from the surroundings of Monsheim (Germany, west of Worms) (11), and a recent find (not yet published) is known from the cemetery of Lentseveld (in the Netherlands) (14).[69] Of the Gondorf specimen the loop is missing. Moreover, it has not an inlaid foil but a dot-in-circle decoration stamped into the plate. This may have been done after the (bronze?) foil had been lost. Schulze-Dörrlamm mentions two other unpublished close parallels found in Neuwied-Heddesdorf (Germany) (12) and Heikenberg (Germany, near Lünen) (13).[70] Päffgen dates the grave of Cologne, Saint-Severin in his phase 4 of the cemetery of Cologne, Müngersdorf (c. 550/560-580/590).[71] Vinski holds a post-Justinian date, post c. 565, most likely.[72] Schulze-Dörrlamm suggests a date early in *Stufe* III, which is generally dated from c. 520/530 to 600. She thus suggests rather a date before 565. The Kärlich grave includes a small circular fibula and a bow fibula of the type Koch

(40) Fingerling 1967, 181, Fundliste D nr 1, Tafel 69, 1; Werner 1953, 22, 87. (41) Sage 1984, I, 202; II, Tafel 101, 33. (42) Fingerling 1967, 181, Fundliste D nr 3, Tafel 69, 2. (43) Fingerling 1967, 181, Fundliste D nr 4, Tafel 69, 3. This one is included because of the characteristic vertical rib. (44) Roth/Theune 1995, 222-223, Tafel 273. (45) Fingerling 1967, 181, Fundliste D. In the new presentation of the grave finds from Engers by Grunwald no such buckle is mentioned (Grunwald 1998, 108-109). (46) Fingerling 1967, 182, Fundliste E nr 20, Tafel 69, 6; Stare 1980, 106, T. 2; Vinski 1980, 96. (47) Fingerling 1967, 182, Fundliste E nr 16, Tafel 69, 7. (48) Menghin 1983, 248, catalogue nr 98, 8. On the date of the sword: Mengin 1983, 135. (49) Fingerling 1967, 182, Fundliste E nr 11; Vinski 1967 [1974], Tab. XLII, nr 3. (50) Fingerling 1967, 181, Fundliste E nr 7, Tafel 69, 5. (51) Fingerling 1967, 182, Fundliste E nr 8, Tafel 69, 4; Ament 1976, 204, Tafel 25, 8. (52) Fingerling 1967, 182, Fundliste E nr 14; Ripoll 1985, 72-73, 214, nr 1. (53) Palol/Ripoll 1999 (1988), 50, nr 191. (54) Zeiss 1934, 34-35, Tafel 14, 10, 11 and 13. (55) Peschek 1996, I, 41-42, 238-239; II, Tafel 31,5. It is the grave of a woman dated to the Ältere Merowingerzeit III (560/570-600). (56) Zeiss 1934, Tafel 14, 14. (57) Martin 1976, 64-66, 281-288. (58) Fingerling 1967, 170. For the buckles discussed here this date seems to be too late. (59) Martin 1976, 64-66, 281-288. (60) Martin 1976, 66. (61) Martin 1976, 64. (62) Martin 1976, 66. The example from Castel Trosino originates from a burial of the late sixth century. (63) Burzler *et al.* 2002, I, 142-143; II, 200-201, Tafel 96, nr. 5. (64) According to the caption of Abb. 92 in Burzler et al. 2002, I, 142. (65) If the Castel Trosino grave is that of a Lombard woman it probably dates after the conquest of the nearby fortress by the Lombards in 571 (Fingerling 1967, 164). (66) See now Burnell 1998, 150-152. (67) Burnell 1998, 158. Burnell states that they cannot be attributed to the Jüngere Merowingerzeit I. (68) See for instance types 133 and 138 in the typology of Legoux/Périn/Vallet 2004. (69) Kranj grave 337: Vinski 1980, 97; Stare 1980, 119 and T. 102. Cologne, Saint-Severin grave IX, 93B: Päffgen 1992, 388-389, 703-705, Tafel 106,7. Gondorf: Schulze-Dörrlamm 1990, I, 264-265, 332; II, 167, Tafel 52. Grez-Doiceau: *De l'or sous la route. Découverte de la nécropole mérovingienne de Grez-Doiceau*, Namur 2006, 9. Kärlich: Hanel 1994, 23-24, Tafel 4, 8 and 7. Schleitheim: Burzler et al, 2002, I, 143; II 168-169, Tafel 69. La-Roche-sur-Foron: Colardelle 1983, 118, fig. 56,8. Hanel mentions in her book on the Merovingian finds of Kärlich that a similar buckle is found in Niedernberg am Main (Germany) grave 36 (Hanel 1994, 24 note 67 referring to Pescheck, 1984: Das fränkische Gräberfeld Niedernberg am Main, *Aschaffenburger Jahrbuch* 8, 91, 71 Abb 50,3). This publication is however not available in the Netherlands. Unteren Wied (Neuwieder Becken): Grünewald 2001. Surroundings of Monsheim': Behrens 1947, 47, catalogue number O. 15225; Abb. 102. The buckle plate is part of the Fliedner collection that was built up of finds collected by Fliedner in the surroundings of Monsheim, but also by buying objects from private persons on the art market. An origin from the surroundings of Monsheim is however conceivable. (70) Schulze-Dörrlamm 1990, I, 265. It is not clear whether they have two bulges (group A) or one (group B) at the end of the plate. (71) Päffgen 1992, 389. (72) Vinski 1980, 97.

IV.2, which dates to the second half of the sixth century.[73] The grave will date to the second half of the sixth century.

There is a variant with only one circular bulge at the end of the plate and two bulges near the loop (group B). A complete inventory of this type of buckle to study its distribution and context was not aimed at, for now only a few examples are given. This type is known from Kranj graves 77 (with oval loop) and 327 (idem).[74] Another such specimen (inlaid with bronze foil) was found in the cemetery of Cutry (France) grave 910.[75] It is the grave of a man, which is placed by Legoux in his phase C/D/E. In the new chronology of Merovingian material culture from northern France this type of buckle (type identification 162) is placed in the second halve of the phase MA2 and in the phase MA3 to which the approximate dates of 520/530-560/570 and 560/570-600/610 are given.[76] In the discussion of this buckle Legoux states that this type is common in northern Gaul (he means France) and Belgium and mentions similar examples in the cemeteries of Lavoye (France) grave 8, and Vieuxville (Belgium) grave 101.[77] Finally such a buckle has been found in Schwarzrheindorf (Germany) grave 55.[78]

Comparable, but different, are specimens with the same outline of the plate as those of group B but with an open triangular plate which may have been filled up or had a bronze plate or foil at the back. Examples of these are, for instance, found in Hailfingen grave 371,[79] Ciply grave 113,[80] and in nearby Meerssen grave 16.[81] They seem to be rather common in France and Belgium as well.[82] Often it is not possible to distinguish between the type with inlay and the open plates on the basis of the publication drawings.[83] Neither is it possible to see whether the plates have rivets or fasteners on their backs. An oval buckle with a tongue of similar shape and decoration as the Maastricht example has been found at Haine-Saint-Paul (Belgium).[84] The plate however is lost. The oval shape of the loop suggests that it belongs rather to group B.

According to Vinski the discussed types of plate buckles (from the here defined groups A and B) originate from the south-eastern Alpine region near the Adriatic Sea.[85] In the north however, similar specimens are identified in quite a reasonable number.[86] Päffgen asks about the influence of these Mediterranean products in Northern Gaul.[87] We could as well ask whether he distribution pattern justifies the conclusion that they are Mediterranean products or even Mediterranean inspired products. Of the identical buckles of group A (Kranj, Cologne, Gondorf, Grez-Doiceau, Kärlich, Schleitheim, 'surroundings Monsheim' and Maastricht) seven are from the north and possibly another two also are (Neuwied-Heddesdorf and Heikenberg bei Lünen for which illustrations could not be found). Most of the specimens of group B were found north of the Alps.[88] Most likely buckles with a plate inlaid with bronze foil (group A) date to c. 550/560-580/600 in spite of the early date given by Schulze-Dörrlamm.

The Maastricht buckle was found in the grave of a man, like the one in Cologne, Saint-Severin grave IX, 93B. For the grave in Kranj the sex/gender of the deceased could not be established. Graves 77 and 327 of the cemetery at Kranj (group B) are probably those of a woman (bow fibula) and a man (crossbow fibula, fire-steel). The Cutry grave is that of a man. The Kärlich grave is that of a woman and the Schleitheim grave of a man of c. 30-34 years. These buckles thus do not seem to be exclusively part of the dress of men.

Another buckle with foil inlay was found in the Pandhof cemetery (context 10527). This buckle is of silver, the loop is rectangular as is the plate, which has two fasteners on its back. The tongue has a trapezium-shaped base, its edges are profiled. The three rectangular inlays on the plate and the one on the tongue base are of bronze foil and are decorated with a dot-in-circle motive. An almost identical silver buckle was found in grave 1360 of the cemetery at Altenerding (Germany).[89] This buckle however has an oval loop. The arrangement of the ornament on the plate and the irregular end of the plate is nearly identical to the Maastricht specimen. The plate of the specimen from Altenerding was inlaid with silver foils; the inlay on the tongue is missing. The grave from Altenerding is difficult to date; next to the buckle it contains a broken and heavily corroded lance, four knives, a strap end and a needle.

With the exception of the find in Cologne, Saint-Severin, the lower Rhine area does not provide examples of similar plate buckles with bronze or silver foil inlay. Legoux, Périn and Vallet mention some examples of plate buckles and plates which are characterized by bronze foil inlays also with dot-in-circle decoration.[90] These plate buckles, however, are much smaller and have a different shape than the two from the Servatius complex. They date these plate buckles in 540/50-600/10. It can be assumed that the plate buckles as categorized by Périn belong to the same 'tradition' as those known from the Servatius complex and the known parallels.

Plate buckles: copper alloy with hinged construction

Vrijthof: 99 (1413-1, 2); 154 (1545-1).

One plate buckle with a flat plate and a hinged construction to connect the plate with the buckle was found in grave 99 (fig 10.2). This plate buckle is of bronze and accompanied by a strap end. The plate buckle was attached to the belt with the three fasteners cast on the back of the plate. The cast and incised decoration on both the plate and strap end can be described as degenerated animal style. The buckle has an oval loop with an oval section and a simple tongue. It was found at the right side of the pelvis and can therefore be interpreted as the fastener of a waist belt. The belt width is approximately 1.8 cm. It is part of an assemblage of grave goods that furthermore consists of two glass vessels (one of around AD 600 and one of the late-Roman period). Parallels for this plate buckle are difficult to find, but some resembling specimens are known from grave 206 of the cemetery of Stetten an der Donau.[91] Here they are part of the leg wear. Closer parallels, although of silver and with a shield tongue, were found in grave 2 in the church of Saint-Evre in Toul. The two silver plate buckles of this grave have a similar bulge at the extremity of the plate, their ornamentation can be described as degenerated animal style. This grave dates to the first half of the seventh century.[92]

Siegmund suggests that a hinged construction is a chronological significant feature.[93] In his typology hinged constructions occur with plate buckles with cast fasteners on the back of the plate, decorative (fake) rivets and a cast and incised decoration. The plate buckles of Siegmund's typological groups, however, differ from the specimen of the Vrijthof cemetery in that they have larger and triangular shaped plates. Thus the plate buckle from the Vrijthof cemetery cannot be placed in the Rhineland groups. It could be that the hinged construction of the plate buckle from the Vrijthof dates it in the same period (Rhineland phase 8: 610-640).

The plate buckle with a hinged construction from grave 154 is discussed here, although it is unknown whether it can be compared with the plate buckle from Vrijthof grave 99 because the plate is lost (fig. 10.2). The buckle belongs to a belt with a width of approximately 1.3 cm. Therefore it cannot be classified as Siegmund's Gür 3.3 or 3.4, which are generally much larger. It can be assumed, as mentioned above, that it dates to the same period as the larger plate buckles with a hinged construction (Rhineland phase 8: 610-640).[94] This is the only find from this grave.

Plate buckles: copper alloy with round round plates and stamped in decoration

Vrijthof: 79 (1382-2, 3).*

The plate buckle from grave 79 went missing, as is the strap end found with it, but the old photographs provide some information for their description and classification (fig. 10.2).[95] It is assumed that the plate buckle is part of a belt with a width of approximately 3.5 cm.[96] The plate buckle and strap end were part of a grave goods assemblage of a man, which consists of a fire steel with a piece of flint and a pottery vessel.

That plate buckles with rounded plates and a stamped in decoration can be part of belt sets with multiple mounts is for instance illustrated with the extended belt set found in grave 293 of the cemetery of Kleinlangheim.[97] The plate buckle of this belt set resembles the specimen of the Vrijthof cemetery. They are considered to be the belts of men.[98] Böhner classified similar plate buckles as group B2.[99] The one specimen that can be dated (from Zemmer) is dated to his *Stufe* III. Another example was found in the village of Maasmechelen, c. 12 km to the north of Maastricht.[100] It is decorated along the edges with two lines of stamped in triangles, which are bordered on both sides with a line of stamped in dots.

The Vrijthof belt can be classified as Siegmund's type Gür 3.2b, which is dated to Rhineland phase 6 (570-585).[101] No exact parallels, however, are known from the lower Rhineland area. The Franken AG classified these buckles as type Gür 3c and date them in their phases 5 and 6 (565-610/20).[102] Legoux, Périn and Vallet distinguish in the group of bronze plate buckles with rounded plates between the singular plate buckles (157), the plate buckles with counter plates (158) and the large plate buckles (159).[103] Since the find circumstances make it difficult to establish whether a buckle is singular or part of an elaborate set, their types 157-159 are for the moment considered as a single group. These types belong to their phases MA3 and MR1 (560/70-630/40). Types 157 and 158 are common in the second half of phase MA 3 (thus c. 585-610).

Bronze plate buckles with rounded plates are certainly related to the iron ones with silver inlays such as the one in grave III, 81 of the cemetery Cologne-Sankt-Severin.[104] It seems that the bronze plate buckles with rounded plates are somewhat earlier than the iron ones. It is therefore probable that the Vrijthof specimen dates to the later sixth century.

Plate buckles: copper alloy, triangular flat plates and stamped in decoration.

Vrijthof: 48 (1592-1, 2); 310 (1783-1).

The bronze plate buckles with triangular plates have a wrapped and slotted construction that attaches the plate to the buckle. The plates of these plate buckles are flat and have three domed bronze, quite prominent, rivets, which served to fix the plate to the leather belt. The outline of the plates shows bulges at the place of the rivets. The decoration on the plate buckles is characterized by stamped in motifs consisting of small points and triangles.[105]

The plate buckle from grave 48 has stamped in triangles along

(73) Koch 1998, I, 265-271; II, Typentafel 2. See also Göldner 1987, I, 133-135. (74) Stare 1980, 108, T. 31, 118, T 95. (75) Legoux 2005, 145, 146 (fig. 120, 910), planche 41, 329, planches 120-121. (76) Legoux/Périn/Vallet 2004. (77) Legoux 2005, 145; Joffroy 1974, 105, planche 1; Alénus-Lecerf 1985, 128. (78) Behrens 1947, 20, Abb. 50, 1. (79) Stoll 1939, 63 and Tafel 23, 24. (80) Faider-Feytmans 1970, 174-175 and planche 91. (81) A small specimen that lacks the two bulges near the loop: Braat 1956, fig. 17,16-0 and 76-77. (82) In the cemetery of Cutry also examples of Fingerling's type Güttingen and Mindelheim are present. (83) See also Päffgen 1992, 388-389. (84) Faider-Feytmans 1970, planche 91. (85) Vinski 1980, 96-97. (86) Päffgen 1992, 388-389. (87) See also the discussion on a number of these buckles in Giesler 1983, 518-520. (88) See the list in Päffgen 1992, 388-389, notes 26-32. (89) Sage 1984, I, 328; II, Tafel 160, 19. (90) Legoux/Périn/Vallet 2004, 16, 32 (type 161) (91) Weis 1999, grave 206. (92) Wieczorek *et al.* 1996, 1033-1034 with references to the original publications. (93) Siegmund 1998, 27-28 (Rhineland Gür3.3 and 3.4.). (94) Siegmund 1998, 27-28. (95) Only a fairly good photograph of the plate buckle was available; the photograph of the strap end is of a poor quality and could not be depicted. (96) Based on a drawing in the Ypey-archive of which it is assumed that it represents the actual size. (97) Pescheck 1996, 50 and Taf. 71, 1-9. It is dated to the Ältere Merowingerzeit III (560/70-600). (98) Pescheck 1996, 50, Abb. 13. (99) Böhner 1958, 184, Taf. 36, 8a-d, Taf. 37,1. (100) Heymans 1978, 94 en Pl. 16 (133). (101) Siegmund 1998, 27. (102) Müssemeier *et al.* 2003, 19. (103) Legoux/Périn/Vallet 2004, 17, 31 53 (type 157-159). (104) Päffgen 1992, 2, 246 and Taf. 57,5. / 1992,1, 390-391. (105) Aufleger 1996, 622-624; Koch 1977, 124.

the edges of the plate (fig. 10.2). The width of the leather belt was approximately 2.5 cm. The belt has an additional strap end. The set most probably belongs to the grave of a woman which contained a string of beads, some chain elements and a finger ring. The plate buckle with strap end was found at the right side of the pelvis, so it is likely that they were components of the waist belt.

The plate buckle from grave 310 has a more elaborated decoration, which is also applied on the loop (fig. 10.2). It consists of both points and triangles. Only half of the plate remains, but the original shape of the plate buckle will have been triangular. It can be regarded as a repaired specimen. The remains of the plate buckle were reused and a rivet was placed at the new end of the plate. This grave contained also a lance head and a *fransisca* and is probably the grave of a man.

Although the variability in this group of plate buckles is great there does not seem to be a large chronological variation. Siegmund places plate buckles of this kind in typological group Gür 3.2a and describes them as bi-partite bronze belt sets of which the plate buckles have a shield tongue and a stamped in decoration of points. In this case bi-partite refers to a belt consisting of a plate buckle and a back plate. Siegmund's definition of this group of belt fittings is quite wide and it may therefore prove necessary in the future to differentiate within this group of belt mounts. The Franken AG refers to this heterogeneity, but the chronological variability within this group was considered too insignificant to create a further subdivision for this type.[106] However, a subdivision of this type might be necessary in relation to other themes of research such as gender and age categories. Siegmund dated this group (Gür 3.2a) in his phase 6 (570-585). The Franken AG designated this group as type 3A and date it in their phase 5 (c.565-580/90). The best match in the typology of Legoux, Périn and Vallet is type 170 which they date to the second half of their phase MA2 and MA3 (540/50-600/10).[107]

Plate buckles: triangular flat plate with cast animal style decoration

Vrijthof: 205 (1654-1, 2).

One bronze plate buckle with a flat plate and cast decoration was found, together with a back plate, in grave 205 (fig. 10.2). The plate buckle has a decoration of animal heads along the edges of the plate, which are accompanied by stamped in triangles and dots. The outline of the middle field is defined by lines of stamped in triangles and a groove, and the middle field itself is filled with stamped in dots. The shield of the tongue has a decoration of triangles, which are similar to those along the edge of the associated rectangular back plate. The back plate is, in contrast with the plate of the plate buckle, hollow.

The belt fittings were associated with a seax, a fire steel and a small bronze buckle which served as the fastener of a purse flap. The finds probably formed the grave goods assemblage of a man. The small bronze purse buckle and the seax date to the sixth and seventh century. No exact parallels are known for this plate buckle. It shows some superficial similarities with type 179 of Legoux, Périn and Vallet, which predominantly dates to their phase MR2 (630/40-660/70).[108] The plate buckle is to some extent related to the cast silver and bronze plate buckles and counter plates of the seventh century which are discussed by Werner in the context of the analysis of the rich grave finds from Wittislingen (Germany).[109] The Maastricht plate buckle shares some characteristics with these exquisite fittings, such as the profiled edges of the plate which are decorated with animal heads. The central field of the Maastricht buckle is lined with triangles imitating the triangles inlaid with niello of the gilded silver cast examples such as the one from Wittislingen. It shares this characteristic with the belt set of Wurmlingen (Germany) depicted by Werner.[110] The Maastricht specimen, however, has no animal decoration in the central field nor garnet or glass inlay. Werner dates the Wittislingen and related belt sets in the second half of the seventh century. Marti discusses a similar group of cast bronze belt sets decorated in animal style.[111] These fittings are, however, hollow to some extent. He dates these belt sets in the *Jüngere Merowingerzeit* II (630/40-670/80). The Maastricht specimen dates most likely in the same period.

Plate buckle: copper alloy, triangular hollow plate, not decorated

Vrijthof: 110 (1596-1, 2; 1553-1, 2).

The counter plate from grave 110 is hollow and not decorated (fig. 10.2). It belongs to the grave goods assemblage of a woman. Because of its position relatively far from the skeletal remains the allocation of this find to grave 110 is questionable. It can be assumed that this counter plate was originally part of a belt with at least a comparable plate buckle. Other mounts that are associated with this counter plate are a rectangular (back) plate and two mounts (*Riemenöse*) with square slots and small round holes.

Bronze plate buckles with hollow plates and their associated belt fittings belong to Siegmund's group Gür 3.3, which dates to Rhineland phase 8 (610-640). Koch dates belt sets of this kind in her *Stufe* 5 (620/30-650/60).[112] A similar example is known from the cemetery of Bülach (grave 127); it consists of a plate buckle, counter plate and triangular back plate.[113] Werner dates this belt set in the second half of the seventh century and claims that it is a type that is part of the material culture of the entire Merovingian area and especially the Lombard area. The ones distributed in the more northern regions, however, are considered by Werner as local products and differ from the Lombard types by their broader and ungainly appearance.[114] Legoux, Périn and Vallet classified plate buckles and associated belt fittings with the described characteristics as type 172 and date them in their phases MR1-MR2 (600/10-660/670).[115]

Plate buckle: copper alloy, triangular hollow plate, decorated

Vrijthof: 0 (8888-4).

The hollow plate buckle (8888-4) with cast decoration along the outer edge of the plate is without context (fig. 10.2). A close parallel for this specimen is not known until now, but a belt set that can be compared with this plate buckle was found in Theswil-Benkenstrasse (Switzerland) grave 53.[116] It is part of a group of belts with cast animal style decoration.[117] One characteristic is the presence of a decorated middle field surrounded by a cast animal style frieze. The Maastricht plate buckle has such a decoration scheme but the middle field is not decorated but plane. Moreover, it is as if the mould for making this plate was not finished, which might be an indication for a local workshop too. The composition of the frieze of this plate (in terms of the ordering of animal heads) resembles that of the plate from grave 205 (1654). This might be another (although weak) indication for the presence of a local workshop. Belt sets with cast animal style decoration of the type as found in Theswil date to the *Jüngere Merowingerzeit* II (520/30-560/70).

Plate buckles: iron, round plates, undecorated

Vrijthof: 0 (1771-1); 75 (1381-1, 2, 3).

The Vrijthof excavation produced two iron undecorated plate buckles with a round plate (fig. 10.5). The specimen of which the context is unknown (1771-1), belongs to a belt with an approximate width of 7 cm.[118] The loop is attached to the plate with a wrapped and slotted construction. Three bronze rivets with decorated rims of brass inlay served to attach the plate to the leather belt.[119]

The plate buckle from Vrijthof grave 75 was part of a leather belt with a width of approximately 5.5 cm. The plate is attached to the buckle with a wrapped and slotted construction. The fittings forma a tri-partite belt set with, next to the plate buckle, a rectangular back plate and round counter plate. The plate buckle and counter plate both have three undecorated bronze rivets, the rectangular back plate has four rivets. The belt fittings were associated with a knife next to the right lower leg. The belt and knife belong to an assemblage of grave goods that furthermore consists of a pottery dish and beaker and a decorated pin. The pin can be dated to Rhineland phase 7 (585-610).

Iron undecorated plate buckles with round plates are quite common grave goods in the Rhineland, the Middle Meuse area and Northern France. The variety in this category of belt sets is quite small, and mainly concerns the size and the combination of the belt fittings present. Koch dates these belt sets in her *Stufe* 3 (565-590/600) and 4 (590/600-620/30) of the cemetery of Schretzheim.[120] These belt sets gradually replace the simple buckles so that they rather belong to the later part of *Stufe* 3. Moreover, Koch observed that belt sets consisting of only a plate buckle are rather a phenomenon of *Stufe* 3 whereas those consisting of two or three elements (plate buckle, counter plate, back plate) belong to *Stufe* 4 of the cemetery of Schretzheim. Within this phase these belts seem to be early. Similar observations were made for the cemetery of la Grande Oye at Doubs (Fr. Doubs) where these

Fig. 10.5
Plate buckles: iron (scale 1:2).



1771-1



1381-1/2/3



1843-1

(106) Müssemeier et al. 2003, 19. (107) Legoux/Périn/Vallet 2004, 16, 32, 53 (type 170). (108) Legoux/Périn/Vallet 2004, 16, 32, 53 (type 179). (109) Werner 1950, 26-32. (110) Werner 1950, Tafel 7, 2a-b. (111) Marti 2000, 99-100. (112) Koch 1977, 125. (113) Werner 1953, Taf 4, 12. (114) Werner 1953, 25. (115) Legoux/Périn/Vallet 2004, 16, 32, 53 (type 172). (116) Marti 2000, I, 100, Abb. 55. (117) See also Werner 1950, 26-32. (118) This is the maximum diameter of the plate, not the inner loop width. (119) It is difficult to establish the material of the rivets. They can also be of iron and plated with copper alloy. However, the pins with which they are attached to the plate and the leather belt are of copper alloy as can be seen on the back of the plate. For this reason we suspect that the entire rivets are of copper alloy. (120) Koch 1977, 21-29.

belt sets are an element of phase HA (c. 580-600/610). In this cemetery too, the bi- or tri-partite belts seem to be somewhat younger.[121] Belts with a width of 5-6 cm that consist of a plate buckle and counter plate were not found in Schretzheim, only tri-partite belts of this width are known. Koch claims that belts with a width of 7-8 cm can be expected, in the cemetery of Schretzheim, to consist of two rectangular back plates and a round counter plate. Belts of this kind are according to Koch younger than the belts with only a plate buckle or the thinner bi-partite belts. In Schretzheim the broad tri-partite belts are dated to the period from 590/600 to 650/60. This chronological characteristic could indicate that the plate buckle 1771-1 was part of a belt with counter plate and two back plates.

Siegmund considers the category of belts with round iron plate buckles to be the earliest group of belts with iron fittings in the Rhineland. They are classified as Siegmund type Gür 4.1 or 4.2 (depending on the fittings present) and date to Rhineland phase 7 (585-610).[122] The Franken AG discarded the typological difference between the two groups of Siegmund that was based on the presence or absence of additional fittings, because their original presence or absence is difficult to establish with certainty. They define only one typological group for all the iron belt fittings with rounded plates (Gür 4.1/2) and date them in their phases 5-6 (565-610/20).[123] Legoux, Périn and Vallet make a distinction between two different groups of iron plate buckles with round plates on the basis of the presence (type 149)[124] or absence (type 148)[125] of additional belt fittings. They state that the plate buckles with the additional elements often show larger dimensions than those without.[126] This, however, is not in accordance with the Vrijthof finds. The specimen from the Vrijthof cemetery that consists of a plate buckle, a counter plate and back plate (grave 75) is smaller (length of plate: 4.5 cm) than the plate buckle without the additional elements (length of plate: 6.5 cm). The context of this plate buckle is unknown, and it could originally have been part of a bi- or tripartite belt set. The decoration of the rivets (brass inlays) is not considered to be a relevant typological feature according to Siegmund, the Franken AG and Legoux, Périn and Vallet.

Plate buckle: iron, not decorated

Vrijthof: 0 (1843-1).

The loop of the plate buckle (context unknown) is reasonably preserved, but half of the plate is lost and its original shape cannot be identified anymore (fig. 10.5). This plate buckle was part of a belt with a width of approximately 4 cm. Whether this plate buckle originally had a decoration of silver and/or brass inlay cannot be established. Although no context information is available, this find can be associated with a lance, seax and perforated rivets of a seax scabbard. On the basis of these finds it can be assumed that the plate buckle was part of the grave inventory of a man and that it was probably decorated with silver and/or brass inlay, which is a common phenomenon on belt mounts which are associated with *Breitsaxen*.[127]

On the basis of the remains, however, it is classified as an undecorated plate buckle with a broad plate and placed in Siegmund's group Gür 4.5, which dates early in Rhineland phase 8 (610-640).

Iron plate buckles with silver and copper alloy inlays

Various belt fittings (plate buckles, counter plates, back plates) with inlays of seven waist belts are present (fig. 10.6). The decoration patterns formed with inlays of silver and copper alloy have been a research subject for a long time but a consistent and detailed typology is not available yet.[128] This is mainly due to the complexity and the local variation of the decoration patterns. The iron belt fittings of Maastricht can be placed in nearly all the typologies available, such as those of Siegmund, the Franken AG and Legoux, Périn and Vallet, because the classifications they offer simplify the variability and complexity of the decoration patterns. The specific characteristics of the decoration patterns on the belt fittings from the Vrijthof cemetery need to be discussed separately. Further research on the classification of the complex decoration patterns is required. The main distinctive criteria for the plate buckles from the Vrijthof cemetery are the shape of the plates, the material of the inlay (monochrome or bi-chrome) and the presence of a coated middle field. The decoration of the plates will be described separately for the middle fields and their surrounding frames.

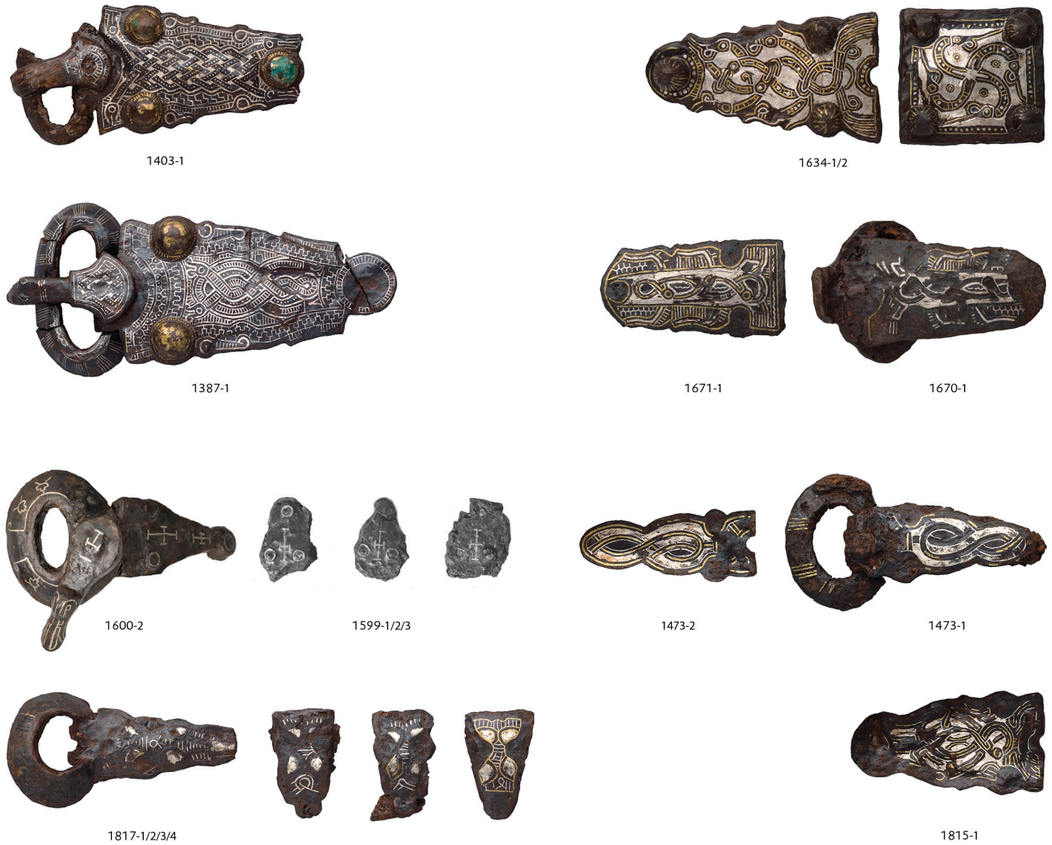
Plate buckle: iron with inlays, type 'Bülach'

Vrijthof: 92 (1403-1, 2, 3, 4).

The iron plate buckle from grave 92 has a characteristic swallow's tail extremity which is a characteristic of the plate buckles of the so called 'Bülach' type (fig. 10.6 and 10.7).[129] The Bülach type is defined both by form (swallow's tail ends) and decoration (band-motives in the middle field and snakes along the edges). This central pattern can consist of single or multiple lines and can be rounded or angular.[130] In Bülach most of the belts (eight out of twelve) show a monochrome (silver) incrustation.[131] The plate buckle from the Vrijthof cemetery has three domed bronze rivets with a decoration of brass inlays at their base. The Maastricht specimen has one of the most intriguing and complicated decoration patterns of the buckles of the Bülach type (fig. 10.7). The middle field of the plate consists of a pattern of six interlacing bands that are filled with points and have angular sides. Four of these bands end in animal heads. This pattern intersects the silver coated background. On this plate the animal heads that are placed in the swallow's tails ends are not those of the 'snakes' presumed to decorate the upper and lower edges of the plate.[132] Usually the swallow's tails ends are taken in by heads of 'snakes' whose bodies stretch along the edge of the plate in the direction of the rivets near the loop. On the Vrijthof specimen, however, they are part of the intertwining bands in the middle field. These bands are thus not a closed off ornament but has open ends. This characteristic can also be seen on a plate buckle and counter plate from Haine-Saint-Paul (Belgium).[133] Schrickel discussed the addition of animal heads to the bands of the central motive.[134] However, her examples cannot be compared to the composition of the Maastricht specimen. In our case extra animal heads are present along the edges, of which it may be assumed that they are related to the bands with vertical stripes and steps along the edges of the plate. The snakes' bodies thus are of type 3 in Schrickel's classification.[135] These bands are considered to form the 'snakes'' bodies. However, it is not possible to identify the body belonging to the animal heads near the two rivets near the loop.

This plate buckle is apparently part of the grave goods assemblage of a man and consists furthermore of a seax, four decorative rivets of the seax scabbard, a touch stone, two additional belt fittings and a small bronze buckle (see the catalogue). The two bronze belt fittings have a square base with a slot, a tongue shaped extension and three solid domed rivets. The mounts probably served to attach some additional straps to the waist belt to which the seax scabbard or a purse was attached. A small bronze buckle (1403-2)

Fig. 10.6
Plate buckles: iron with inlays (scale 1:2).



(121) Urlacher/Passard/Manfredi-Gizard 1998, 142-144. (122) Siegmund 1998, 29-31. (123) Müssemeier et al. 2003, 20. (124) Legoux/Périn/Vallet 2004, 16, 31, 53 (type 149). (125) Legoux/Périn/Vallet 2004, 16, 31, 53 (type 148). (126) Legoux/Périn/Vallet 2004, 16. (127) Siegmund 1998, 87-94. (128) Salin 1904; Werner 1953; Trenteseau 1966; Martin 1971; Haseloff 1981a,b; Roosens 1986; Marti/Meier/Windler 1992, 34-48, 56-57; Plumier-Torfs 1986. (129) Werner 1953, 31-34; Schrickel 1979, 15-28; Van Es/Hulst 1991, 123-124. (130) Werner 1953, 31. (131) Werner 1953, 31. (132) Schrickel 1979, 21-33. (133) Faider-Feytmans 1970, I, 132, II, planche 72 (H.P. 164). Van Es/Hulst 1991, 124. (134) Schrickel 1979, 24-25. (135) Schrickel 1979, 17 and Tafel 1.

Fig. 10.7
The distinct decoration elements on the plate buckles from grave 86 (1387) and 92 (1403) (scale 1:1).



suggests that a purse was present. The plate buckle and additional mounts were found together with the seax next to the right lower leg. Close parallels for these mounts were found in the grave (grave of 1932) of a man in the cemetery of Mannheim-Strassenheim (Germany).[136] The four mounts of this grave were also found with belt mounts of the 'Bülach' type. A spatha, seax, lance and umbo were also found in this grave, which is dated to the second quarter of the seventh century.

'Bülach' type refers to the find concentration of such plate buckles in the region around the cemetery of Bülach. Werner states that the plate buckles of this type have that much similarities that it can be assumed that they were made in the same production centre.[137] However, Werner states that the definition of these plate buckles as type 'Bülach' does not mean that Bülach is the place of production of these plate buckles but merely that it refers to the high concentration of finds in this cemetery.[138] The specimen from the Vrijthof cemetery again shows that this type appears in graves outside its region of 'origin'. A plate buckle of the 'Bülach' type with bi-chrome inlay is known from grave 1975/79 of the cemetery of Lent.[139] Van Es and Hulst offer a list of ten cemeteries in the Frankish area where belt mounts of this type with monochrome inlay were found.[140]

Siegmund did not identify plate buckles of this type, nor did the Franken AG, which is an argument in support of the observation by Van Es and Hulst that the Bülach type belt sets of the north are rather a feature of eastern Belgium and north eastern France (the Middle Meuse valley). The plate buckle from Vrijthof grave 92, however, can be classified as Siegmund's type Gür 4.6 on the basis of the monochrome geometric inlays of bands filled with points.[141] This type dates to Rhineland phase 8 (610-640). The Franken AG maintained this type and date it in their phase 7 (610/20-640/50).[142] Strangely enough plate buckles of type *Bülach* are not defined as such by Legoux, Périn and Vallet, but the plate buckle of Vrijthof grave 92 can be classified as their type 185, based on the points in the interlacing bands.[143] This type dates to their phases MR1-MR2 (600/10-660/70). Knaut dates the plate buckles of the Bülach type with bands and dots in the second quarter or second third of the seventh century.[144]

Plate buckle: iron with silver geometric inlays and animal style elements

Vrijthof: 86 (1387-1).

An iron plate buckle with monochrome inlays is the only waist belt fitting from Vrijthof grave 86 (fig. 10.6 and 10.7). The belt width is approximately 5 cm. Broad waist belts are often identified as weapon belts, which means that they could carry the weight of a scabbard with seax or sword that was connected to the belt.[145] This is in accordance with the find of a seax and perforated scabbard rivets in grave 86. The buckle loop is decorated with lines of silver inlay, the tongue base has silver geometric inlay and the silver inlays on the top of the tongue represent an animal head. The plate is trapezium shaped, is slightly profiled and has rounded extensions there where the rivets are placed. The extension or bulge at the short end of the plate suggests the former presence of a rivet. The presence of three fasteners on the back of the plate indicate that these rivets did not serve to fix the plate to the leather belt but that they merely had a decorative function (so-called 'fake rivets'). The two remaining rivets are large and dome headed, and it can be assumed that the third had the same appearance.

The decoration on the plate refers to a group of plates with intricate band motives, which Schrickel considers to be related to the plate buckles of the Bülach type in some ways (fig. 10.7). She discusses a group of buckles of which the band motive is combined with animal heads.[146] However, she does not believe that this ornamental scheme develops out of that of plate buckles of the Bülach type.[147] The central field of the Maastricht buckle is taken in by two animal heads and associated bodies that consist of bands with cross-stripes (*Leiterband*). The animal bodies are intertwined with two bands. One of them is closed and has cross-stripes (*Leiterband*), the other one consists of a band with dots (*Punktband*) and is open at one end. Thus on this buckle two types of bands are combined. The central field is bordered by a narrow band of varying width of vertical stripes on the long sides and a frieze of steps along all four sides. Around the shield of the tongue a honeycomb frieze is present. Along the outer edges there is either a band with cross-stripes or animal heads.

The two animal heads looking away from the side rivets, might be considered 'snake's' heads (in Schrickel's sense) looking backwards, although they do not have exactly a form that reminds of a snake's head. The curved upper jaw rather refers to a bird of prey or another animal. The 'snake's' bodies along the edges consist of two bands (comparable to Schrickel's type 3), one with vertical stripes and one with a double line of steps. The two bands are separated by a single line and not by two lines as in Schrickel's type 3. Moreover, the presence of friezes with steps along the short sides of the central field is an argument not to consider the step friezes along the long sides as parts of snake's bodies, but as elements of the frame of the central field. In this sense the ornamental repertoire of this buckle seems to represent a further development of that on the Bülach buckle in grave 92.[148]

The high quality of this buckle and those found in Pandhof grave 10885, Vrijthof grave 92 and in the Lage Kanaaldijk cemetery (Maastricht), and the interconnectedness of these buckles, may be an indication that a workshop producing iron buckles with silver inlay was present in Maastricht.

Iron plate buckles with monochrome animal style decoration are not identified in Siegmund's research area. Siegmund, however, mentions that the pattern of the decoration is chronologically more indicative than the presence of monochrome or bichrome decoration.[149] Despite this remark, it is difficult to assign the plate buckle from grave 86 to one of the types as identified by Siemund.[150] The alterations of Siemund's typology by the Franken AG do not offer a typological group in which the belt from the Vrijthof unambiguously fits. The same remark can be made for the typology of Legoux, Périn and Vallet. The Vrijthof plate buckle has elements of their types 185, 186 and 187.[151] The date ranges for these types are from MR1 to MR2 (600/610-660/70). Knaut discussed buckles with this decorative scheme on the basis of a belt set found in Neresheim grave 101.[152] The execution of the ornaments on this example is, however, rather crude showing how delicate the decoration on the Maastricht buckle has been made.[153] As to the dating of this type of decoration he refers to Koch who dates these in phase 5 of the cemetery of Schretzheim (620/30-650/70).[154] However, the example from Schretzheim grave 274 does not really match the Maastricht plate buckle. The Maastricht plate buckle most likely dates to the second quarter and the middle of the seventh century. The perforated rivets of the associated seax scabbard date to the seventh century, as does the seax.

Plate buckle: iron with silver inlays, cross motif

Vrijthof: 125 (1600-2; 1598-2*; 1599-1, 2, 3*).

The belt fittings from grave 125 have a characteristic decoration of silver inlay in the form of crosses. The belt consisted of an iron plate buckle, a counter plate and three additional fittings (fig. 10.6).

(136) Wieczorek *et al.* 1996, 1022-1023. (137) Werner 1953, 31. (138) Werner 1953, 30. (139) Van Es/Hulst 1991, 123-124, 281, Abb. 83. This 'Bülach' type has a decoration of bi-chrome inlay and the authors suspect a place of production in the Meuse valley. (140) Van Es/Hulst 1991, 147, note 218. (141) Siegmund 1998, 32. (142) Müssemeier *et al.* 2003, 20-21. (143) Legoux/Périn/Vallet 2004, 16, 33, 53 (type 185). (144) Knaut 1993, 132. (145) Siegmund 1998, 29. (146) Schrickel 1979, 25-28. (147) Schrickel 1979, 25. On the relation between Bülach type plate buckles, plate buckles with band shaped animal bodies such as this one, and plate buckles with '*Faltenbandstil*' see also Van Es and Hulst 1991, 123-128. (148) Two other high quality and interesting Bülach buckles and one counter plate have been found in Maastricht-Lage Kanaaldijk (Panhuysen 1984, 80, with a dating to the second half of the seventh century, which seems to be too young). One of these is almost identical to the example of the Vrijthof cemetery; the other one shows 'snake bodies' in Schrickel's sense. In a later study we will return to all belt sets of Maastricht and their meaning for the study of the development of belts in the Meuse valley. (149) Siegmund 1998, 32. (150) Siegmund type Gür 4.6 is characterised by monochrome inlay in a geometric pattern, type Gür 4.7 is characterised by bi-chrome inlay with a regular animal style pattern. This pattern does not match the pattern of the plate buckle from grave 86, although this group probably comes close. (151) Legoux/Périn/Vallet 2004, 16, 33, 53 (types 185, 186 and 188). (152) Knaut 1993, 132-134. (153) On the Neresheim mounts we see the same decorative elements: *Leiterband*, steps, honeycomb. (154) Knaut 1993, 133; Koch 1977, 30, 127-128.

Only the plate buckle is present; the other fittings are lost and can only be described on the basis of old photographs and drawings in the Ypey-archive (except for the counter plate for which no photographs or drawings are available). The plate buckle has a triangular plate with a rounded extension at the short end. Two crosses of silver inlay are applied on the middle field. The three bronze rivets are relatively small and have a rim with silver inlay. A wrapped and slotted construction connects the plate to the loop. The buckle shows three decoration patterns of silver inlay; mushrooms are applied on the loop, a cross is placed on the base of the tongue, and the tongue extremity is moulded and decorated as an animal head. The counter plate (1598-2) will have resembled the plate of the plate buckle, as will have the three additional plates (1599-1, 2, 3). Some leather remains were present at the back of at least two of these, as the photographs show. The other objects found in this grave are a seax, lance and shield boss. Another iron object is mentioned in the documentation but not further described. Close parallels for this belt are not known until now.

A plate buckle with counter plate and three additional plates, all with inlay in the shape of crosses, are depicted in the typological scheme of Legoux, Périn and Vallet. The plates of this belt, however, are elongated and do not resemble those of the Vrijthof belt. This belt is classified as type 191 and dates to phase MR3 (660/70-700/10) and sporadically to phase MR2 (630/40-660/70).[155] The shape of the Vrijthof belt fittings resemble Siegmund's belt type group Gür. 4.6, which dates to his phase 8 (610-640). The decoration bears some resemblance with the examples of Gür 4.4, which dates to phase 7 (585-610).[156] The mushroom motive on the loop is an element of the decorative schemes of plate buckles with silver inlay imitating garnets.[157] This motive regularly occurs in the first half of the seventh century.[158]

Plate buckle: iron, bi-chrome inlays, indistinct ornamentation

Vrijthof: 278 (1817-1, 2, 3, 4).

An iron plate buckle and three additional plates are known from grave 278 (fig. 10.6). They are laid in with a bi-chrome pattern of silver and brass. The patterns are weathered to such a degree that they are difficult to identify. The decoration on one of the additional plates, however, is reasonably preserved, and is presumed to be indicative for the patterns on the other plates. Brass and silver lines and four small silver-plated fields seem to form the middle field. The edges of the plates seem to be undecorated. Maybe fake rivets were once present. The triangular plate of the plate buckle is relatively narrow and long, the three additional mounts are triangular. The belt fittings were attached to the belt with the help of fasteners on the back. It is not known what function the additional plates had. The belt was found with a seax and scabbard fittings such as bronze rivets and nails and a clasp. Since no other plate buckle was found in this grave, it is assumed that it was part of the waist belt, although this cannot be deduced from the position in the grave. For the three additional mounts it remains unknown whether they were attached to the waist belt or to leather straps that served to attach the seax scabbard to the waist belt. The belt fittings can be classified as Siegmund's type Gür 4.8, although they do not show a completely plated middle field as the examples of this type do. This type dates to Rhineland phase 9 (640-670).[159] The Franken AG changed this type into two different types depending on the presence of a plated middle field. Because of their plated fields, the belt mounts of the Vrijthof fit into their type Gür 4.8A which dates to phase 8 (640/50-670/80).[160] The closest parallel in the classification of Legoux, Périn and Vallet is type 190 which they date to their phases MR2-MR3 (630/40-700/10).[161] Nearly identical mounts with bi-chrome decoration are found in the cemeteries of Borsbeek and Beerlegem (Belgium).[162] These graves date to the middle and second half of the seventh century.[163] The seax from Vrijthof grave 278 dates to the end of the seventh century and early eighth century, the associated rivets in the middle of the seventh century. A date for these belt mounts in the second half of the seventh century seems plausible.

Plate buckles: iron, bi-chrome inlays, silver plated, animal style without central field

Vrijthof: 58 (1634-1, 2); 284 (1815-1).

Silver plated iron fittings of two belts are known from the Vrijthof cemetery (fig. 10.6). A triangular counter plate with a profiled outline and back plate were found in grave 58. It can be assumed that a plate buckle was originally part of the belt, but it remains unknown whether the belt was deposited without plate buckle or that the plate buckle was lost after excavation. The belt fittings were found in association with a seax and knife near the right lower leg. The width of the belt is approximately 5 cm, and the two fittings can be identified as the parts of a broad waist belt that served to carry the seax with scabbard. This means that the seax, scabbard and waist belt were separated from the body and deposited as a single entity. The counter plate and back plate are nearly completely silver-plated. The animal pattern, which intersects the silver coating of the plates, consists of brass inlays. The animal bodies consist of double brass lines and are decorated with silver lines and dots. The decoration covers the entire plate of the plate buckle; there is no middle field. On the back plate a typical ornament of rotating animals (German: *Tierwirbel*) on a plated background and in a frame of silver and brass dots is present. The lines of the animal bodies consist both of stripes (ladder motive) and dots. This type of belt fittings and type of decoration was found in a large area covering the Netherlands, Belgium, France, Germany and Switzerland. This type has recently been discussed both by Burnell and Marti in relation to belt mounts in grave 27 of Sissach-Saint Jacob.[164] Both discuss the motive of rotating animal heads although the ornament on the back plate of Sissach differs from the one in Maastricht. Burnell dated the Sissach belt set in the *Jüngere Merowingerzeit* IIa (620/40-660).[165] Marti moreover discusses a significant detail of the decoration: the circle of points around the rivet at the end of the plate. He considers this, along with other characteristics, as an element, which has its origin in eastern Belgium.[166] He points to an example of the cemetery of Braives (grave 52) although the specimen from grave 29 of this cemetery seems to be a better parallel.[167] However, both belong to this group of belt mounts with a silver plated background, brass inlayed animal style decoration, which takes in the entire field. Another example of a belt mount with a circle of dots around the outer rivet was found in Lent grave 1975/14.[168] Van Es and Hulst also voice the impression that this example has its best parallels in eastern Belgium.[169] Their plea for a renewed study of this type of belt mounts can only be repeated here. It might again show that Maastricht is a good candidate for the location of a workshop producing iron belt mounts with silver and brass inlay.

The counter plate from grave 284 is the only belt mount found in this grave. It was found with decorative bronze rivets, some bronze nails and a mouth-reinforcement of a seax scabbard near the right lower leg. The width of the associated belt (approximately 3.5 cm) makes it likely that the counter plate was an element of the waist belt. The decoration consists of a silver plated field which is intersected with animal heads and bodies of brass. The animal bodies are executed less delicately than those of the belt in grave 58. They consist of simple double brass lines. The decoration covers the entire plate without zoning and without separate decoration of the edges. This counter plate belongs to the same group of plates as the one from Vrijthof grave 58 although, as said, the execution of the decoration seems to be less delicate.

These belt fittings can be classified as Siegmund's type Gür 4.7. The plated middle field is not a defining characteristic of this type, although it is mentioned by Siegmund as an important chronological feature of comparable specimens in the work of Ament.[170] This type dates to Rhineland phase 9 (640-670). The Franken AG maintained type Gür 4.7 and date it in their phase 8 (640/50-670/80).[171] The belt mounts of the Vrijthof cemetery show some resemblances with type 188 and 189 of Legoux, Périn and Vallet. [172] These types date predominantly in their phase MR2 (630/40-660/70) and sporadically in phase MR3 (660/70-700/10).[173]

Plate buckle: iron, bi-chrome inlays, sliver plated middle field, animal style decoration

Vrijthof: 15 (1670-1, 1671-1).

A plate buckle and associated counter plate were found near the feet in grave 15, together with a seax, bronze scabbard elements and an axe (fig. 10.6). The belt width was approximately 4 cm, which indicates that the plate buckle and counter plate were part of a waist belt to which the seax scabbard was attached. The waist belt was separated from the body and deposited as an ensemble with the seax and scabbard. The decoration pattern on the plates is characterized by zoning. A virtually completely plated middle field is separated from the outer zones by a brass line. The outer zones are not plated. The silver plated central field is intersected by an animal style decoration of brass inlay. The animal bodies consist this time of only a single line. The plating was made by hammering silver wires in the iron base of the plates. The edges are undecorated with stylised animal heads. Near the ends of the plates a honeycomb pattern is present. Marti discusses the use of this honeycomb motive in that he considers this as an archaic element surviving the Bülach style belt mounts. The plate of the plate buckle is much more corroded than the counter plate, so it can be assumed that the plate of the plate buckle was also trapezium shaped with a rounded short end.

A difference should be made between plates with no zoning such as those from graves 58 and 284 and plates with a central field in the plate (such as this one). It is not easy to find close parallels for the decoration pattern of the belt mounts from grave 15. Often nearly the entire surface is silver plated, but our specimen has no silver plating along the edges, just the stylised indication of animal heads executed in lines. Moreover, the shape of the plates is difficult to define but certainly is not triangular as most other belt mounts are with a decoration scheme that consists of a middle field. It can, however, be assumed that these belt mounts must be dated to relation to the triangular belt mounts with plated middle field. Most likely this belt set dates to the *Jüngere Merowingerzeit* II (630/40-660/70) or Rhineland phase 9 (640-670).[174]

(155) Legoux/Périn/Vallet 2004, 16 33, 53 (type 191). (156) Siegmund 1998, 31-32. (157) See for example the belt from Pandhof grave 10885 (in prep). (158) See the analysis of this motive by Paulsen (1967, 34-40) and the dating of the graves in Niederstotzingen. (159) Siegmund 1997, 32-33. (160) Müssemeier *et al.* 2003, 21. (161) Legoux/Périn/Vallet 2004, 16, 33, 53 (type 190). (162) Borsbeek grave 27: De Boe 1970, 41, Fig. 23, 17-28. Beerlegem: Roosens/Gyselinck 1975, II Pl. 35, grave 154, 2-4. (163) In grave 27 of Borsbeek two trientes of Madelinus (Dorestat) have been found. The date of these trientes has not yet been established definitely but at least they give a terminus post quem of around 630/40. Grave 154 of the Borsbeek cemetery is located on its northern periphery and may thus be considered as one of the youngest graves of the cemetery. (164) Burnell 1998, 101-105; Marti 2000, 94-97. (165) Burnell 1998, 104; Marti 2000, 29. (166) Marti 2000, 97. (167) Brulet/Moureau 1979, pl. 5,3 and pl. 8,2. (168) Van Es/Hulst 1991, 130-131. (169) See also their distribution map on page 189. (170) Siegmund 1998, 32. (171) Müssemeier et al. 2003, 21.

(172) Legoux/Périn/Vallet 2004, 16, 33, 153 (types 188 and 189). (173) They differentiate their types on the basis of how animal bodies are executed: with lines (type 188) or ladder motive (type 189). One may question wether this is a good criterion for other regions. The animal body on the plate from grave 58 is executed in different motives (longitudinal lines, stripes and dots). The animal bodies on the plates of the belt from Sissach grave 27 are also executed in both the ladder motive and single lines (Burnell 1998, taf. 21, 13-15; Marti 2000, 95). Is it a coincidence that all the specimens they present in the graphic examples of type 188 are with a middle field and most (except one) of type 189 are without zoning? They date types 188 and 189 exactly the same; a new study of these belt mounts may suggest other subdivisions, which are not so much significant in a chronological sense but are in a cultural sense.

Plate buckle: bi-chrome inlays, silver coated middle field (degenerated animal style?)
Vrijthof: 105 (1473-1, 2).

The profiled triangular plate buckle and counter plate from grave 105 were found with a seax, knife, fire steel and pieces of flint (fig. 10.6). They were probably part of the waist belt to which the seax scabbard was attached. The decoration pattern may be described as a (very) degenerated animal style, because it now constitutes irregular 8-shaped ornaments. It can be seen that the silver plating was attached by means of cross-hatching in the iron base of the plates. This is a different technique than the one applied on the plates of grave 15. The ornaments have open ends and loose elements are present that seem to be the stylised remnant of the jaw of an animal head. Close parallels are difficult to find. Plates with a comparable decoration were found in the Eisenach (Germany) grave 31 and Ehrang grave 11. Böhner classified them as types A3b and A3a without being specific about their date.[175] This plate buckle with counter plate is difficult to place in the typology of Siegmund, the Franken AG or that of Legoux, Périn and Vallet. It can be expected that this type of decoration has to be dated at the end of the development of the iron buckles with silver and brass inlay. It is best dated to the second half of the seventh century.

Remaining belt fittings
The classification and description of the Vrijthof (and Pandhof) belts had the buckles and plate buckles of waist belts as point of departure. For some of these belts the additional fittings (counter plates, back plates, additional plates, slotted plates, strap ends, belt studs and belt loops) have already been described, classified and dated in relation to the buckles or plate buckles. Additional fittings found as singular finds and not sufficient indicative for the reconstruction of a complete belt set are described below.

(Back) plates: copper alloy
Vrijthof: 96 (1528-2); 0 (1175-3).

The back plate from grave 96 was found together with a small bronze rectangular buckle, which is identified as the fastener of a purse flap (fig. 10.8). This back plate can be part of the strap that attached the purse to the waist belt or can be part of the waist belt itself. Other waist belt fittings are not known from this grave. The square back plate has four domed bronze rivets and an open middle field in which the remnant of bronze foil with a (animal style?) decoration, which is attached to the back of the plate, can be seen. It is apparently part of the grave goods assemblage of a man. A similar back plate was found in Rübenach grave 151 in which a small rectangular bronze buckle and a biconical pot with wide mouth were present too.[176] Rübenach grave 151 is assigned to phases B1-2 (c. 560/70-600).[177]

The thin bronze plate 1175 (without context) was probably part of a back plate (fig. 10.8).[178] The small plate buckle (1175-1) it was found with is, considering its size and the identification of similar specimens, a shoe buckle, part of the leg wear or the fastener of a purse flap (see below).

T-shaped mounts with a slot (slotted plates), copper alloy
Vrijthof: 39 (1603-4); 230 (1767-1, 2).

The mounts from graves 39 and 230 have the same shape, but are different in size (fig. 10.8).[179] They are T-shaped and have a slot in the broad side of the plate. The mount from grave 230 is the smallest of all the T-shaped mounts from the Vrijthof cemetery (the others were already discussed above). It was found with a buckle (1767-1) that was the fastener of a purse flap. This slotted plate is identified as part of the leather strap that attached the purse to the waist belt. The narrow part of the mount from grave 39 is gone. It was found in association with a seax (lost), two decorative rivets of bronze and fragments of an edge-reinforcement of the seax scabbard, at the right side of the body. It can therefore be assumed that this fitting was part of a strap that connected the seax scabbard to the waist belt.

Strap ends: large, copper alloy
Vrijthof: 208 (1646-1).

The bronze strap end from grave 208 has a length of 14.2 cm (fig. 10.8). The split base and little bronze rivets with carved-rim decoration imitating filigree were used to attach the strap end to the belt. Between the two rivets an extra hole is present, possibly to accommodate a third rivet. The strap end is decorated with three cast lines and a pair of incised quarter circles in the corners of the cast lines and the edge of the plate. The lower two third has bevelled edges and the outline of both edges is inward curved. The strap end was found next to the middle of the left leg. Apart from the strap end, the grave goods assemblage probably consisted of a string of beads (as can be seen on the drawings of this grave), but these are lost.

Because of the length and weight of the strap end it is difficult to assume that it was part of the clothing worn in everyday life and it is therefore more plausible that is served a specific decorative or even symbolic function. Large bronze strap ends are an element of the later seventh and early eighth century.[180]

Strap ends: copper alloy
Vrijthof: 56 (979-1); 247 (1754-1); 0 (1576-1).

The strap ends mentioned here were supposedly parts of waist belts (fig. 10.8). All these strap ends are tongue shaped and have a rounded extremity.[181] Two of these (979-1 and 1754-1) have a profiled outline and a stamped in decoration. Strap ends of this form, although slight differences occur in their outlines, are known as components of both waist belts and horse gear. As elements of horse gear such strap ends were found in Beckum I (Germany) grave 17, Altlussheim (Germany) grave 22, Gammertingen (Germany) grave of 15-12-1902, Regensburg (Germany) horse grave of 1976, Beckum II (Germany) grave 110, and Bremen (Germany) graves 14 and 21.[182] The grave from Regensburg is dated to c. 600[183], the grave of Gammertingen is dated by Oexle to the end of the sixth century, although her description is a bit cryptic,[184] the grave Beckum II, 110 dates to the last third or last quarter of the sixth century,[185] and finally the graves from Bremen are dated to the last third of the sixth century.[186] It can thus be stated that strap ends of this type are generally dated to the last third of the sixth century (the find repertoire of the Ältere Merowingerzeit III) and possibly to the beginning of the seventh.

Belt studs/belt rivets
Vrijthof: 101 (1493-1, 2); 0 (1487-1, 2, 3).

Grave 101 revealed two belt studs of bronze (fig. 10.8). They are shield/violin shaped with a central groove over the length of the plate and were attached to the belt with cast loops at the back of the plates. They were found with a small bronze buckle, which is identified as a shoe buckle. Belt studs are often found in numbers from one till three in the graves of men. These little plates, mostly bronze and violin shaped were attached to the belt at the right side of the buckle and served to fix the belt ending that was wrapped around the buckle. Belts studs are often found in combination with simple bronze or silver buckles without plate.[187] The well-excavated cemetery of Grez-Doiceau shows how three belt studs might have been fixed to a belt; one pair fixed is close to the buckle and a third one is fixed further down the strap pointing in an opposite position.[188] Legoux, Périn and Vallet make a typological distinction between belt studs of less or more than 2.5 cm, of which the smallest date earlier than the larger ones. The Vrijthof belt studs are all smaller than 2.5 cm and can be classified as their type 193, which dates to the second half of their phase MA1 (470/80-520/30) and in phase MA2 (520/30-560/70) and sporadically in phases MA3 (560/70-600/10).[189] Siegmund classifies similar belt studs as type Gür 2.10, which dates to Rhineland phase 4 (530-555).[190]

The two rivets with find number 1487 (Vrijthof: without context) are also identified as belt studs (fig. 10.8). Comparable rivets are known from Krefeld-Gellep grave 2489. Siegmund does not identify these kinds of rivets as a separate group. He includes them in his general group of belt studs of all forms (Gür 2.10).[191] The Franken AG classified them as Gür 2.10A and date them in their phase 4 (510/20-565).[192] Legoux, Périn and Vallet identified such rivets as belt studs (type 195) and date them to their phase MA1 (470/80-520/30).[193]

Belt loops
Vrijthof: 59 (1595-1).

The bronze belt loop from grave 59 is the only find from this grave (fig. 10.8).[194] The loop consists of a folded plate of bronze with expands in the middle. A simple line decoration is applied on the surface of this expansion. Not much is published on these specific components of Merovingian belts, probably because they are uncommon. It can be assumed that belt loops are generally part of elaborate belts.

Fig. 10.8
Various belt fittings: copper alloy (scale 1:2).



(174) Siegmund 1998, 32 (Gür 4.7). (175) Böhner 1958, Tafel 51, 2a-b. (176) Neuffer-Müller/Ament 1973, Taf. 8, 36. (177) Neuffer-Müller/Ament 1973, 146; Wieczorek 1987, 486, Abb. 23. (178) Thin plates are known from different belt fittings such as plate buckles, counter plates and back plates. They were fixed underneath these fittings and have the same shape as them. See for example the plate buckle from Pandhof grave 10061, where a thin plate is still fixed underneath the plate with the four rivets that served tot fixate the back plate to the belt. Probably the back plate was fixed on the upper surface of the leather belt, and the thin plate underneath it. (179) A photograph of the mount from grave 39 is not available; a drawing can be found in the catalogue of graves and finds. (180) Stein 1967, 32-35, 414-415 and Taf. III. Siegmund 1998, 39 (Gür 6.3, phase 10 (670-705)), 217-218. (181) Strap ends with a pointed extremity generally date to the later Merovingian period (eight century).

(182) All examples can be found in: Oexle 1992. The sites are presented in alphabetical order in the second volume with plates, so the specific examples can be found easily. (183) Oexle 1992, 20. (184) Oexle 1992, 42. (185) Oexle 1992, 54-55. (186) Oexle 1992, 54. (187) Siegmund 1998, 25. (188) Vrielynck 2007, 46, fig.2. See also Fleury/France-Lanord (1998, 131) for a similar arrangement of belt studs in grave 42 of the cemetery of Saint-Denis (France). (189) Legoux/Périn/Vallet 2004, 16, 34, 53 (type 193). (190) Siegmund 1998, 25. (191) Siegmund 1998, 25. (192) Müssemeier et al. 2003, 18. (193) Legoux/Périn/Vallet 2004, 17, 33, 53 (type 195). (194) A photograph of the loop is not available; a drawing can be found in the catalogue of graves and finds.

Shoes and leg wear: buckles, plate buckles and strap ends

The metal fittings of foot- and leg wear can be identified as such by their size, paired appearance and location in the grave in relation to the body. They may be simple bronze or iron buckles or simple or more elaborate plate buckles, with occasionally additional elements such as strap ends and other fittings. Strap ends can also be the only metal elements of the leg wear, in German literature referred to as *Wadenbindengarnitur*.[195] Metal shoe- and leg wear fittings can have the same appearance as metal belt fittings or purse fittings. The location of the objects in the grave is therefore essential for their functional identification. Plate buckles of shoes or leg wear and purses are the only ones buckles for which a fixed plate is common. For the metal shoes and leg wear fittings of the Vrijthof cemetery a distinction is made between the categories 'buckles' and 'plate buckles'.

Shoes: simple buckles (with & without strap ends)

Vrijthof: 97 (1496-1*, 2*; 1497-1, 2); 101 (1493-3); 250 (1795-1); 166 (1542-1*).

One bronze shoe buckle with strap end is known from grave 97.[196] From the documentation it is known that this ensemble was originally part of a pair.[197] The other half of this pair went missing after the excavation, but the drawings of Ypey show that the buckles were alike. The strap ends, however, show some differences. The bronze buckles are oval with a ribbed surface and have a punched in dot-in-circle decoration. They were part of a strap with an approximate width of 1.4 cm. The tongue of the remaining buckle is a simple bronze tongue; it can be assumed that the tongue of the missing buckle was also bronze. The remaining strap end is bronze, tongue shaped and has a punched in dot-in-circle decoration. It can be assumed that the missing strap end was also of bronze. The available drawings show that the shape and dimensions of this missing strap end is quite similar to the one present, but that its decoration is different. The drawing shows a punched in decoration of short lines along the outer edge of the strap end. Presumably dot-in-circle decorated strap ends were originally part of this set of footwear (because of the dot-in-circle decoration on the buckle), and one of them was replaced. Both buckles and strap ends were found near the feet. The rest of the grave goods assemblage consists of a fragment of a comb, a boar tooth, a '*Herkuleskeule*', two iron rings and a bronze plate buckle (also lost).

Legoux, Périn and Vallet identified buckles with a ribbed surface as type 120 and date them in their phase MA3 (560/70-600/10).[198] The examples of this type of buckle, however, are not exactly similar to the ones from the Vrijthof cemetery. They lack the dot-in-circle decoration, and the ribbed surface of the Vrijthof buckles is not as pronounced as the ones defining type 120. It is not clear whether these buckles were found together with strap ends in the research area of Legoux, Périn and Vallet, and whether they interpret them as parts of shoes. Similar shoe buckles and strap ends can be classified as Siegmund's typological group Sna 1.2 and can be assigned to Rhineland phase 6 (570-585). This group, however, is very broadly defined as bronze oval buckles without plates, which are generally found next to the feet.[199] The ribbed feature as observed on the Vrijthof buckles is not considered, although a buckle with ribbed surface is known from the cemetery of Müngersdorf.[200] No exact parallels are yet known for these Maastricht buckles with strap ends. The majority of the other finds from this grave date to the sixth century what coincides with the above mentioned dates. The Franken AG did not identify this type.

Another bronze buckle that can be identified as component of the footwear was found in grave 250 (fig. 10.9). [201] This small bronze rectangular buckle with simple bronze tongue belonged to a strap with a width of 0.8 cm. Small bronze rectangular buckles are known from several graves of the Vrijthof cemetery but these are all identified as elements of purses.[202] The buckle from grave 250 is identified as a shoe buckle because it was found near the right foot (together with a glass bottle). The left counterpart was, according to the available documentation, not found. Similar buckles are quite common in Merovingian graves in the Rhineland and are classified by Siegmund as type Sna 1.1, defined as small rectangular buckles with a trapezium shaped cross-section. Siegmund also refers to these buckles as elements of purses or straps that are attached to the waist belt. The upper part of the grave (from the pelvis to the head), however, is disturbed, so it is possible that the buckle was moved from a position at the pelvis (as fitting of a purse) to one next to the right foot. Small bronze rectangular buckles (Siegmund Sna 1.1) predominantly date to Rhineland phase 5 (555-570).[203] The Franken AG date these buckles more broadly from phases 4b to 7 (510/25-610/20), although predominantly in phase 5 (565-580/90).[204] Legoux, Périn and Vallet also identified small bronze rectangular buckles and date them to their phases MA1-MR1 (470/80-630/40).[205] From this publication it cannot be deduced whether these buckles are interpreted as fittings of shoes or purses.

The simple bronze buckle from Vrijthof grave 101 belongs to a strap with a width of approximately 1 cm. It was found together with two bronze belt studs near the right foot; the counterpart was not found.

The strap end from grave 166 went missing; it was recorded as a find on the field drawing close to the lower right leg. It was not part of the purse with purse fittings from this grave, since these were found to the left of the waist. It remains uncertain what the original function of this strap end was; further details are not available.

Shoes: copper alloy plate buckles (with & without strap ends)

Vrijthof: 116 (1568-1*; 1569-1); 0 (1739-1, 2, 3).

The majority of the shoe buckles are plate buckles with a fixed plate. Two pairs of shoe related plate buckles of the Vrijthof cemetery, however, have the plate attached to the buckle with a wrapped and slotted construction. One bronze plate buckle of the pair from context 116 was lost after excavation, and its existence is only known from a note on the drawing of shoe buckle 1569-1 ("1568 idem", which suggests that a similar specimen was present once). The available plate is triangular and slightly hollow (fig. 10.9). The three bronze rivets applied on the plate show a pearl-rim decoration. These rivets had only a decorative function since the three loops at the back of the plate (which do not consist of one piece with the rivets, they are located differently) served to attach the plate buckle to a leather strap. The triangular hollow plate and the presence of loops and so called 'fake rivets' are typical for the plate buckles of belts which are classified by Siegmund as Gür 3.3, although the typical hinged construction of this type is not present on the Vrijthof specimens. They are also much smaller than the plate buckles identified as type Gür 3.3.[206] The position in the grave is indicated on the pencil drawing by Ypey. Nr. 1569 was found near the left foot and nr 1568 near the right foot. The two buckles were found together with two glass vessels, which are usually found near the feet. Siegmunds type Gür 3.3 dates to Rhineland phase 8 (610-640).[207] Legoux, Périn and Vallet identified these plate buckles as type 172 and date them to their phases MR1-MR2 (600/10-660/70).[208] Parallels for similar small plate buckles are not known up to now, but it seems plausible, because of the common features, to date them according to the comparable, although larger, fittings known of waist belts.

The context of the pair of small plate buckles with strap ends nr. 1739 is unknown (fig. 10.9). They are identified as part of the foot- or leg wear because of their small size and paired occurrence. The plate buckles belong to a strap with a width of 1.4 cm, are oval shaped and have a simple bronze tongue. Because of the similarity of the buckles it is assumed that they were a pair although the plate of one of them is missing. The remaining plate of the other plate buckle is small and rounded. Only one bronze strap end remains. It has a length of 4.4 cm and a geometric punched in decoration. Parallels for these plate buckles are not known so far, and without context and other accompanying grave goods they remain difficult to date.

Fig. 10.9
Various shoe fittings (scale 1:2).



Shoes: copper alloy plate buckles, fixed plates (with & without strap ends)

Vrijthof: 100 (1495-1,-2,-6*,-7*); 140 (1547-1*).

One pair of bronze shoe buckles with fixed plates is known from the Vrijthof cemetery. Of this pair from grave 100 only one plate buckle and strap end are present (fig. 10.9). Their counterparts are only known from the excavation documentation, in which it is mentioned that they were found near the feet. The round plates of both the plate buckles have a punched in decoration of two rows of circles along the edges. The strap ends have a punched in decoration of one row of small rectangles along the edges. This pair of footwear was found together with a string of beads that was found at the position of the pelvis. A similar pair of shoe buckles with round plates was found in Rosmeer (Belgium) grave 43, which is considered to be one of the oldest graves of this cemetery and is dated to the second half of the sixth century.[209]

A small bronze plate buckle which is now lost can be ascribed to grave 140 on the basis of the information in the excavation documentation. According to the Ypey-drawings the plate is tongue shaped with a profiled outline, and some punched in or incised geometric decoration can be observed on the centre of the plate.[210] This plate buckle was found near the right foot and is therefore identified as part of the footwear. The left counterpart however was not found. No other finds are known from this grave.

(195) *Wadenbindengranitur* have different appearances and can also consist of multiple fittings, not only strap ends. See for example Clauss 1976/77 for the leg wear of women in the sixth and seventh century. (196) A photograph of the set from grave 97 is not available; drawings can be found in the catalogue of graves and finds. (197) It is marked on the field drawing, mentioned in the excavation documentation, and indicated on drawings in the 'Ypey-archive'. (198) Legoux/Périn/Vallet 2004, 15, 30, 52 (type 120). (199) Siegmund 1998, 40. (200) Fremersdorf 1955, Tafel 21, Grab 118-5. (201) A photograph of the buckle is not available; a drawing can be found in the catalogue of graves and finds. (202) See the section on purses in this chapter. (203) Siegmund 1998, 40. (204) Müssemeier *et al.* 2003, 105. Only in the graphical depiction of the types per phase, this type is not described. (205) Legoux/Périn/Vallet, 15, 30, 52 (type 124). (206) Siegmund 1998, 27. (207) Siegmund 1998, 27. (208) Legoux/Périn/Vallet 2004, 16, 32, 53 (type 172). (209) Roosens/De Boe/De Meulemeester 1976, 18, plaat XI, 43, 3-6. (210) A photograph of the plate buckle is not available; a drawing from the Ypey-archive can be found in the catalogue of graves and finds.

In Siegmund's typology of small plate buckles no distinction is made between the shapes of the plates. All the small bronze plate buckles, identified as fittings of shoes or leg wear, are classified as type Sna 2.2.[211] These plate buckles are, in the Rhineland, characteristic for grave goods assemblages of women, what is in accordance with the described plate buckles with fixed plates from the Vrijthof cemetery of which the grave context and associated finds are known. The plate buckles date to Rhineland phases 5 to 8 (555-640) but occur predominantly in phase 7 and 8 (585-640). The Franken AG altered Siegmund's classification because of the already mentioned variability in this group. They identified plate buckles with triangular plates as separate type, but did not identify those with rounded plates as a separate type.[212] Legoux, Périn and Vallet also consider some differences in the shapes of the plates. According to them, the plate buckles with triangular plates date earlier than those with rounded plates. Triangular shaped and fixed plates of small plate buckles are classified as type 130 and date to phases MA2-MR1 (520/30-630/40).[213] The plate buckles with rounded plates are classified as type 131 and date to phases MA3-MR2 (560/70-660/70).[214]

Shoes: iron plate buckles with inlays

Vrijthof: 126 (1572-2*,-3*); 105 (1470-1, 2).

The iron plate buckle and strap end with inlay from Vrijthof grave 126 is only known from photographs and drawings in the old Ypey-archive (fig. 10.9). They were found, together with a glass bell beaker and a knife, next to the left foot and are, because of this position and the small size of the plate buckle, identified as fittings of the footwear. The strap end is relatively large (length: 8.6 cm) compared to the size of the plate buckle (length: 5.8 cm) and its function as fitting of a shoe; the fittings may also have been part of the leg wear. In that case they might have been fixed to a vertical strap between the upper and lower straps around the leg. The right counterparts of both the plate buckle and strap end of the foot/leg wear were not found. The plate buckle has an oval loop with shield-tongue and a triangular plate. The loop and tongue have a monochrome or bi-chrome (this cannot be established on the basis of the photograph and the drawings) line pattern decoration. The plate also has monochrome or bi-chrome inlays which consist of a (silver?) coated middle field with interlacing s-shaped lines intersecting this field. The outer edge of the plate shows some animal style elements (heads). The strap end is tongue shaped and curved inwards in the middle. It also has a silver coated middle field, intersected with a decoration of brass inlay in animal style.

A pair of nearly similar iron plate buckles (although without strap ends) with bichrome inlay is known from grave 105 (fig. 10.9). These plate buckles show a silver coated middle field, intersected with brass inlay. Both buckle loops are decorated with lines of silver inlay, and the shields of both shield tongues show a geometric pattern of silver threads.

It seems plausible to date the plate buckles from both graves to the same period to which Siegmund dates similar small plate buckles. These, however, are identified as fittings of female footwear. The plate buckles from grave 105 were found at the location of the pelvis, which does not match with their identification as components of shoes. The location in the grave (at the right side of the pelvis) could indicate that the plate buckles were part of a waist belt, but the paired occurrence seems to contrast with this interpretation. And, larger belt fittings are also found in this grave. These belt fittings, however, were found with a seax, fire steel and flint just outside the outline of this grave. It should therefore be questioned whether these finds actually belonged to this grave. If not, the rest of the grave contents do not contradict the identification of this grave as that of a woman. The grave is disturbed, so the shoe fittings could have moved from their original location. For now they are identified as fittings of shoes or leg wear.

Paired iron plate buckles with triangular shaped plates with inlay and accompanying strap ends are considered to be part of the female footwear and are classified by Siegmund as Sna 2.4 or 2.5, depending of the decoration applied.[215] The two Vrijthof pairs are classified as Sna. 2.5 on the basis of the bichrome inlay. These pairs date to Rhineland phase 9 (640-670). The Franken AG maintained this type and date the associated plate buckles to their phases 7-8 (610/20-670/80).[216] Legoux, Périn and Vallet make no distinction regarding the decoration, and created one typological group (135) for iron shoe buckles with a triangular plate and a wrapped and slotted construction to attach the plate to the buckle. This type dates to their phase MR1 (600/10-630/40).[217] This date corresponds with Siegmund's typological group Sna 2.4 which dates to Rhineland phase 8 (610-640).

(211) Siegmund 1998, 40. (212) Müssemeier *et al.* 2003, 41. (213) Legoux/Périn/Vallet 2004, 16, 30, 53 (type 130). (214) Legoux/Périn/Vallet 2004, 16, 30, 53 (type 131). (215) Siegmund 1998, 40-41. (216) Müssemeier *et al.* 2003, 42. (217) Legoux/Périn/Vallet 2004, 16, 30, 53 (type 135). (218) See for example Martin 1991; Clauss 1987; Walter 2004. (219) Vielitz 2003. (220) Siegmund identified five types of garnet disc brooches, which is, according to him, sufficient for chronological purposes.

Dress accessories

Brooches

In the group of brooches a main distinction is generally made between disc brooches, bow brooches and the so-called small brooches (which are of various forms). The disc brooches and bow brooches have been the focus of several studies, which resulted in a series of publications that are mainly concerned with their typology, chronology and distribution patterns. Moreover, repeated attention has been paid to the co-presence of certain brooches in relation to the body, on the basis of which the way brooches were worn is discussed.[218] All the Vrijthof brooches are well known forms of the Merovingian period, except two which are peculiar specimens in Merovingian contexts, as will be discussed below, and one Roman brooch (table 10.3).

Table.10.3
The brooches of the Vrijthof cemetery.

Group	
Garnet disc brooch	10
Garnet disc brooch, filigree	1
Filigree brooch	-
Bow brooch, rectangular head plate	-
Bow brooch, round head plate	1
Bow brooch, equal armed	1
Small brooch, bird	1
Small brooch, rhomboid	-
Oval, domed brooch, large inlays	1
Bow brooch, exotic provenance	1
Bow brooch (Roman)	1
Small brooch, swastika shaped (Roman)	-
Total	17

Granet disc brooches

The garnet disc brooches form the most characteristic and frequent group of finds from Merovingian cemeteries. Eleven garnet disc brooches with various characteristics were found in the Vrijthof cemetery (table 10.4; fig. 10.10).

Table 10.4
The features of the garnet disc brooches of the Vrijthof cemetery.

Garnet disc brooches	
Round brooches	6
Rosette brooches	4
Bronze casing	1
Silver casing	9
1-zone of cells with garnet	1
2-zones of cells with garnet	7
Pressed foil middle field	6
Filigree middle field	-
Garnet middle field	2
Mixed middle field	1

The work of Vielitz is the most recent study on garnet disc brooches.[219] She specifically focussed on the typology and chronology of these brooches, on their associated grave goods, and their part in the custom of wearing brooches by women. The typological groups of Vielitz are mainly based on the number of zones and the construction of the inner zone, what resulted in eight general groups (A-H) with additional sub-types. This typology covers nearly all the elements and characteristics of the brooches from Maastricht. Siegmund's typology appears to be insufficient for the description and classification of the Vrijthof brooches, as are the typologies of the Franken AG and Legoux, Périn and Vallet; they are all to general.[220] The chronological significance of the more refined typology of Vielitz, however, needs to be compared to these broader classifications.

Garnet disc brooches consist of a middle field and/or 1 or multiple zones of cells with garnets. The disc brooches are first classified on the basis of their number of zones. This requires a clear definition for both the zones and the middle fields. Next to the number of zones Vielitz chose the material of the casing, the number of cells, and the material and construction of the middle field as main characteristics for the classification of garnet disc brooches. The definition of the middle fields is formulated inconsequently in the typologies of Siegmund, the Franken AG and Legoux, Périn and Vallet. The middle fields, which can be of various forms, are in these typologies sometimes identified as a zone and sometimes they are not.[221] As a consequence, the definition and classification of the middle fields and number of zones remains vague and summarily.

Vielitz created a typology in which she especially focussed on the various appearances of these middle fields (material, construction and decoration pattern). The middle fields consist, according to Vielitz, either of garnets, of a (sunken) field decorated with filigree, of a field of pressed foil or filigree, or of inlays of various other materials than garnet. In the groups of small disc brooches (group A and B: both rosette and round) with one zone, such as defined by Vielitz, the cells in the middle often have another inlay than garnet. If the inlay is not present and this middle field exceeds a diameter of 0.9 cm, the brooches are not considered to be part of the group of small brooches with one zone. The possibility that the middle field consisted of multiple cells of garnets, of pressed foil or of filigree, and as a consequence consists of more than one zone (group C, D or E), should be considered for these brooches.[222]

The detailed typology of Rupp, as Siegmund claims, has no chronological significance (1998, 45-46). Legoux, Périn and Vallet identified six types of disc brooches. (221) Compare for example the brooches form Xanten I Grab P147.4 (Siegmund 1998, Taf.229) and the brooches from Junkersdorf grave 41, 49 and 211 (La Baume 1967, Taf 4, Taf 14); all classified as Siegmund's Fib 1.3. (222) Vielitz 2003, 33, note 199.

Although Vielitz described and classified the middle fields of disc brooches more extensively, her identification (or lack of definition) of this part of the brooch as middle field or as zone also remains confusing. Though it is not mentioned explicitly it can be concluded that the centre (middle field) of the brooch is considered, both by Vielitz and Siegmund, to be a zone when it consists of more than one cell with garnet, or when it consists of pressed foil or a field with filigree.[223] A middle field which consists of one cell with garnet, of a bead as central setting, etc., in the centre of the brooch is not considered to be zone. I think this is rather inconsequent and that the middle filed should only be considered a zone when completely covered with garnet, either fitted in one or in multiple cells. This will be the point of departure for the following classification of the garnet disc brooches from Maastricht. The identification of the number of zones for the Vrijthof is as a consequence different from the comparable types as defined in other classifications.

Garnet disc brooch: round, one zone

Vrijthof: 306 (1796-1).

The single small round disc brooch with one zone form the Vrijthof cemetery consists of a silver casing with five cells with garnets and a central setting of a grey-white substance, probably a glass bead (fig. 10.10).[224] The brooch has a diameter of 2.2 cm, the fastener on the back of the brooch is lost. A remarkable feature is the outward extension of thin silver foil on the rim of the brooch. This brooch was found on the breast in a partly disturbed grave, which also contained a string of beads.

The other round brooches with one zone of multiple cells with garnets from the Vrijthof cemetery have middle fields of silver pressed foil. According to the typology of Vielitz and Siegmund these are brooches with 'two zones'.[225] Moreover, the pressed foil and filigree middle fields are not explicitly mentioned as a criterion for their classification. I consider these as brooches with one zone. They are, however, considerably different from the small round brooch discussed here, and will therefore be classified and discussed in a separate section below.

The brooch from grave 306 consists of a zone with five cells, which is remarkable. Small brooches with one zone of four cells are, according to Siegmund, known from the middle and lower Rhine area and modern northern France.[226] Those with six cells are mainly restricted to the lower Rhine area. Brooches with a zone of four, six or eight cells are according to Vielitz the most regular finds. Brooches with a higher number of cells and an uneven number of cells, such as the Vrijthof brooch has, are rarer.[227]

The Vrijthof brooch can be classified as Vielitz type A3 (*Einzonige Rundfibeln mit funf-, sechs- oder siebenfach-radialen Zellmuster*), and more specifically subtype A3.10.[228] Vielitz does not date type A3 separately. Types A2-A5 (with a radial pattern of cells with garnet) cover the three chronological phases (*Stufe* 1-3) such as defined by her.[229] Small round brooches with a zone of radial garnet cells appear at the end of the fifth century, especially those with a zone of four or eight cells.[230] Vielitz mentions two examples of brooches with one zone of five cells. The brooch from Schretzheim grave 146 dates to her *Stufe* 1 (480/500-530/40) and the one from Weimar grave 51 in *Stufe* 2 (530/40-560/70).[231]

Vielitz claims that the diameter of the round brooches with one zone that date to *Stufe* 1 measure between 1.3 and 2.0 cm, and the ones from *Stufe* 2 between 1.7 and 2.3 cm, of which the ones that exceed 2.0 cm form a majority.[232] Thus the Vrijthof brooch (diameter 2.2 cm) should be placed in *Stufe* 2 (530/40-560/70) of Vielitz. Moreover, Vielitz considers brooches with one zone to be rare in her *Stufe* 3.

Siegmund dates small brooches with one zone (Fib 1.1) in Rhineland phases 3-4 (485-555). The period that these phases cover is almost identical with *Stufen* 1 and 2 of Vielitz. The Franken AG maintained Siegmund's type and date these brooches predominantly in their phase 3 (460/80-510/25) and sporadically early in phase 4 (510/25-565).[233]

Garnet disc brooches: round and rosette, one zone, middle field of pressed foil

Vrijthof: 187 (1641-1; 1642-1); 274 (1792-1; 1782-1); 314 (1172-1).

Five garnet disc brooches (one single, two pairs) with a middle field of pressed foil and one zone of multiple cells with garnets were found in the Vrijthof cemetery.[234]

The two brooches from grave 274 are identical, but were initially not identified as a pair (fig. 10.10). Brooch number 1782-1 was, on the basis of the available documentation, ascribed to Vrijthof grave 290. On closer inspection it became apparent that the find number of this brooch was probably incorrect and that brooch 1782 was in fact originally number 1792 (as the other brooch) and should consequently be ascribed to Vrijthof grave 274. Next to the similarity of the two brooches this is also supported by the fact that Vrijthof grave 290 does not know any other finds, which is a peculiar circumstance for such brooches. Moreover, the excavation documentation suggests that more than one brooch was found in Vrijthof grave 274. The other finds from this grave, among which are earrings and beads, are usually associated with a pair of garnet disc brooches.

(223) Vielitz 2003, 33 note 199. (224) Vielitz 2003, 33. It is mentioned that white glass beads are often used as inlay in the middle fields of small garnet disc brooches with one zone. (225) Siegmund 1998, 45-47; Vielitz 2003, 42-44. (226) Siegmund 1998, 45. Siegmund refers to the overview of Martin (1976, 81-82) for small brooches with four cells. (227) Vielitz 2003, 32. (228) Vielitz 2003, 247, Abb. 110- A3.10. (229) Vielitz 2003, 66-70. (Stufe 1: 480/500-530/40; Stufe 2: 530/40-560/70; Stufe 3: 560/70-600/10). (230) Vielitz 2003, 69. (231) Vielitz 2003, 70. (232) Vielitz 2003, 70. (233) Müssemeier *et al.* 2003, 26.

Both brooches consist of a round silver casing with silver ground plate and silver sheets dividing the cells. Both brooches have one zone of eight cells with garnets applied on gold foil. The brooches have a diameter of 1.9 cm. One garnet is absent from brooch 1782-1. Of the fasteners on the back of both brooches the silver pins are lost. The middle field of the brooches consists of a pressed silver foil with a pattern of radiant lines.

The two brooches can be classified as Vielitz' general type E3 (*Zweizonige Fibeln mit presblech-Strahlenkranzmuster*) and, on the basis of the middle fields, more specifically as type E3.21.[235] The brooches of this type date to Vielitz *Stufe* 3 (560/70-600/10).[236]

The other Vrijthof brooches of this group are all rosette shaped. The two brooches from grave 187 are identical and belong to a grave goods assemblage that consists of a variety of beads, golden pendants (probably attached to the necklace of beads), earrings and a finger ring (fig. 10.10). According to the excavation drawings, one of the brooches was found near the neck and one on the breast. This is in accordance with the general way these brooches were worn and/or deposited as grave goods.[237] The brooches consist of a silver casing and ground plate and one zone of ten cells with garnets. They have a diameter of 3.1 cm. The middle fields consist of a central setting of pressed silver foil with a decoration pattern of radial stripes. Although they are not round such as the brooches from Vrijthof grave 274, these brooches also belong to general type E3 of Vielitz. On the basis of the middle fields they can be classified as sub-type E3.22.[238] The brooches of this type date to Vielitz *Stufe* 3 (560/70-600/10).[239]

The brooch from grave 314 is much alike those from grave 187, but does not form a pair and is, with a diameter of 2.3 cm, smaller (fig. 10.10). It cannot be said whether this brooch once was part of a pair. A part of the silver ground plate and rim, and four of the eleven garnets are gone. The middle field consists of pressed foil with a pattern of short radial stripes. It was found with some beads. This brooch can best be compared with general type E2 (*zweizonige Fibeln mit Presblechmustern aus Kugelchen und Linien in konzentrischer Anordnung*) and on the basis of the decoration pattern of the middle field as sub type E2.12.[240] These brooches date to Vielitz *Stufe* 2 (530/40-560/70) but can also occur in *Stufen* 1 and 3.[241]

It appears that the rosette shaped brooches of the Vrijthof cemetery are larger, except for the brooch from grave 95 (see the section below), than the round garnet disc brooches. Siegmund described the rosette shaped brooches of the Rhineland area as brooches with either two or three zones of multiple cells with garnets. He did not consider the variation of the middle fields. No brooches with middle fields comparable to the Vrijthof brooches can be found in the lower Rhineland area. Vielitz also observed

Fig. 10.10
Disc brooches, bow brooches and various brooches (scale 1:2).



that brooches with a middle field of pressed foil are rare; from her research area only 7% of the brooches have such a middle field.[242]

On a general level the Vrijthof brooches can be classified as Siegmund type Fib 1.3, which dates to Rhineland phase 4 (485-555) and sporadically in phase 5 (555-570). The Vrijthof brooches date somewhat earlier according to Siegmund's typo-chronology than according to the typo-chronology of Vielitz.

Unlike Siegmund, Legoux, Périn and Vallet do refer to middle fields of another material than garnet and show some examples of rosette shaped brooches with one zone of garnets. The ro-

(234) As mentioned before, such brooches are often identified as brooches with two zones (the middle field of pressed foil is included as zone). (235) Vielitz 2003, 42-44, 253, Abb. 113-E3.21. (236) Vielitz 2003, 76-77. (237) See for example Zeller 1996; Martin 1991, RGZM 38/2, 629 e.v.; Martin 1995 in Hoops Reallexikon (238) Vielitz 2003, 42-44, 253, Abb. 113-E3.22. (239) Vielitz 2003, 76-77. (240) Vielitz 2003, 42-44, 253, Abb. 113-E2.12. (241) Vielitz 2003, 76-77. (242) Vielitz 2003, 42.

sette shaped Vrijthof brooches can be classified as their type 215, which dates to their phases MA2-MA3 (520/30-600/10).[243] Round brooches with a middle field of pressed foil are not identified as a separate type, what seems in contradiction with the observation of Vielitz that the rosette shaped brooches form a minority of the brooches with a pressed foil middle field in her research area.[244] The rosette shaped brooches with a pressed foil middle field, however, form the majority in Maastricht. They are probably more characteristic for the Meuse area and northern France. The dating of Legoux, Périn and Vallet is in line with that of Vielitz. It can be assumed that the rosette brooches from Maastricht date earlier than the round brooches with a pressed foil middle field, but a date of all these brooches to the second half of the sixth century is for now proposed.

Garnet disc brooches: rosette, one zone, filigree middle field
Vrijthof: 95 (1484-1).

The brooch from grave 95 is also rosette shaped (fig. 10.10). It has a silver casing and is, with a diameter of 1.8 cm, the smallest rosette brooch from the cemetery. It is the only brooch found in this grave. The other finds from this grave are various beads, bronze earrings, a knife, a bronze bracelet and a bronze belt buckle with belt stud. The singular zone of garnets of this brooch counts eight cells and the pattern of filigree in the middle field is a spiral; a pattern that can be identified as sub-type D10.34 of general group D (*Zwei- und dreizonige Fibeln mit filigranverzierter Innenzone*) of Vielitz.[245] A middle field such as in Vielitz classification scheme, however, is only known from brooches with three zones. Vielitz generally dates brooches with filigree in her *Stufen* 2 and 3 (530/40-600/10).[246] The Vrijthof brooch is with a diameter of 1.8 cm a relatively small brooch, of which it is mentioned by Vielitz that these can date as early as in her *Stufe* 1 (480/500-530/40).[247]

The brooches with a middle field of filigree make up the second large group of garnet disc brooches in the research area of Vielitz.[248] The exact dating of the small brooch Vrijthof brooch is uncertain. According to Siegmund's typology, similar brooches can at best be classified as type 1.3, which dates to Rhineland phase 4 (530-555), and sporadically to phase 5 (555-570).[249] The Vrijthof brooch can be classified as type 215 according to the typology of Legoux, Périn and Vallet, which dates to their phases MA2-MA3 (520/30-600/10).[250]

The classification and associate datings of the middle fields, according to Vielitz typo-chronology, differs only slightly from the dating ranges of the other typo-chronologies. It can therefore be concluded that the incorporation of the morphological development of the middle fields did not offer a more detailed chronology.

Garnet disc brooch: round and rosette, two zones
Vrijthof: 166 (1539-1).

The single brooch from grave 166 has two zones (fig. 10.10). The inner zone consists of multiple cells of garnets and is therefore not a so-called middle field, such as they are described for the other brooches.

The round brooch from grave 166 has a silver casing and a diameter of 2.8 cm. The inner zone has a diameter of 1.1 cm. It is formed by three triangular cells, from one of which the garnet is lost. The outer zone consists of twelve cells with garnets. The other finds from grave 166 are the bronze fittings of a purse, a small key and various beads of a necklace. The brooch was found on the middle of the chest. It is not certain whether it originally belonged to a pair.

Vielitz classified brooches with similar inner zones as type C1 (*Zweizonige Fibeln mit zwei- oder dreifach-radialen Zellmustern*).[251] On the basis of its inner zone, the Vrijthof brooch can be classified as sub-type C1.4.[252] Vielitz claims that the middle fields of these brooches (such as for types C2 and C3) are much alike the little brooches with one zone, so that these brooches (of types C1 to C3) can be seen as their successors.[253]

Round brooches of group C1 with a diameter of 2.5-3.0 cm (the Vrijthof brooch measures 2.8 cm) date to *Stufe* 2 of Vielitz (530/40-560/70).[254]

Siegmund classified brooches with this appearance as typological group Fib 1.3 which is placed in Rhineland phases 4-5 (530-570).[255] The sub-types that Vielitz identified for these brooches do not have much chronological significance compared to the less specific classification of Siegmund. It can be concluded that the study of Vielitz can be highly appreciated for its detailed typological results, but that chronological results are not obtained to the same refined degree.

Brooches of this kind are not specifically defined in the classification of Legoux, Périn and Vallet, and on the basis of all the depicted examples of garnet disc brooches it seems that they are not part of the find repertoire of northern France.

Garnet disc brooch: round, two zones with mixed inlays
Vrijthof: 17 (1681-1).

The garnet disc brooch from grave 17 can be distinguished from the other round disc brooches because of its bronze casing and the two zones of relative narrow cells with garnets and greenish glass inlay (fig. 10.10). The glass inlay forms a cross motif. The outer zone consists of 20 cells, the inner zone of 5. The central setting is a small round cell from which the inlay is missing. Because it is too small for a setting of multiple cells of garnets and these little cells are often with another inlay than garnet it is for now identified as a middle field, not a zone. The brooch has a diameter of 2.8 cm. The fastener at the back of the brooch is lost. This grave contained also some glass beads. No skeletal remains were found in this grave but in view of the outline of the grave it can be assumed that the brooch was found in the area around the pelvis, what is a relatively low position. This grave may have been disturbed, and it can be assumed that this brooch moved from its original position.

Although the cells of this brooch are quite narrow, especially compared to the other Maastricht brooches, it seems appropriate to place this brooch in Siegmund's typological group Fib1.3 instead of group 1.5 for which narrow cells are the main characteristic.[256] The brooches that are examples of this type do not resemble the Vrijthof brooch. Group Fib1.3 dates to Rhineland phase 4-5 (530-570).

The brooch fits best in group C (*Zwei- und mehrzonige Fibeln mit granatbelegter Innenzone*) of the Vielitz typology, and more specifically in sub-group C3 (*Zweizonige Fibeln mit sechs- oder mehrfach-radialen Zellmuster)*.[257] The first zone with 5 cells and the central setting of the Vrijthof brooch are both, according to this typology, considered to form the inner zone of the brooch. This inner zone, however, in the typology of Vielitz counts six or more radial cells and not five. Despite this deviation the Vrijthof brooch can best be compared with subtype C3.14 of group C3.[258] Brooches of this type are dated to Vielitz *Stufe* 2 (530/40-560/70).

Legoux, Périn and Vallet created a specific typological group for round garnet disc brooches for which a cross motif is the main characteristic. They refer to these brooches as 'relatively large with large garnets', although without giving exact measurements.[259] The brooch from grave 17 has a diameter of 2.9 cm, which is only somewhat larger than a number of the other brooches from the Vrijthof. Type 218 of Legoux, Périn and Vallet dates to phase MA3 (560/70-600/10), which is later than the proposed date of Vielitz and Siegmund. It can be questioned whether the Vrijthof brooch can be classified and dated according to the typology of northern France.

Garnet disc brooches: rosette, 1 zone, garnets and filigree in a sunken field
Vrijthof: 189 (1489-1).

The garnet disc brooch from grave 189 is rosette shaped and consists of a silver ground plate and a silver casing with a diameter of 2.7 cm (fig. 10.10). The outer zone consists of ten cells of which six are filled with garnets and four are empty. It can be assumed that these cells originally contained garnets. The middle field is formed by two isolated, semi-circular cells with garnets placed opposite each other on a sunken field. This sunken field is of a silver plate with a decoration of four S-shaped/volute shaped filigree threads. Apart from some remnants, the fastener on the back of the brooch has gone astray. This brooch is found together with another, although very different brooch, on the middle of the chest (see below).

The features of this Vrijthof brooch are well documented by Vielitz. She classified such brooches as general group F (*Zwei- und mehrzonige Fibeln mit gemischter Innen- oder Zwischenzonenverzierung)* of which the Vrijthof brooch can be compared to type F3.[260] The exact appearance of the filigree pattern is not listed in the overview of sub-types for type F3, although the position of the cells with garnet of sub-type F3.11 (two segments of garnets) resembles the Vrijthof specimen.[261] Vielitz dates brooches of type F3 in her *Stufe* 3 (560/70-600/10).[262]

Siegmund classifies similar brooches as Fib1.4 and dates them in Rhineland phase 5 (555-570).[263] The Franken AG maintained this type which dates towards the end of their phase 4 (510/25-565) and in phase 5 (565-580/90). Brooches with a sunken field and filigree are not explicitly defined by Legoux, Périn and Vallet, but the Vrijthof brooch resembles the depicted examples of type 215, which dates to their phases MA2-MA3 (520/30-600/10).[264]

It is remarkable that the garnet disc brooches from the Vrijthof cemetery do not necessarily form part of the 'four-brooch fashion' with bow brooches. This may be an indication that the garnet disc brooches of the Vrijthof belong to a 'fashion' whereby single brooches worn on the breast replace the custom of wearing two brooches. The 'single garnet brooch fashion' (eventually combined with bow brooches) is supposed to be a further development of the 'fashion' with two disc-or small brooches. It dates later in the sixth century and culminates in the use of large disc brooches in the seventh century.[265]

Bow brooches

Bow brooch: gilded silver with bird and animal style elements
Vrijthof: 0 (2965-1).

The context of this exclusive silver bow brooch, found as a stray find during the excavation of the Vrijthof, is unknown, but it can be assumed that it was deposited in one of the Vrijthof graves. The brooch consists of a semi-circular head plate with five knobs, which are cast to a whole with the brooch (fig. 10.10). Four of the five knobs are bird heads; the knob in the middle is an animal head. The bird heads consist of a head and a neck. The necks are thick and vertical lines of *Kerbschnitt* are applied on them. The eyes of the bird heads are formed by round cells. Some remnants of a garnet can still be observed in one of the cells that form the bird eyes.

(243) Legoux/Perin/Vallet 2004, 17, 35, 53 (type 215). (244) Vielitz 2003, 42. (245) Vielitz 2003, 39-42, 251, Abb. 112, D10.34. (246) Vielitz 2003, 76. (247) Vielitz 2003, 76. (248) Vielitz 2003, 39, 42. (249) Siegmund 1998, 45. (250) Legoux/Périn/Vallet 2004, 17, 35, 53 (type 215). (251) Vielitz 2003, 35-39. (252) Vielitz 2003, 37, 249, Abb. 111- C1.4. (253) Vielitz 2003, 35. (254) Vielitz 2003, 73. (255) Siegmund 1998, 45. (256) Siegmund 1998, 45. (257) Vielitz 2003, 35-39. (258) Vielitz 2003, 249 (Abb. 11-C3.14). (259) Legoux/Périn/Vallet 2004, 17, 35, 53 (type 218). (260) Vielitz 2003, 44-48. (261) Vielitz 2003, 255, Abb. 114-F3.11. (262) Vielitz 2003, 77. (263) Siegmund 1998, 45. (264) Legoux/Périn/Vallet 2004, 17, 35, 53 (type 215). (265) Zeller 1996, 675-680.

The fillings of the other three bird heads are gone astray but it can be assumed that originally they were filled with garnets. Round cells form the eyes of the animal head, but these are filled with green glass paste. The rounded head plate has a middle field with four round cells in which the garnets are still present. The middle field is framed by *Kerbschnitt* lines that follow the rounded curve. On the ribs in between the lines a vague decoration of niello dots can be observed. The bow also shows a decoration of *Kerbschnitt* lines along the middle field on which engraved or *Kerbschnitt* dots in circles are applied. The foot is formed by the neck and head of a bird. It is decorated with a *Kerbschnitt* pattern of curls on which also some niello decoration in the form of dots and triangles can be observed. The bird head that forms the extension of the foot has one large round cell with a garnet that represents the eye. The beak has a *Kerbschnitt* decoration of lines that follow the outline of the beak.

It is noteworthy that parallels for the head plate with the 'knobs' made of four bird-heads and one animal-head are well known, as are they for the foot in the shape of a bird head, but that a parallel for the combination of these two elements that also resemble the Vrijthof brooch, are difficult to find.

Koch classified brooches with bird head knobs as type I.3.3.2.8 (with four sub-types) of the general group I of brooches with a half-round head plate, straight foot and five knobs.[266] None of the examples, however, resemble the Vrijthof specimen. The middle knob in the form of an animal-head is neither identified by Koch. All these brooches with bird head knobs have simple feet (without an extension in the form of a bird- or animal head). Specimen with a foot in the shape of bird head can be found in Koch's groups III.3.4.2.[267] These bird heads, however, are all very different from the bird-head on the Vrijthof brooch, as are the bird-head knobs of these brooches. Regarding the combination of knobs and feet, it is difficult to find exact parallels for the Vrijthof brooch.

Legoux, Périn and Vallet classified brooches with a nearly identical head shape as type 268 and date them in their phases MA1-MA2 (470/80-560/70).[268] The foot of this type however is simple. Brooches with this head shape and foot shape are not known from the lower Rhineland area.

Small brooches

The group of small brooches consists of brooches of various forms.[269] From the Vrijthof cemetery one bird brooch and two equal armed brooches are known. The bird brooch and equal armed brooches are Merovingian in date, the others are either Roman or of an exotic provenance. For these brooches it can be questioned whether they were deposited as grave goods in the Merovingian period.

Bird brooch with filigree and garnets

Vrijthof: o (8888-6*).

The only context information available for this bird brooch, which became lost after excavation, informs us that it was found at the location of the Vrijthof cemetery and that it was fixed to the lower back of a skull.[270] Information on whether this find was done in a grave and whether it was associated with other finds is not available; nevertheless it can be assumed that it was deposited as a grave good in the Merovingian period. The old photograph and several notes disclose that it was a brooch with a length of 3.3 cm (fig. 10.10). The filigree and cells with garnets are placed on a golden plate that was attached on a silver ground plate with seven silver nails. The beak is pointing to the right and is curved downwards. The four cells with garnets, applied on the middle of the brooch, represent the right wing.

This bird brooch can be placed in Thiry's group of bird brooches with *Filigran- und Cabochonverzierung*.[271] In this group both *Kerbschnitt* brooches in combination with garnets or cells with another sort of stone, and filigree brooches with garnets or other stones are included. The positions of the garnets or stones on the examples of *Kerbschnitt* brooches do not resemble those of the Vrijthof specimen.[272] The examples of filigree brooches are only slightly comparable to the Vrijthof specimen.[273] The patterns of their filigree decoration are different, the outlines of the brooches do not compare, and the garnets that represent wings are not applied in the same way as on the Vrijthof brooch. Other examples that form a more exact parallel for the Vrijthof brooch are for now not known to me from publications hereafter. Thiry dates bird brooches with filigree and garnets or other sorts of inlay to the second half of the sixth century.[274]

Siegmund defines four types of bird brooches on the basis of the presence or absence of garnets and their location on the brooch.[275] This classification is also used by the Franken AG.[276] The location of cells with garnets on the middle of the brooch and filigree decoration are not identified as features of the bird brooches from the lower Rhine Area, nor are they by the Franken AG for their research area. This may indicate that the Vrijthof specimen has features that are specific for Maastricht or the Meuse area. Siegmund dates all four types of bird brooches in Rhineland phase 3 (460/80-510/25).[277]

Legoux, Périn and Vallet identified 17 types of bird brooches on the basis of the decoration technique and the shape of the brooch. Nearly all the types refer to the specific locations they are known from, but they do not describe their significant and defining characteristics.[278] None of the published examples are similar to the Vrijthof brooch.

(266) Koch 1998, 92-96. (267) Koch 1998, 114-117. (268) Legoux/Périn/Vallet 2004, 18, 37,54 (type 268). (269) Siegmund 1998, 50-52. (270) This information was found in the Ypey-archive. (271) Thiry 1939, 58-59. (272) Thiry 1939, Taf. 21.482-493. (273) Thiry 1939, Taf. 21, 494-503. (274) Thiry 1939, 59, 139. (275) Siegmund 1998, 50-51. (276) Müssemeier *et al.* 2003, 28. (277) Siegmund 1998, 50-51. (278) Legoux/Périn/Vallet 2004, 17, 36, 53 (types 235-251). (279) Siegmund 1998, 51. (280) Siegmund 1998, 51; Müssemeier et al. 2003, 29-30. (281) Müssemeier *et al.* 2003, 29-30. (282) Legoux/Périn/Vallet 2004, 18, 38, 54 (type 291). (283) Thörle 2001.

Bow brooch: equal armed

Vrijthof: o (1850-1*).

Brooch 1850 was a stray find, and went missing after excavation. The remaining documentation provided enough information to describe the find as a bronze brooch with a length of 5.4 cm (fig. 10.10). It has rounded plates at each side of the bow which are decorated with a cast or/and engraved cross motif in the middle of the plates and a geometric pattern along the edges. The bow is decorated with a similarly applied pattern of lines.

This brooch resembles the brooches that Siegmund classified as type Fib 10, which dates to Rhineland phase 10 (670-705).[279] The Franken AG maintained this type.[280] They mention that equal armed bow brooches show a variety of shapes that are difficult to date to specific chronological phases. In the research area of the Franken AG the first equal armed bow brooches are known from graves of women of the late seventh century. They are more specifically dated to their phases 9-10 (670/80-750).[281] Legoux, Périn and Vallet defined two types of equal armed bow brooches with round plates (type 286 (small) and 291(large)). No specifications on the exact measurements are given. For now it is assumed that the Vrijthof brooch can be classified as their large equal armed bow brooch. This type (291) dates to their phase MR3 (660/70-700/10) but can also sporadically appear just before this phase.[282]

Small equal armed bow brooches of the early medieval period are recently discussed by Thörle.[283] His research area expands from the north to the south and east of the Alps. The group of bow brooches with round endplates such as the Vrijthof specimen is relatively large. Thörle classified bow brooches with round end plates as general group II, which is divided in sub-types on the basis of the form of the bow.[284] The bow of the Vrijthof brooch has a convex profile on the basis of which it can be classified as Thöhrle's type II A1. The brooches of type II A1 are cast bronze brooches, which can be further subdivided on the basis of their decoration. A decoration that is similar with the decoration on the Vrijthof brooch cannot be observed on the examples of the subtypes, and this brooch is therefore classified as the rest group of type A.[285] Regarding the brooches of type A (and also the other equal armed brooches) the decoration of an engraved cross on the plates of the bow of the Vrijthof brooch is remarkable. A decoration on the plates of the bow can only be observed on a very limited number of equal armed bow brooches. Group II A1 dates to JMII-JMIII (630/40-670/80). It remains questionable whether the Vrijthof brooch can be dated to exactly this period, although a general assignment to the seventh century seems plausible in view of the date ranges in various classification schemes.[286]

Equal-armed bow brooch: Scandinavian/Thuringian?

Vrijthof: 85 (1419-1).

The brooch from grave 85 shows a relatively large bow compared to the arms (fig. 10.10). The elevated concave bow is oval and on the flattened top of the bow a round cut-away space can be observed in which some remnants of a white paste (cement?) is present. An engraved ladder-band pattern is applied along the edge of the round cut-away around which a pattern of engraved opposite triangles can be observed. Such triangles can also be observed along the edge of the oval bow. The arms of the brooch are formed by three singular cells. The white paste that is still present on the round cut-away on the top of the bow can also be observed in the round cells at both far ends of the arms. The two other cells of both the arms are filled with gold foil. The inlay of yellowish transparent glass applied on top of this gold foil is still present in three of these cells. It can be assumed that it was also applied in the fourth cell. It remains to be questioned whether the gold foil with glass on top of it was also applied in the other two cells in which only the white paste remains.

The grave goods assemblage to which this brooch belongs consists of a pottery trefoil jug, a glass globular and a necklace of beads. The brooch was found near where the original position of the left shoulder is assumed. Although only the skull remains, it seems that both the necklace and the glass and pottery vessels were found at, what is assumed on the basis of similar finds in other graves, their original position in the grave. It can thus be assumed that the brooch was also found at its original position and that it is actually part of a Merovingian grave goods assemblage although resembling specimen from the Merovingian period are not known to me.[287]

Brooch: bronze, oval, with multiple large settings

Vrijthof: 189 (1489-2).

A peculiar bronze brooch, for which no resembling examples are known to me, was found in grave 189 (fig. 10.10). The brooch is oval and domed. It has a length of 3.3 cm and a height of 1.3 cm. It can be assumed that a 'stone' (material unknown) was originally set in the oval opening on top of the brooch. This oval opening measures 1.9 cm and is deep. It was therefore a relatively large setting. Oval and round openings alternate with each other along the side of the brooch. In total four round and four oval cells are present. Remnants of white settings (pearls / glass paste?) are still present in all four round cells. The oval cells are empty. It can be assumed that originally 'stones' of some kind of material were also once set in these cells. In between each oval and round cell two

(284) Thörle 2001, 50-53. (285) Thörle 2001, 57. (286) Thörle 2001, 92, tabelle 7. (287) In the documentation archive of the Vrijthof finds a remark was made that this brooch resembles a 'Scandinavian brooch from Farsleben', which dates to the sixth century. This brooch is, according to these notes, published in: *Gesellschaft und Kunst der Germanen. Die Thüringern und Ihre Welt* by G. Behm-Blancke (1973, Taf. 100). This book is not available in the Netherlands. For now it is assumed that this brooch is part of the Scandinavian material culture of the sixth century.

shallower, triangular cells with garnets can be observed. The two triangular cells are mirrored and thus form the shape of a sandglass. On the back of the brooch some remnants of the fastener are still present.

This brooch was found with another brooch (a filigree disc brooch with isolated cells with garnets), on the middle of the breast, and a string of beads (around the neck, now lost). No other finds are known from this grave. The grave seems undisturbed, and it can therefore be assumed that this brooch formed part of the material culture of the Merovingian period, or perhaps the period before what would make it an antique in this grave.

Bow brooch: Roman

Vrijthof: 68 (1105-1).

The brooch from grave 68 is part of a grave goods assemblage that contains a necklace of beads and a bronze buckle (fig. 10.10). The grave is disturbed, so the brooch is not necessarily part of this assemblage, although the reuse of Roman objects in Merovingian graves is not unusual. This brooch is a so-called hinged brooch with strongly pronounced bow.[288]

Decorative pins

Only one stray find (pin with biconical head) and two bronze pins with scoop shaped heads are known from the Vrijthof cemetery. Many more were found in the Pandhof cemetery. The pins from Maastricht are discussed in more detail when dealing with the Pandhof cemetery on the basis of Möller's study of pins.[289]

Pin: biconical head

Vrijthof: 0 (1330-1).

One bronze pin with a biconical shaped head and a pointed shank with a circular section is known as a stray find from the Vrijthof cemetery (fig. 10.11). Pins of this kind are not known from the research areas of Siegmund, the Franken AG and Legoux, Périn and Vallet. Maybe it is not Merovingian in date, but Roman.

Pins: spoon shaped heads

Vrijthof: 75 (1383-1); 308 (1735-1).

The pin with spoon shaped head from grave 308 has a pointed shank with a triangular section (fig. 10.11). It has a length of 17.5 cm. The upper part of the shank has a circular section and a cast ribbed decoration. The pin was found in a disturbed grave near the right side of the skull. The pin can be identified as a hairpin if this was the original position.

The pin from grave 75, with a length of 10.2 cm, has a shank with a circular section of which the upper part shows a cast ribbed decoration (fig. 10.11). The other finds from this grave are iron belt elements, two pottery vessels and a knife. These finds are not indicative for the gender of the buried person. The pin was found, together with the knife, near the right lower leg.

Möller referred to a number of pins with spoon-shaped heads and shanks with various decorations as hair- and cloak pins.[290] Similar, but smaller pins are not discussed by Möller; these are according to her merely toilet implements and not used as adornment.[291] Both the Vrijthof pins are long. On the basis of their find locations, the pin from grave 308 can be identified as a hairpin and the pin from grave 75 as a fastener of the cloak.

Similar pins are classified by Siegmund as Nad2.2 and seem to be restricted to graves of women. They are dated to Rhineland phase 7 (585-610).[292] The Franken AG maintained this type and date it in their phases 5-7 (565-640/50). Legoux, Périn and Vallet classified such pins as type 310 and date them in phase MA1-MA3 (440/80-600/10).[293] This type of pin (*type 58 Spatelkopfnadel)* belongs to fashion phases H and I (or SW♀IV) in the typo-chronology of the graves of women in Southern Germany and dates to c. 610-670.[294] It seems plausible to date the Maastricht pins in the end of the sixth century and the first half of the seventh century.

Fragment of a La Tène bracelet

Vrijthof 95: (1478-3).

A fragment of a blue La Tène bracelet with three ribs on its outer surface was found in grave 95 (fig. 10.12). It is part of a grave goods assemblage of a woman. This is based on the finds of various beads, two ear rings with garnet and a garnet disc brooch. Other finds from this grave are a pottery jug, a comb with case, a knife, bronze belt elements and two coins (now lost). The fragment of the bracelet was found near the right lower leg together with 62 small black beads and a coin (now lost). It can be assumed that these objects were carried in a purse, which was hanging down from the waist belt. The purse and its contents probably moved from their original position in the grave.

Fragments of La Tène bracelets are regularly found in the graves of women.[295] Such bracelets date approximately to the last three centuries before the beginning of the Common Era. This fragment is therefore a reused pre-Merovingian 'object' in this grave. It is regularly mentioned that these fragments were carried in purses and that they had magical or protective characteristics, which were probably related to their blue colour. It is thought that blue was a colour of importance for people in the early medieval period.[296]

(288) Van Buchem 1941, pl. X-XI. (289) Möller 1976/1977. (290) Möller 1976/77, 36-50. (291) Möller 1976/77, 14, note 1. (292) Siegmund 1998, *Typ Nad 2.2: Schmucknadeln mit 'Löffelchen'*, 44. (293) Legoux/Perin/Vallet 2003, 18, 39, 54 (type 310). (294) Roth/Theune 1988, 32-35. (295) Pescheck 1996, 94, 104. (296) See for example Pescheck 1996, 204; Koch 1997, Teil 1, 156; Mehling 1998, 26-28, 115-116.

Earrings

Earrings appear in a variety of forms in cemeteries throughout the Merovingian period.[297] The term earring is generally used for objects found near both sides of the skull, what resembles the wearing of jewellery we nowadays refer to as earrings. The usually paired occurrence of such objects makes a reference to earrings even more likely. The question remains, however, if these 'earrings' were always worn in the same way (through the ear(lobe)) as is done in modern times. The construction of some Merovingian 'earrings' suggests otherwise. A large diameter can for example indicate that they were folded around the ears. Moreover, they could have been attached to leather straps that formed part of the headgear, or were directly attached to veils or head bands.[298] Von Freeden offers a detailed typology of Alamannic earrings in the early medieval period. This is a detailed typology for nearly all the forms of earrings known from the Merovingian period and is, for the greater part, adopted by Siegmund and the Franken AG.

Earrings: silver, added polygon casing with garnets

Vrijthof: 187 (1640-1, 1638-2).

In the group of earrings with polygon extremities a distinction is made between earrings with a fixed polygon and those with an added polygon (which is separately fixed to the ring.) Two types of the group of earrings with added polygon casings were found in the Vrijthof cemetery.

One of the earrings of the pair from grave 187 is complete and intact, of the other specimen the ring and polygon casing are separated and the casing itself is entirely fragmented (fig. 10.12).[299] The rings of both earrings are simple and of silver. The inlay of the intact silver polygon casing consists of four rhombic garnets and eight triangular garnets in between. Gold foil can be observed underneath the garnets. The rhombic garnets are placed in raised cells, the triangular garnets are placed in cut out spaces. The ring pierces the casing through the flat rhomboid sides which are without cells and inlay. The original appearance of the fragmented casing was probably similar to its counterpart in view of the remaining garnets and ring. The opposite ends of the rings of both specimens are lost. They could have been pointed or hooked. The ring of which the polygonal casing became separated shows a bulge that probably served as a 'lock' for the casing. This 'lock' cannot be observed on the complete specimen.

Von Freeden classified similar earrings as *Durchbrochen gearbeitete Polyederkapseln*.[300] This classification implies that the casings have cut out openings in which the garnets were set. The triangular garnets of the Vrijthof specimen were set in this way, the rhomboid garnets were set in elevated openings, which are at one with the casing.

Fig. 10.11
Various decorative pins (scale 1:2).



Fig. 10.12
Earrings and fragment of a La Tene bracelet (scale 1:2).



Von Freeden described examples of which the casings are of gold or silver; the inlays are always garnets, although the number of garnets can vary. Von Freeden dates these earrings, on the basis of associated finds, in the first half of the sixth century.[301]

Siegmund dates this type of earrings in Rhineland phases 4-8 (530-640).[302] This is an extended period, and the researchers of the Franken AG point out that Siegmund's type Ohr4 can be divided in an early and late variant, such as Von Freeden has noticed for the Alamannic region. The difference between the two types is considered to be the material of the casing (silver and gold for the early type and bronze for the later type, although silver is is also possible) and the material of the inlay (garnets for the earlier types and glass paste for the later types).[303] The earrings from the Vrijthof cemetery with their silver casing and garnets can be assigned to the early group; Ohr4A of the Franken AG. They can therefore be dated to their phases 3-5 (460/80-580/90) although its most frequent occurrence is observed in phase 4 (510/20-565). This coincides better with the dating of Legoux, Périn and Vallet. They date similar earrings earlier than Siegmund, that is sporadically in their phase PM (440/50-470/80), but predominantly in phases MA1-MA2 (470/80-560/70). They can also occur sporadically in the phase thereafter.[304]

(297) Von Freeden 1979. (298) Von Freeden 1979, 412-413. (299) The fragmented casing of this earring was first assigned to another grave, but reconstructed as part the ring found in grave 187. (300) Von Freeden 1979, 249-253. (301) Von Freeden 1979, 251-252. (302) Siegmund 1998, 42. (303) Müssemeier *et al.* 2003, 23-24. (304) Legoux/Périn/Vallet 2004, 18, 38, 54 (type 303)

Earrings: silver, added polygon casing, applied cells with glass paste inlays

Vrijthof: 95 (1485-1,-2).

A pair of silver earrings composed of silver twisted wires with an added silver polygon casing was found in grave 95 (fig. 10.12). The rings were found at both sides of the skull. One of the casings is gone astray, but it can be assumed that it was originally part of the assemblage of grave goods and was similar to the remaining casing. This polygonal casing consists of six rhomboid shaped segments connected by small triangular zones. Four of the rhomboid zones have an applied raised cell in the same shape, but smaller, and their inlay consists of a greenish glass paste. At the four corners of all the four rhomboid cells, small cylindrical cells, which also have a greenish glass paste as inlay, can be observed. The cylindrical cells are formed in one part with the rhomboid cells.

The remaining casing is not attached to the twisted ring anymore but, as some parallels show, the ring entered and left the casing through the rhomboid shaped surfaces without inlay. The round 'depressions' in the middle of these surfaces confirms this. In the corners of each rhomboid surface without decoration, four bulbs of silver can be observed. These could be the remnants of small cylindrical shaped cells, such as Von Freeeden describes for the two rhomboid shaped sides of the earrings of Mindelheim (grave 102) and Ötlingen (grave 5).[305] Because the rings go through the middle of these sides, no larger cells with inlay were applied. The Vrijthof earrings were part of a grave goods assemblage of a woman which also contains a rosette shaped garnet disc brooch, numerous beads, a comb with case, a knife and a small bronze belt buckle.

Von Freeden classified similar earrings as examples of the group of earrings with polygonal casings and defined this group as '*Typ mit Polyederkapsel in der jüngeren Merowingerzeit*' and more specifically '*polyederkapseln mit aufgesetzeten Fassungen*'.[306] Von Freeden dates these earrings in the JM II (630/40-670/80).[307] She mentions that these earrings probably do not originate in the Alamannic region because most specimens were, at the time of her publication, found in the Frankisch region.[308] In Siegmund's research area, however, these earrings are rare. In the Rhineland earrings with applied polygon casings are only known from two graves of the cemetery of Junkersdorf.[309] One of these pairs (Junkersdorf grave 49) is similar to the type described in the section above (from grave 187); the other pair (Junkersdorf grave 450) is similar to the pair from grave 95. The pairs, which Von Freeden would classify as two different types, are classified as one type in Siegmund's typology. This type dates to Rhineland phase 4-8 (530-640).[310]

Despite the silver casing, the earring from grave 95 can be classified as Franken AG type Ohr4B (see the section above), on the basis of the glass paste inlay.[311] They date this type in their phases 6-8 (580/90-670/80). Although the Franken AG mention the material of the casing and inlay as the main discriminating characteristics for the old and young types, another important feature is the occurrence of applied cells of various forms for the younger types (of which the rhomboids with small cylindrical corners such as on the Vrijthof specimen can be frequently observed), which are mostly filled with glass paste but can sporadically contain garnets.

These earrings can be classified as type 304 of Legoux, Périn and Vallet, which dates to their phases MA3-MR1 (560/70-630/40).[312] This typology makes a clear distinction between the two sorts of polygonal casings, as the Franken AG and Von Freeden proposed. The one with applied rhomboid and cylindrical cells are in the typo-chronology of Legoux, Périn and Vallet also the later variant.

Ring

Vrijthof: 274 (1792-2)

This ring of silver twisted wire (fig. 10.12) can be compared to rings that are part of ear rings with polygon casings with garnets or glass (see the sections above). Its counterpart was not found, and it can be assumed that a polygonal casing, either applied or fixed, was originally part of it. It was found near the skull in a grave which contained also a garnet disc brooch, a simple bronze ring and a biconical pot. This grave can be identified as the grave of a woman. Earrings of twisted silver wire and a fixed or applied polygon casing date to the sixth an seventh century. A more precise dating cannot be obtained for this ring.

Beads

The beads of both the Vrijthof and Pandhof cemeteries have been studied together. In this volume on the Vrijthof cemetery a general introduction to the study of the Maastricht beads is presented.

The Vrijthof and Pandhof strings are dated on the basis of the typo-chronological classification of their individual beads. The majority of the beads are glass and amber beads; the beads of other natural stones (amethyst and rock-crystal) and of precious metal (gold or silver) occur less frequent. It is generally accepted that the colour, shape and decoration of the glass beads are the best chronological indicators; the beads of natural stone can be polished and/or cut in specific shapes but the chronological significance of these features is not firmly established until now.

Different shades of the same basic colour can be observed in the group of glass beads. This is for the greatest part a result of production processes, but can also have been influenced by post-depositional processes. Beads can sometimes be corroded to such an extent that the original colour is hard to distinguish. Here, only the basic colours black, white, blue, green, red, orange/ochre and yellow are used as typological criteria, a classification of all colour nuances would be unworkable.[313]

Table 10.5
Combination groups of beads and their dating by Siegmund and the Franken AG.

Siegmund 1998			Franken AG 2003		
Combination group	Phase	Date	Combination group	Phase	Date
Group A	Late-Roman/3-4		Group I	3	(460/80-510/25)
Group B	2	(440-485)	Group II	2-5	(400-580/90)
Group C	3-early 4	(485-555)		3-4	(460/80-565)
Group D	Late 4-6	(530-585)	Group III	3-5	(460/80-580/90)
Group E	4-6	(530-585)		4-5	(510/25-580/90)
Group F	6-7 early 8	(570-610)	Group IV	5-8	(565-670/80)
		(610-640)		6-7	(580/90-640/50)
Group G	7- early 8	(585-640)			
Group H	Late 8-9	(610-670)			
Group I	9-10	(640-705)	Group V	8-9/10	(640/50-750)

The majority of glass beads are undecorated, as they are in the Vrijthof and Pandhof cemeteries, but typological works focussed mainly on the decorated beads. These, however, are only present in considerable quantities in certain phases, while undecorated beads are specific for the remaining phases.[314]

Numerous typo-chronologies of beads are available of which some are indispensable for the classification of certain groups of Merovingian beads. Substantial and elaborate works on the typology and chronology of beads are for example those of Koch (the decorated glass beads of Schretzheim and Pleidelsheim), Siegmund for the Lower Rhine area, Legoux for Northern France, Siegmann for Lower Saxony and Brugmann for Anglo-Saxon England.[315] Numerous studies on beads of the Merovingian period have appeared; Sasse and Theune offer an interesting historiography of this specific research.[316]

The typo-chronologies of Koch and Siegmund will be the starting point for the analysis of the Vrijthof and Pandhof beads with decoration. The undecorated beads will be classified according to Siegmund's typology. The Franken AG maintained this typology except for some alterations with regard to the dating of the beads, which will be adopted for the analysis of the Maastricht beads (table 10.5). Supplementary information for the typo-chronological analysis of the Maastricht beads can hardly be obtained from the work of Legoux, Périn and Vallet.[317] Their typo-chronology is difficult to apply because the single beads that are characteristic for their four combination groups are only portrayed, not described. It can moreover be questioned whether these examples are sufficient for the classification of the variety of beads from Maastricht and whether the results will offer extra insights. For purposes of convenience this typology is, except for two early beads, not used for the classification of the Maastricht beads.

Siegmund and the Franken AG place the beads in combination groups, which are created on the basis of a seriation of all the beads-types identified.[318] These combination groups are better datable than the individual bead types since these can have extended circulation periods. A seriation was not performed with the beads from Maastricht; the dating of the beads and strings relies on other typo-chronologies and a thorough analysis of the typo-chronological development of the beads and strings of beads from the Meuse region around Maastricht is a subject for further research.

The Franken AG researchers mentioned that the enormous amount of beads originating from their research area made it impossible, within the limited research time available, to create an independent typology. The beads are therefore classified on the basis of Siegmund's typology and processed as such in a seriation.[319] Adjustments, however, are made in Siegmund's scheme of combination groups (table 10.5). The Franken AG identified five combination groups on the basis of their seriation results, whereas Siegmund identified nine groups.[320] The boundaries of these combination groups are established with the appearance of a substantial set of new types and/or the disappearance of other types of beads.[321] The Franken AG concluded that of their five groups the groups I (late Roman beads), II and V could be identified rather unambiguously: the boundaries of groups III and IV are less obvious and remain questionable. The majority of the strings are assigned to these groups. They concluded that strong chronological arguments to maintain the refined division in the nine chronological groups of Siegmund cannot be found. As a consequence, the Franken AG identified phases in which the beads of the combination groups II, III and IV occur either sporadically or pre-

(305) Von Freeden 1979, 264-265. (306) Von Freeden 1979, 264-267. (307) Von Freeden 1979, 269-273. (308) Von Freeden 1979, 274-275. (309) Siegmund 1998, 41-42. (310) Siegmund 1998, 42. (311) Müssemeier *et al.* 2003, 23-24. The parallel known from Junkersdorf (La Baume 1967, grave 450-1,2) has a silver casing, but classified as type Ohr.4B by the Franken AG. (312) Legoux/Périn/Vallet 2004, 18, 38, 54 (type 304). (313) This is a general practise (see for example Siegmund 1998 and Koch 1977).

(314) Siegmund 1998, 57. (315) Koch 1977, 2001; Legoux 1993; Siegmund 1998; Siegmann 2002; Brugmann 2004. (316) Sasse/Theune 1997. (317) Legoux/Périn/Vallet 2004, 19, 42-43 (type 374-377). (318) Siegmund 1998, 58. (319) The seriation was executed together with the beads from the Lower Rhine area classified by Siegmund. (320) Müssemeier et al. 2003, 25-39; Siegmund 1998, 57-61. (321) Müssemeier et al. 2003, 36.

dominantly (predominantly is indicated in bold characters in table 10.5). As a consequence, the assigned date ranges of these three groups show a considerable overlap.

It would be interesting to discover which combination groups can be found in the collection of beads from Maastricht and how they compare to the results of Siegmund and the Franken AG. The huge amount of beads, and therefore the excessive amount of time this exercise would take, leaves this a topic for future research.[322] Moreover, the research of the Franken AG seems to indicate that an extremely detailed description and analysis of beads do not produce detailed chronological insights. It is for this reason that it is decided to publish the beads in such a way that other researchers can use the Maastricht evidence in full detail. For now the typo-chronologies of Siegmund, the Franken AG and Koch are used as tools to classify and date the beads and strings of beads of the Vrijthof and Pandhof cemeteries. The classification and dating of the individual beads will form the basis for the dating of the complete strings. First the individual opaque and transparent monochrome beads (figs. 10.13 and 10.14), the polychrome beads (fig. 10.15), the amber beads (fig. 10.16), and the amethyst and rock-crystal beads will be classified and dated; thereafter each string is discussed.

Amber beads

Vrijthof: 68 (1149-10: 3x); 85 (1418-2: 1x); 95 (1482-2: 1x); 110 (1624-25: 1x); 166 (1539-2: 10x); 178 (1516-1: 3x); 187 (1636-6: 3x); 187 (1637-5: 14x; 1: 1x); 187 (1640-2: 1x); 247 (1752-4: 2x, 7: 1x); 258 (1831-2: 17x); 274 (1792-3: 10x); 277 (1807-3: 15x); 314(1172-6: 1x).

Most of the amber beads are irregular or almond/drop shaped (fig. 10.16 and appendix 10.1: table 1). The bead from grave 247 is remarkable because of its long broad cylindrical shape and grooves along the edges.

Amber beads were used in strings throughout the Merovingian period. They form the majority in Siegmund's combination groups C and D (485-585). The Franken AG only mention amber beads as characteristic for their combination groups II (predominantly phase 3-4: 460/80-565) and III (phase 3-5: 460/80-580/90) if they form more than 20% of a string.[323] Both Siegmund and the Franken AG do not define amber beads as a type and do not consider the various forms of these beads.

The Vrijthof strings consisting of a majority of amber beads can be dated according to Siegmund and the Franken AG; the other amber beads are difficult to date precisely. Typo-chronologies for the classification of amber beads of various shapes are not available. It is only mentioned by Christlein that small amber beads date to the early Merovingian period (*Schicht* 1: 550-570/80),[324] which was also observed by Koch.[325]

Amethyst beads

Vrijthof: 48 (1587-1: 9x); 85 (1418-3: 2x); 110 (1624-18: 2x); 285 (1819-3: 1x); 315 (1151-1: 14x).

The amethyst beads either make up an entire string or form the majority in two strings from the Vrijthof cemetery (appendix 10.1: table 2). The other amethysts beads where part of strings that consisted of various beads. Most of the beads are relatively large and almond shaped, a minority is small. The number of amethyst beads is relatively large in Maastricht.[326]

The Franken AG maintained Siegmund's type Per 5.2 and consider the amethysts beads to be especially characteristic for combination group IV which dates to their phases 5-8 (565-670/80).[327] Koch also shares the general belief that amethysts beads appear in the second half of the sixth century, which is supported by the evidence of the cemetery of Schretzheim.[328]

Rock-crystal bead

Vrijthof: 308 (1737-2: 1x).

Rock-crystal beads are a rare. The specimen from grave 308 was found as a singular bead (appendix 10.1: table 3). It is a large biconical bead made of turbid rock-crystal. In the Rhineland they belong to combination group C (mainly late fifth, first half of the sixth century). Siegmund mentions that rock-crystal beads can occur elsewhere over much longer time-spans.[329] The Franken AG did not identify rock-crystal beads as a type.

Millefiori beads (leaf type)

Vrijthof: 68 (1149-2: 2x); 95 (1482-2: 5x); 187 (1637-2: 1x); 314 (1173-2: 3x).

The millefiori beads of the Vrijthof cemetery all have more or less the same shape, except for one, but have various decoration patterns and are either of a blue or red basic colour (fig. 10.15 and appendix 10.1, table 4). The decoration patterns are vague and difficult to describe in detail. It can be concluded, however, that all the beads are so-called *Millefiori* beads of the leaf type, which are characterised by floral motifs. All the beads are globular or slightly biconical except for the bead from grave 187, which is a relatively large cylindrical bead. Koch provided us with a detailed typology of millefiori beads.[330]

The two beads from grave 68 both have two red opaque border bands. The millefiori patterns in between are blue, but their specific details cannot be observed anymore. It is difficult to classify these beads more precisely than to the group of globular beads with red border bands, of which some seem to have a middle field which is completely blue (except for the decoration motifs), such as for example Koch type M33.

(322) A new simplified scheme to classify undecorated beads was proposed in Theuws/Van Haperen 2012. (323) Müssemeier et al. 2003, 37. (324) Christlein 1966, 72. (325) Koch 2001, 162: *Kombinationsgruppe* A. (326) This phenomenon will be discussed in the volume on the Saint Servatius cemetery. (327) Siegmund 1998, 77. Müssemeier *et al.* 2003, 38. (328) Koch 1977, 72. (329) Siegmund 1998, 76-77. (330) Koch 1977, 215-218, Farbtafel 6; Koch 2001, 619-620, Frabtafel 8, Gruppe M.

Fig. 10.13
Monochrome opaque bead types (scale 1:1).



1024-A

Fig. 10.14
Monochrome transparent bead types (scale 1:1).



The five beads from grave 95 are all globular. Three have red opaque border bands, but have different decoration patterns. One of the beads resembles Koch type M27, another type M25 and the last one type M52. The two other beads are blue with some vague red and white motifs. These cannot be classified more precisely as to the group without red opaque border bands (Koch types M1-M17).

The short cylindrical bead from grave 187 is blue opaque with a vague decoration pattern. The only option for this bead is Koch type M56.

Two beads from grave 314 are much alike. They both have two red opaque border bands and a centre of blue fields with a yellow or white leaf-motif and fields which are of another colour but very vague. The two beads can be classified as Koch type M21 or M22. The other bead from Vrijthof grave 314 has blue opaque fields of which the decoration is clearly visible and blue opaque fields of which the decoration is vague. It can be classified as Koch type M9 or M11.

In the group of millefiori beads Siegmund only distinguishes three shapes of beads: the short cylindrical beads (Per 2.12), the globular beads (Per 2.13) and the long facetted beads with six sides (Per 2.14).[331] He mentions that the globular beads are a long used type and that they are difficult to assign to a specific chronological phase. The short cylindrical beads, such as the one from grave 187, are typical for Siegmund's combination group C and D (485-585), as are the long six sided beads. The Franken AG consider only these long facetted beads as a chronological significant type.[332]

Volkmann and Theune presented another recent study primarily concerned with leaf type millefiori beads.[333] This study deals with the research history of such beads, their exchange (trade) and the explanation of certain distribution patterns, next to some typo-chronological remarks. A classification scheme is proposed, on the basis of which the beads can be described uniformly.[334] A nice overview of the appearance of the various types per *Stufe* in south-western Germany is presented, which demonstrates the chronological significance of the typology offered by Koch.

The millefiori beads of the Vrijthof cemetery show a variety of colours and patterns, and were, except for the ones of which the decoration pattern became vague, classified according to Koch's refined arrangement of beads. However, no discussion exists on the chronological significance of the individual types. Koch mentions that millifiori beads are not found in *Stufe* I of the cemetery of Schretzheim. They are present in a few graves of *Stufe* II, and strings with five or more millefiori beads were found mainly in the graves of *Stufe* 3 and 4 (565-620/30). Millefiori beads are not a characteristic feature of *Stufe* V, and if they are found in graves of this period they are, according to Koch, likely to be survivals that were used in a younger string of beads.

Volkmann and Theune also discussed the typo-chronological development of leaf type millefiori beads in Southern Germany, mainly on the basis of the finds from the cemetery of Schreztheim.[335] From their analysis it follows that the types assigned to the Vrijthof beads mainly date to *Stufe* 3 of Schretzheim. The beads identified as type 56 (grave 187) and 25 (grave 95) date to *Stufe* 2, and the bead identified as type 52 (grave 95) to the second half of *Stufe* 4. The discrepancy between the date ranges assigned to the two beads from Vrijthof grave 95 is remarkable and could mean either that the typo-chronologies of Koch and Volkmann and Theune do not apply to other regions or that one of the millefiori beads from grave 95 is a reused specimen.

Retticella beads

Vrijthof: 187 (1637-3: 1x); 258 (1831-8: 1x).

The two retticella beads from the Vrijthof cemetery are large specimens of a short cylindrical shape (fig. 10.15 and appendix 10.1: table 5). Siegmund classified all the retticella beads from his research area as a single type (type Per 2.11).[336] Koch on the other

(331) Siegmund 1998, 67. (332) Müssemeier *et al.* 2003, 37. (333) Volkmann/Theune 2001. (334) Volkmann/Theune 2001, 548, Tab. 4. (335) Volkmann/Theune 2001, 531-534, Abb.4-5.

Fig. 10.15
Polychrome bead types (scale 1:1).



Fig. 10.16
Amber beads (scale 1:1).



hand identified various types on the basis of their shape, colours and decoration patterns. The bead from grave 187 can be classified as Koch type 48,14.[337] The other bead does not match exactly with one of Koch's types.

Koch assigned the short cylindrical reticella beads, regardless of their colour and pattern, to *Stufen* 2-3 of the cemetery of Schretzheim (545/50-590/600). Siegmund placed the retticella beads in combination group D (phases 4-6: 530-585). The Franken AG maintained this type and placed these beads in combination groups II and III, which date to their phases 2-5 (400-580/90, although predominantly to phases 3-5 (460/80-580/90).[338]

Silver metal-in-glass beads

Vrijthof: 48 (1587-10:1x); 68 (1149-4:7x); 178 (1516-5:2x); 187 (1636-5:6x; 1637-6:34x).

The silver-in-glass beads have a cylindrical segmented or a compressed globular shape (appendix 10.1: table 6). Most of the silver-in-glass beads are in a bad condition: the outer glass layer is weathered and the silver foil has disappeared or is difficult to identify. In these cases the beads can easily be confused with the transparent segmented white beads (without metal foil), which are rather common. The identification of some of the Vrijthof beads as either silver-in-glass beads or segmented white beads remains therefore questionable.[339] Siegmund considers the silver-in-glass beads (type 40.1) as beads of combination groups C-E (485-585). The Franken AG combined the two types and their type Per40 dates predominantly to phases 3-4 (460/80-565).[340]

Black glass beads

Seventy-four black beads are known from the Vrijthof cemetery, of which seventy-two are undecorated opaque beads and two are large opaque beads with decoration (appendix 10.1: tables 7 and 8). The black beads without decoration are all small and compressed globular beads.

Small undecorated black beads are classified by Siegmund as Per31.1; shape is not considered a relevant variable.[341] All the small beads from the Vrijthof are therefore classified as S-Per31.1. According to the Franken AG, black beads, both decorated and undecorated and of different shapes, can especially be seen in strings of their combination group II and less frequent in group III. Combination group II dates to their phases 2-5, yet predominantly to phases 3-4 (460/80-565).[342]

The black opaque bead with decoration 1361-1 is a stray find. It is a relatively large bead with combed threads of white and red opaque glass. The large black bead from grave 313 belongs to a string with small green beads. The bead is decorated with yellow combed (in one direction) threads. The beads are classified as Siegmund's general type-group 31 of which sub-types 3 to 5 are decorated black beads.[343] Some comparable decoration patterns can be found in the typology of Koch, but is questionable if the Vrijthof beads, which have different shapes than the Koch types, can be dated on the basis of this characteristic alone.[344]

Blue glass beads

In the Vrijthof cemetery 123 blue beads, of which the transparent undecorated ones form the majority with 96 beads, were found (appendix 10.1: tables 9, 10, 11 and 12). The twenty-two blue opaque beads without decoration are part of eight strings. The string from grave 166 contained the highest number with six specimens that are very light blue and have a compressed globular shape. Three similar beads are known from two strings that were found in grave 187: string 1637 has two of these beads, string 1636 one. Similar beads are not identified by Siegmund, neither are they by the Franken AG. This is also the case for the blue opaque beads in the shape of a short cylinder from graves 85, 100 and 247, and the globular ones from grave 48. The globular bead from grave 48 is of a dark blue coloured glass.

Apart from the melon beads and facetted beads, all the blue opaque beads are classified as Siegmund's general type-group 37 (sub-types 1-2), which consists of various blue opaque beads.[345] The beads of this group belong to combination groups F-I and are dated to Rhineland phases 6-10 (570-705). The significance of this dating, however, remains questionable.

Only the three opaque blue beads with five facetted sides from grave 258 are of a type also known from the lower Rhine area and are accordingly classified as type Per 1.3.[346]

A number of 96 blue transparent beads of various shapes were found in the Vrijthof cemetery. Thirty-two heart-shaped beads are known from grave 64, and two in grave 68. Such beads can be classified as Siegmund's type 1.1 of combination group A, which are identified as beads of the late-Roman period.[347] The four almond-shaped beads from grave 152 can be classified as Siegmund type 1.8 of combination group H-I.[348] The fragments of transparent blue beads from grave 179 cannot be classified on the basis of their shape. These beads are therefore classified as general group 47, which consist of various blue transparent beads. Blue transparent beads occur throughout the Merovingian period; a precise date range cannot be obtained for these beads and fragments.

The decorated blue opaque bead from grave 124 is light blue. The dots are corroded and their colour cannot be identified. Bead type-group 1 of Koch consists of beads of various colours with a single row of dots: opaque blue beads with dots, however, are not identified by Koch.

(336) Siegmund 1998, 66-67. (337) Koch 1977, Teil 1, 211; Teil 2, Farbtafel 4. (338) Müssemeier *et al.* 2003, 37. (339) The identification of some beads remains uncertain due to their bad condition. The predominance of the gold-in glass beads in the Pandhof cemetery as opposed to the Vrijthof cemetery can, however, assumed to be correct. (340) Müssemeier *et al.* 2003, 37. (341) Siegmund 1998, 67. (342) Müssemeier *et al.* 2003, 37. (343) Siegmund 1998, 67-68. (344) Koch 1977, Teil 1, 204-205, 211-213; Teil 2, Farbtafel 2, 5; Koch 2001, Farbtafel 4. (345) Siegmund 1998, 74. (346) Siegmund 1998, 65. (347) Siegmund 1998, 64. (348) Siegmund 1998, 65.

Four decorated blue transparent beads are identified. The bead from grave 110 is dark blue with yellow opaque raised dots dispersed all over the surface. A similar type is described by Koch, although the yellow dots on these specimens are not raised. The two decorated beads from grave 166 are identical. They are biconical and show two transparent white and one opaque red line at the carination. The decoration is identical to the decoration of types M67 and M72 of Koch, but their shape is different.[349] These bead types date to Schretzheim *Stufen* 2-4 or 6-8.

Green glass beads

A number of 244 green beads were found in the Vrijthof cemetery (appendix 10.1: tables 13, 14, 15 and 16). Green beads are frequently part of strings and are so during a considerable length of time, especially the opaque green beads of a short cylindrical shape.[350]
The compressed globular beads are with a number of 81 dominant in the group of monochrome opaque green beads; these are not identified by Siegmund. The beads are therefore classified as type-group 36 (general group of opaque green beads). The other green monochrome opaque beads could be classified according to the typology of Siegmund.

Green transparent beads were with a number of 137 examples a frequent find. They show less variety in shape than the blue transparent beads. Of the identified shapes only the various cylindrical beads can be classified according to Siegmund's typology, the compressed globular types are not identified in his research area. They are therefore classified as Siegmund general type-group 46, which comprises all the green transparent beads without decoration from his research area.[351] The beads that fit in the typology are all identified as late-Roman specimens.

One fragment of a green opaque bead with decoration is known from grave 277. It seems to have been of a biconical bead, and the remainder of the decoration consists of red and yellow dots. This bead does not match with the bead-types from the research areas of Siegmund and Koch.

Four green transparent beads with decoration were found in the Vrijthof cemetery. Similar beads are not known from Siegmund's research area. With some restrictions they can be classified as Koch types.[352]

Orange (ochre) beads

The identification of some beads as orange is questionable. They can also be weathered beads, which were originally red or yellow. Orange opaque beads are according to Siegmund limited to certain combination groups or phases in contrast to the other opaque beads, which are present throughout the Merovingian period.[353] Opaque orange/ochre beads are in Siegmund's research area disc- and globular shaped and can be found in combination groups D-E. The beads from Maastricht do not have these shapes, but are classified as the group of orange beads in Siegmund's typology (appendix 10.1: tables 17 and 18). One of the two transparent orange/ochre beads is turbid orange/ochre, the other is shiny orange. Transparent orange or ochre beads are not known from Siegmund's research area and are difficult to date.

Red glass beads

In the group of red opaque compressed globular beads some variety in colour can be observed (appendix 10.1: tables 19 and 20). Some of the beads are of a shiny dark red, some are less shiny and of a lighter red. Some of the beads could originally have formed so called double-or multiple connected beads (a well known Merovingian bead shape), but none of them remained fixed. Siegmund did not distinguish between compressed globular and globular beads. The globular beads from the Vrijthof are, however, different from the group with a compressed globular shape. These beads were therefore divided in two groups but classified as the same Rhineland type (Per 35.4).[354] The biconical beads show a more or less sharp carination, they are all larger than the (compressed) globular beads and are of a shiny bright red colour (Siegmund Per 35.6).[355] Siegmund only identified the small cylindrical beads (Per 35.2).[356]

Seventeen red beads with decoration were found in the Vrijthof cemetery. Red beads with decoration are rather common, and the Vrijthof beads can for the greater part be classified according to the typologies of Siegmund and Koch. Some beads with a decoration similar to the types of Siegmund and Koch do not always have matching shapes. This discrepancy if for now neglected.

Most of the beads are compressed globular and in this form group various decoration patterns can be identified. The majority of the red beads have opaque white crossing waves, followed by the beads with opaque yellow crossing waves. The decoration of two beads that consist of a combination of spirally wound white bands and blue border bands is not identified by Siegmund and Koch; their bead-type with spirally wound bands (but without border bands) is for now used to classify these beads.[357]

Yellow glass beads

192 opaque yellow monochrome beads are known from the Vrijthof cemetery of which the compressed globular ones are the most common one (appendix 10.1: tables 21 and 22). The yellow opaque beads can for the greater part be classified according to Siegmund's typology.[358]

Most of the nine yellow opaque beads with decoration can be classified as Siegmund and/or Koch types.[359]

White glass beads

Within the group of white undecorated opaque beads Siegmund discerns 3 types (appendix 10.1: tables 23, 24 and 25).[360] Only the biconical shaped beads and the double- or multiple connected beads from the Vrijthof are shapes known from Siegmunds research area, together with the facetted beads with five sides that are defined as one type regardless the colour.[361]

Four transparent white beads of different shapes are known from the Vrijthof cemetery. For some beads it is difficult to distinguish the segmented transparent white beads from the segmented silver-in-glass beads and some errors can have occurred in their classification. It is difficult to classify the beads on the basis of Siegmund's work.[362]

Decoration is only present on some opaque white beads; transparent white beads with decoration are not present. The main decoration colours within this group of beads are red and blue. Most of these beads can be classified as Koch and also Siegmund types.[363]

Strings of beads

Twenty-five strings of beads are known from the Vrijthof cemetery (appendix 10.2).[364] The strings consist of a variable number of beads of different colours, shapes and sizes. They were thread on wire after excavation and for some of the strings it is known that the position of the beads in the grave determined their actual position in the string. For most of the strings, however, the documentation reveals little on the excavation of the beads and how they were handled thereafter. It remains uncertain whether the original position of the beads and the symmetry of the available strings represent their original appearance.

The classification of strings of beads can be realized in different ways: on the basis of the number of beads, the number of decorated beads, the size of the beads, or on the basis of the predominant colour. The number of beads per string is not considered to be a strong chronological signifier.[365] The predominant colour and the number of translucent beads are thought to be the strongest chronological indicators. Siegmund showed that the main colour of beads in a string changes during the course of the Merovingian period and that translucent beads can be found mainly in strings of the earliest combination groups.[366] The black, green and blue beads are characteristic of the earlier period, the yellow, red, white and orange beads of the later period. Therefore, the Vrijthof strings are classified on the basis of their predominant colour. This is determined by the highest amount of beads of a certain colour. However, the dominant colour of a complete string does not have to be the result of the highest number of beads of a certain colour.[367] Several large beads of a certain colour may optically dominate the colour of the string although not numerically. This appearance is rather ambiguous to identify, and for now the strings will be classified on the basis of highest number of beads of one colour.[368]

The individual bead types were discussed in the section before, and their classification and dating form the basis for the dating of the complete strings (see also appendix 10.1). The following overview of the Vrijthof bead strings, which are organised by dominant colour, include some remarks on the dating of the complete strings and their find location in the grave. The tables of the complete strings themselves with the bead types and the associated date ranges of Siegmund, Koch and the Franken AG and the final dating of the complete strings in Maastricht phases can be consulted in appendix 2.

String: majority black beads, and one individual black bead

Vrijthof: 95 (1478-1); 0 (1361-1).

Three strings of beads are known from grave 95. Sixty-two undecorated black beads were found near the left lower leg, the other two strings on the belly and the breast. It can be assumed that the black beads formed a separate string (fig. 10.17 and appendix 10.2: table 1). This string of black beads is dated to Maastricht phases B-E (400-580/90).

The black decorated opaque bead 1361-1 from the Vrijthof cemetery is a stray find (fig. 10.17 and appendix 10.2: table 2). It is a relatively large bead with combed threads of white and red opaque glass.

Strings: majority blue

Vrijthof: 64 (965-1, 2); 124 (1609-1, 2, 3, 4, 5, 6); 152 (1617-1, 2, 3, 4, 5, 6); 285 (1819-1, 2, 3, 4, 5).

The blue transparent beads of the string from grave 64 only slightly outnumber the resembling green beads. Both the blue and green beads are, on the basis of their heart-shaped appearance, classified as Siegmund's type 1.1 (transparent blue and green heart-shaped beads), although the green beads seem to be more opaque than transparent (fig. 10.17 and appendix 10.2: tables 3). No other objects are known from grave 64. For now it is assumed that the blue and green beads are contemporary. This string may date to Maastricht phase C (460/80-510/25).

Thirty of the 60 beads from grave 124 are small transparent blue beads (fig. 10.17 and appendix 10.2: table 4). No other finds are known from this grave. The twenty-nine blue transparent beads form the majority and date to the fifth century and beginning of the sixth century according to Siegmund and the Franken AG. The other beads date later, to the sixth and seventh century. It can

(349) Koch 1977, Teil 1, 217, 218; Teil 2, Farbtafel 6. (350) Siegmund 1998, 73-74. (351) Siegmund 1998, 75. (352) Koch 1977, Teil 2, Farbtafel 1, 2, 4; Koch 2001, Farbtafel 8. (353) Siegmund 1998, 70. (354) Siegmund 1998, 71. (355) Siegmund 1998, 71. (356) Siegmund 1998, 70. (357) Siegmund 1998, 72; Koch 1977, Farbtafel 4. (358) Siegmund 1998, 65, 69-70. (359) Siegmund 1998, 70; Koch 1977, Teil 1 206; Teil 2, Farbtafel 3. (360) Siegmund 1998, 68. (361) Siegmund 1998, 65. (362) Siegmund 1998, 74. (363) Siegmund 1998, 68; Koch 1977, Teil 1, 198-199, 202, 206; Teil 2, Farbtafel 1, 2; Koch 2001, Farbtafel 3, 4, 7. (364) From some graves the beads are stringed on more than one string. They are regarded as one ensemble when found at the same location in the grave. (365) Siegmund 1998, 60. (366) Siegmund 1998, 62-63, Abb. 15-16. (367) This means that not the number of beads with a certain colour determine the dominant colour of a string, but the total surface of a certain colour. (368) Maybe it is possible to calculate the dominant colour on the basis of a formula including size, colour and number of beads.

Fig. 10.17
Strings of beads from graves 95 (1478, 1482, 1484), 64, 124, 152 and 285 (scale 1:2).



be questioned whether the blue transparent beads should not be dated later. A number of 29 reused beads in a string of the sixth or seventh century seems unlikely. For now the complete string is dated to Maastricht phase D-H (510/20-670/80).

Five of the 12 beads of the string from grave 152 are blue (fig. 10.17 and appendix 10.2: table 5). No other finds are known from this grave. The majority of the beads of this string date to 580/90-750, and the complete string is therefore dated accordingly to Maastricht phase F-J (580/90-750).

The beads of the string from grave 285 date to an extended date range (fig. 10.17 and appendix 10.2: table 6). This string is dated to the Maastricht phases that approximately comprise the middle of this period, Maastricht phases D-E (510/20-580/90). No other finds are known from this grave.

Strings: majority green beads

Vrijthof: 48 (1587-5; 1587-1, 3, 4, 5, 6, 7, 8, 9, 10); 85 (1418-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12); 100 (1495-3, 4, 5); 235 (1748-1, 2, 3, 4, 5, 6, 7, 8, 10); 258 (1831-1, 2, 3, 4, 5, 6, 7, 8, 9, 10); 313 (1019-2, 3, 4); 315 (1151-1, 2, 3).

The beads from grave 48 were found at different locations in the grave. The beads with find-number 1587 were found near the neck, the beads with find number 1586 near the right foot. The beads with find number 1587 form two strings of beads. The excavation drawings show no differentiation in location so it is assumed that these beads originally formed one string (fig. 10.18 and appendix 10.2: table 7). Most of these beads cannot be classified on the basis of Siegmund's typology, and the beads that can be classified show an extended date range. Dating this string to Maastricht phases E-G (565-640/50) seems plausible.

The beads from grave 85 were all found, together with a brooch, near the neck (fig. 10.18 and appendix 10.2: table 8). The beads date to an extended date range, but it seems plausible to date the complete string in Maastricht phases D-G (510/20-640/50).

Fig. 10.18
Strings of beads from graves 48, 85, 100 (1434, 1495), 235, 258, 313 and 315 (scale 1:2).



Two collections of beads were found at two different locations in grave 100. They are identified as two separate strings. Find 1495 was recorded as a find discovered near the right foot on the excavation drawing. However, in the original documentation this find number refers to shoe buckles and not to beads. The beads may have been part of the ensemble of beads with find number 1434 (found on the pelvis) or they may not belong to this grave (a wrong find number might have been assigned to these beads). The string with find number 1495 consists of fifteen beads of which nine are green opaque beads (fig. 10.18 and appendix 10.2: table 9). Only the red and yellow beads of the string can be dated, on the basis of which the complete string is dated to Maastricht phases E-H (565-670/80).

A collection of sixteen beads (1748), of which six are green, was found near the neck in grave 235 (fig. 10.18 and appendix 10.2: table 10). The shape of the green transparent beads does not match with Siegmund's typology and are dated as his complete type-group of green transparent beads. The other beads indicate that the green beads can be dated as the early green beads of this type-group. On the basis of the datable beads the string is dated to Maastricht phases C-D (460/80-565).

Of the sixty-six beads from grave 258 thirty-five are green (fig. 10.18 and appendix 10.2: table 11). This collection of beads was found near the neck. A field photograph gives an indication of the position of the individual beads in situ. It can be assumed that the string as it was created after excavation reflects the original sequence of beads. Although the green beads form a numerical

Fig. 10.19
Strings of beads from graves 12, 187 (1636), 274, 277 and 187 (1637) (scale 1:2).



majority, the string does not give a green impression. Moreover, in this string sequence most green beads will have been in the neck and were hardly visible for a spectator in a face to face situation. The first impression of the colour of this string is one of reddish-white. On the basis of the majority of the datable beads the complete string is dated to Maastricht phases D-E (510/20-580/90).

Of the nineteen beads from grave 313 eighteen are green (fig. 10.18 and appendix 10.2: table 12). The two strings on the photograph were found at the same location and are now identified as one string of beads. The green beads are difficult to date, on the basis of the black bead alone this string is for now dated to Maastricht phases B-D (400-565).

The fifty beads from grave 315 were found at the same location in the grave and are therefore regarded as one string (fig. 10.18 and appendix 10.2: table 13). Although the number of green beads (thirty-five) exceeds the number of amethyst beads, the appearance of the string is determined by the amethyst beads. No other finds are known from this grave. Siegmund and the Franken AG propose a quite similar dating and it is decided to date the string accordingly to Maastricht phases E-G (565-640/50).

Strings: majority red

Vrijthof: 12 (1673-1, 2, 3); 187 (1636-3, 4, 5, 6, 7, 8, 9, 10).

The three-coloured string from grave 12 is dominated by red and green opaque beads (fig. 10.19 and appendix 10.1: table 14). The red outnumber the green beads only slightly. The beads were found near the pelvis. They might have been carried in a purse or served as decoration for a leather purse or for clothing. No other finds are known from this grave. This string is dated to Maastricht phases D-G (510/20-640/50).

Two strings of beads are known from grave 187. The string with find number 1636 was found near the neck/upper breast and the string with find number 1637 near the pelvis. The string with find number 1636 shows a wide variety of beads of which the red ones outnumber the other coloured beads only slightly (fig. 10.19 and appendix 10.2: table 15). On the basis of the majority of the datable beads this string is dated to Maastricht phases D-G (510/20-640/50).

Strings: majority amber

Vrijthof: 274 (1792-3); 277 (1807-3, 4, 5, 6, 7, 8, 9, 10, 11).

The string of beads from grave 274 consists of only amber beads and was found near the neck (fig. 10.19 and appendix 10.2: table 16). Amber beads are used throughout the Merovingian period, but a majority of amber beads in one string is considered to be characteristic for the Franken AG's combination groups II and III (400-580/90). This string is dated accordingly to Maastricht phases B-E (400-580/90).

Amber beads form a majority in the string from grave 277 (fig. 10.19 and appendix 10.2: table 17). No other datable finds are known from this grave. On the basis of the other datable beads, this string is dated to Maastricht phases E-H (565-670/80).

Strings: majority yellow

Vrijthof: 95 (1484-2, 3, 4, 5, 6, 7; 1482-2, 3, 4, 5, 6); 100 (1434-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13); 110 (1624-2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 21, 23, 24, 25, 26, 28, 29, 30); 166 (1539-2, 3, 4, 5, 6, 7, 8); 178 (1516-1, 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13); 214 (1759-1, 2); 247 (1752-1, 2, 3, 4, 5, 6, 7, 8, 9, 10); 314 (1172-2, 3, 4, 5, 6, 7; 1173-2, 3, 4).

From grave 59 three strings are known, of which one (1478-1) is described under the section of strings with a majority of black beads (fig. 10.17 and appendix 2, table 1). The two other strings were found on the belly and the breast and are here discussed as one ensemble (fig. 10.17 and appendix 2, 18 and 19), of which the majority is formed by the small yellow beads. The milifiori beads and the blue melon bead are however the more striking beads of this ensemble.

Two collections of beads were found at two different locations in Vrijthof grave 100. The beads with find number 1434 were found near the pelvis. This string has a majority of 'light' (yellow and white) coloured beads (fig. 10.18 and appendix 10.2: table 20). The dated beads show an extended date range, but the dating of the complete string can be narrowed down to Maastricht phases E-H (565-670/80).

The string from Vrijthof grave 110 consists of a wide variety of beads but the main colours are yellow and white (fig. 10.20 and appendix 10.2: table 21). The beads were found near the neck. The majority of the beads can be dated, on the basis of which the complete string is dated to Maastricht phases D-H (510/20-670/80).

The beads from Vrijthof grave 166 were found near the neck. Of the sixty-six beads thirty-two are yellow (fig. 10.20 and appendix 10.2: table 22). The complete string is dated to Maastricht phases D-H (510/20-670/80).

The beads from Vrijthof grave 178 were found at the location of the neck and upper breast. Of the seventeen beads five are yellow (fig. 10.20 and appendix 10.2: table 23). This string also is dated to Maastricht phases D-H (510/20-670/80).

The eleven yellow beads from Vrijthof grave 214 were found near the neck (fig. 10.20 and appendix 10.2: table 24). They all date to Maastricht phases D-H (510/20-670/80).

The string of various beads from Vrijthof grave 247 was found at the location of the neck. Of the twenty-six beads thirteen are yellow (fig. 10.20 and appendix 10.2: table 25). The complete string is dated to Maastricht phases D-H (510/20-670/80).

Two strings were recorded as finds from Vrijthof grave 314. The beads with find number 1172 were found near the neck (fig. 10.20 and appendix 10.2: table 26), those with find number 1173 (fig. 10.20 and appendix 10.2: table 27) near the left lower arm. The 'bracelet' counts only four beads and is discussed in this section. The bracelet is dated to Maastricht phase E (565-580/90), the other string to Maastricht phases D-H (510/20-670/80).

Strings: majority metal-in-glass beads (metal foiled glass beads)

Vrijthof: 68 (1149-2, 4, 5, 6, 7, 8, 9, 10, 11, 12); 187 (1637-1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19).

Strings with a majority of metal in glass beads contribute to the white-colour appearance of a string. Beads of this kind are quite common finds in Merovingian graves and are dated by Siegmund in the sixth century and by the Franken AG in fifth and sixth centuries.[369]

A string with a high number of silver-in-glass beads from Vrijthof grave 68 was found near the neck (fig. 10.20 and appendix 10.2: table 28). It is dated to Maastricht phase B-J (400-750).

Two strings of beads are known from Vrijthof grave 187. The string with find number 1636 was found at the location of the neck/upper breast, and the string with find number 1637 at the location of the pelvis. The string with find number 1637 shows the highest number of silver-in-glass beads and is therefore regarded as a string with a majority of beads with a 'white' colour (fig. 10.19 and appendix 10.2: table 29). The other finds from this grave are two golden pendants (with find number 1636, probably attached to this string of beads), two earrings, a finger ring and a bronze buckle. These finds are dated to the period 520-640. This string of beads is dated to Maastricht phases B-H (400-670/80).

Pendants: gold with filigree

Vrijthof: 110 (1624-1); 187 (1636-1, -2).

Three small gold pendants with filigree were found in the Vrijthof cemetery.Two pendants of which the form can, compared to the circular specimens, at best be described as lunula (although not an exact lunula shape) with a honeycomb pattern of gold filigree were part of a necklace of beads from Vrijthof grave 187 (fig. 10.19). They belong to an elaborate grave goods assemblage of a woman, which consists among others of garnet disc brooches and silver earrings. The string is characterised by a majority of red coloured

(369) Siegmund 1998, 76; Müssemeier *et al.* 2003, 37.

Fig. 10.20
Strings of beads from graves 110, 166, 178, 214, 247, 314 (1172, 1173) and 68 (scale 1:2).



beads, although it's general appearance in not predominantly red. The complete string is dated to Maastricht phases D-G (510/20-640/50).

The pendant from Vrijthof grave 110 is circular and shows a geometric pattern of circles of filigree and was an element of a necklace too (fig. 10.20). This formed part of an elaborate grave goods assemblage of a woman. The string to which this pendant belongs is characterized by a diversity of beads of which the yellow and white coloured beads make up the majority. Only two amethysts beads were also part of this string. The complete necklace is date to Maastricht phase D-H (510/20-670/80).

The small pendant from Pandhof grave 10220 is circular and decorated with a swastika pattern of filigree. Again it was part of a necklace and of an elaborate grave goods assemblage of a woman. The necklace to which this pendant belonged has only a small number of beads (compared to the two Vrijthof strings), of which the predominant colour is yellow/white. No amethysts beads are known from this grave. The complete string is dated to Maastricht phase C-G (460/80-640/50).

Pendants of this kind, without further specification of their shape and decoration pattern, are classified by Siegmund as type Per6.1 and assigned to Rhineland phases 5 to 7 (555-610). The Franken AG also classified the various forms of pendants (round, triangular and grape-shaped) as a single type. They indicate that a chronological difference is difficult to make between the circular and grape shaped pendants, but suggest that the triangular ones seem to be older. The first appearance of the round ones is somewhat earlier (in phase 4b: 530/45-565) than the grape-shaped ones, but continue to be present for the greater part of phase 5 (565-580/90). However, the dating of gold pendants seems to be somewhat more complicated than this.

The pendants in grave III,99 of the cemetery of Saint-Severin in Cologne (Germany), especially number 12, show that they are still an element of necklaces in the late seventh century.[370] However, those in grave III,73 date from around 570.[371] Ypey discussed a number of necklaces in which gold pendants occur on the occasion of his publication of the grave finds from Beuningen (Netherlands).[372] A typical combination is the necklace of amethyst beads and gold pendants.[373] The round gold pendants of Beuningen look very much alike the pendants of Vrijthof grave 110, although the circles of the decoration of the Beuningen pendants are pressed-in motifs and not of filigree. Ypey mentions gold round pendants with filigree from Hailfingen, Nordendorf and Worms.[374] A detailed search for parallels of these necklaces has not been undertaken yet. This would certainly have produced more examples of such necklaces with these (round) pendants.[375] It has been suggested that amethyst beads in combination with gold pendants were a Mediterranean phenomenon of the last decennia of the sixth century.[376] The Beuningen finds seems to contradict this and suggests that they can occur much later as well. This observation has been explained by presenting the later specimen as late survivals, the number of them, however raises doubts about this explanation. Ypey suggested that the parallel necklaces he presented were all of seventh century date.[377] Klein-Pfeuffer indicates that there may have been two independent phases in which gold pendants were popular.[378] The first phase is from before the middle of the sixth century to the beginning of the seventh century (c. 530-610), the second is from c. 670/80 (end of the *jüngere Merowingerzeit* II) to c. 710 (in the *jüngere Merowingerzeit* III).

In view of this discussion and the accompanying finds, the round pendant from Vrijthof Grave 110 may well date to the first phase (c. 530-610). The lunula-shaped pendants of grave 187 are almost round pendants. An almost identical example is found in the cemetery of Rödingen (Kreis Düren, Germany).[379] It was accompanied by two round pendants with a central boss, two earrings with polygonal ornaments and a necklace with amber, amethyst and redbrown (clay?) beads. Janssen dates the grave in the Ältere Merowingerzeit III and *Jüngere Merowingerzeit* I (c. 560/570-630/640). Dating it to the *Jüngere Merowingerzeit* may be a bit too early. Truly lunula-shaped pendants have a different form.[380] It is suggested that the pendants from Vrijthof grave 187 date to the Ältere Merowingerzeit III (560/70-600).

Pendants: coins

Vrijthof: 48 (1586-2; 1586-3); 100 (1434-21).

Coins are identified as pendants when a suspension hole is present. The suspension hole mostly served to fix the coins to strings of beads. Sometimes some remnants of metal wire can still be observed on the coins. Coins with suspension holes, thus pendants, were for the majority found in the graves of women, and it appears that they are all Roman coins. Vrijthof grave 48 is dated to a considerable later date than the two coins, altered into pendants, from this grave were minted (fig. 10.34).[381] The first coin from this grave is a Follis (Constantinus I) dated to 330-334, the second a Dupondius/As, dated to 54-96. The grave is dated tot 565-640/50 and the cioins were thus already in circulation for some time before their deposition in this grave. The two coins pendants were found close to the feet, together with a stone and a large cylindrical bead; they may have been deposited as an ensemble in a purse. They were not originally attached to the two strings of beads also known from this grave.

The coin from grave 100 could be identified as an Aes II, dating to c. 346-423. It was fragmented, and found at the location of the pelvis. It was probably part of the string of beads also found at this location.

(370) Päffgen 1992, 1, 432-433; 2, 276-280; 3, Taf. 58, 13. (371) Päffgen 1992, 1, 432; 2, 232-239, nrs 10d-e; 3, Taf. 54, 5-6. (372) Ypey 1973. (373) See also Koch 2007, 368-369. (374) Ypey 1973, 453-454. (375) The latest publication of Koch contains several references to such finds (Koch 2007, 57, Abb. 37, 129, Abb. 14-15, 368, Abb. 74); from Sandhofen Grave 115 four specimens are known, from Bösfeld Grave 578 seven, and from the cemetery of Viernheim a total of five specimens were uncovered (all these cemeteries are located in the proximity of present-day Mannheim). All the mentioned pendants are round; parallels for the shape of the two 'lunula' Vrijthof pendants seem to be scarce. It appears that the decoration patterns of filigree on all the pendants are considerably different. (376) See discussion in Päffgen 1992, 432. (377) Another late seventh century necklace of this type is known from Lahr Burgheim (Germany). See *Die Alamannen*, Stuttgart 1997, 461 and Krohn/Bohnert 2006, 100-112, but it is not relevant for our discussion of round pendants. (378) Klein-Pfeuffer 1993, 64. (379) Janssen 1993, 354, Tafel 131, nr. 9. (380) See for instance those of grave V,20 of the cemetery of Saint-Severin in Cologne (Päffgen 1992, 1, 431; 2, 481-484, nr 9a; 3, Taf. 77, 6); Lahr Burgheim grave 10 (Krohn/Bohnert 2006, Abb 107). See also Maczynska 2005. (381) The determinations of this Roman coin was provided by drs. P. Beliën (curator of Ancient Coins at the Dutch National Bank)

Seaxes and seax scabbards

Seaxes were common grave goods although the relative amount can vary considerably from cemetery to cemetery. They were predominantly part of the grave goods assemblages of men. Generally just the iron blade and core of the grip are preserved, and the actual grip (principally made of wood) and leather scabbard have decayed. However, some parts of the wooden grip and leather scabbard of the Vrijthof seaxes are preserved. Some metal fittings of scabbards such as edge-reinforcers, bronze rivets, nails and plates can be related to a number of the Vrijthof seaxes. These elements will be discussed below.

Twenty-nine seaxes were found in the Vrijthof cemetery. Four seaxes went missing lost after the excavation (ns. 1603, 1605, 1684, 1763), and of the remaining twenty-four seaxes two cannot be assigned to a specific grave context (nrs. 1755-10, 1843-3). The condition of the remaining Vrijthof seaxes is reasonable, so the measurements of the blades can be established or reconstructed for most of them. They have a blade width varying from 2.8 to 5.6 cm and a blade length from 16.7 to 49.5 cm.

Because small seaxes can have the appearance of large knives, lower and upper limits for the measurements of seaxes and large knives are introduced for typological purposes.[382] It should be noticed that this modern distinction between seaxes and knives may not have been perceived as meaningful in Merovingian times. This modern distinction is probably made because seaxes are usually associated with combat and are seen as a weapon, while the smaller specimens (knives) are associated with daily or agricultural practices. Siegmund uses 15 cm as dividing line for the blade length to distinguish between (large) knives and (small) seaxes.[383] This critical break will also be used for the analysis of the knives and seaxes of the Maastricht cemeteries, and in doing so, it appears that three of the seaxes (from grave 168 with a length of 19.5 cm, from grave 194 with a length of 16.7 cm, and find number 1659-1 (context unknown) with a lenght of 16.9 cm, come close to this demarcation line of 15 cm. The seax from grave 168 is associated with a knife with a blade length of 9.6 cm, what is a confirmation for its identification as a seax. The seax from grave 194 was not associated with a knife. For now its classification as a seax is maintained, as it is for the object 1659-1 since their blade lengths exceed 15 cm. However, they can also be large knives; the distinction between large knives and small seaxes is not that evident.

Seaxes are typologically differentiated on the basis of the measurements of the blade and grip and some additional formal criteria concerning the blade shape in combination with the associated metal remains of the seax scabbard. Metal scabbard fittings are only known from graves of the seventh century, while seaxes were already in use as grave goods during the early sixth century.[384] Measurements of the blade (length and width) and core of the handle resulted in the well-known German classification of '*Schmal-, Breit- and- Langsaxe*', at one moment expanded with '*Kurzsaxe*'.[385] The *Breitsaxen* were further divided into '*schwere*' and '*leichte Breitsaxen*' and sometimes '*kurzer Breitsaxe*'.[386] A further classification of '*Schmalsaxe*' into '*schwere*' and '*leichte Schmalsaxe*' can also be found.[387] It is remarkable and unpractical that researchers use the same terms, but different metrical criteria to distinguish different seax types from each other.[388] This is probably due to local specificities and the aim of the researches to create meaningful typological classes for the cemetery under study.[389] Another criterion that is used to classify seaxes is the shape of the blade. Despite these efforts, as Siegmund elaborately explains, measurements and shape descriptions did not provide a unambiguous basis for the identification of Lower Rhineland types. Siegmund used only metric criteria for the definition of significant typological groups.[390] The Franken AG proposed a somewhat divergent subdivision that is based on the relation blade length/blade width and the associated belt elements.[391] Whereas Siegmund and the Franken AG identified 4 or 5 types of seaxes, Legoux, Périn and Vallet identified 10 seax types. Their classification is mainly based on the length of the blade and the shape of the back.[392] They do not consider the index of the length and width of the blade as a relevant variable, what results in a rather scanty classification. It is therefore decided to follow the classification of the Franken AG for the analysis of the Vrijthof seaxes.

Schmalsaxe

Vrijthof: 115 (1614-1); 168 (1534-2); 173 (1450-2); 194 (1502-1); 205 (1653-1); 0 (1659-1).

It appears that seaxes with a blade length up to 31 cm scarcely have a blade width of more than 4 cm.[393] The Franken AG classified these seaxes as Sax 1 (*Schmalsax*).[394] This feature can also be observed on the Vrijthof seaxes (fig. 10.21). These are also *Schmalsaxe* according to Siegmund's criteria.[395]

None of the seaxes of the Vrijthof are associated with scabbard rivets, and graves 115 and 173 did not contain belt fittings. Grave 168 contained a simple iron buckle, which, however, is difficult to date. Grave 194 contained a bronze plate buckle of the 'Maastricht' type, which dates to the second half of the sixth century. A bronze plate buckle with animal-style decoration was found in Vrijthof grave 205; it dates to the *Jüngere Merowingerzeit* II (630/40-670/80), which is considered a relatively late date for a *Schmalsax*. The seax from grave 115 shows some noticeable features. As said, it is general phenomenon that the smaller seaxes, of the sixth century, were rarely found with accompanying

Fig. 10.21
Schmalsaxe (scale 1:4).



scabbard elements such as rivets, nails and edge-reinforcers. The seax from Vrijthof grave 115, however, shows a bronze strip folded around the remains of the grip, which can be interpreted as the remains of an edge-reinforcer that was applied to the mouth of the scabbard. No other scabbard remains are known from this grave. Generally only the iron core of the grip and sometimes some wood remains are preserved. Other specific features are the so called ferrules, which can only be observed on the seax from grave 115. Not much is known about the variety in appearances of ferrules and their chronological significance.

Siegmund dates *Schmalsaxen* in Rhineland phases 4-7 (530-610), the Franken AG date this type in their phases 3-7 (460/80-640/50), although predominantly in phases 4-5 (510/25-580/90).[396]

Leichter breitsaxen

Vrijthof: 15 (1670-3); 16 (1679-3, 4); 58 (1634-3); 0 (1843-3).

The group of *leichter Breitsaxen* contains five seaxes (fig. 10.22). The length of the blades should, according to the Franken AG, be longer than 29 and shorter than 35 cm, with a blade width of more than 4 cm.[397] According to Siegmund, these seaxes have a blade length between 25 cm and 36.5 cm, and a blade width between 3.3 and 5 cm.[398] Two seaxes (1843-3 and the seax from grave 58) do not fit these dimensions and cannot be classified as *leichter Breitsax* according to Siegmund's typology.

Two of the *leichter Breitsaxe* were ascribed to grave 16, but this is due to mistakes in the find administration. One of them is probably one of the missing seaxes from the Vrijthof cemetery, although it is not clear which grave it should be ascribed to, as it also remains unknown which of the two seaxes actually belonged to grave 16.

All the *Breitsaxen* have a curved back, only one seax (find nr. 1843-3, stray find) has an angled back. This is a chronological significant feature for knives, which is dates to the end of phase 7 to phase 10 (640/50-710) of the Franken AG.[399] It can be assumed that an angled back appeared first at the seaxes (*leichter Breitsaxen* date somewhat earlier), and was later applied to the knives. This seax has ferrules with double lines on both sides of the blade of which their connection (towards the grip of the seax) is formed by a geometric pattern. Seax 1679-3 from grave 16 also has ferrules, but these became very vague due to corrosion. A pattern consisting of two parallel incised lines can be reconstructed, like on seax nr. 1843-3. The seax from grave 58 is found with a knife attached to the blade. Knives are often associated with seaxes, and it is assumed that on the scabbard of this seax a little 'scabbard' for the knife was applied. The position of the knife makes this assumption plausible. The Franken AG date the *leichter Breitsaxen* in their phases 5 to 8 (565-670/80), although predominantly in phases 6 to 7 (580/90-640/50).[400] Siegmund dates his *leichter Breitsax* predominantly in Rhineland phase 8 to the middle of phase 9 (610-655).[401]

Schwerer breitsaxen

Vrijthof: 11 (1665-5); 86 (1387-7); 292 (1794-2); 297 (1703-3).

Four seaxes of the Vrijthof cemetery are identified as '*schwerer Breitsaxe*' (fig. 10.23) The length of the blades of these seaxes are, according to the Franken AG, between 35 and 41 cm, and their width more than 4 cm. The Franken AG observed that these seaxes are predominantly associated with bronze belt fittings, more specifically bronze triangular fittings, or iron fittings with inlay, but almost never with undecorated iron belt fittings.[402] According to Siegmund's typology these seaxes have a blade length of more than 36.5 cm and a blade width of more than 5 cm.[403] This implies that two of the seaxes which are discussed here as *schwerer Breitsax* (Franken AG) would be identified as *leichter Breitsax* according to Siegmund.

Two of the *schwerer Breitsaxe* were associated with belt elements. The seax from Vrijthof grave 86 with a belt of iron fittings with inlay of monochrome geometric and animal-style elements, and the seax from Vrijthof grave 11 with a small bronze plate buckle, which is difficult to classify as belt fitting, although it was found at the position of the pelvis.

(382) Siegmund 1998, 87. (383) Siegmund 1998, 87. (384) Siegmund 1998, 94-95. (385) See for instance: Böhner 1958, 130-145; Neuffer-Müller 1966, 28-29; Koch 1977, 105-108. (386) Koch 1977, 107-108; Müssemeier *et al.* 2003, 46. (387) Siegmund 1998, 87-92; Pescheck 1996, 56; Koch 1977, 105-108; Giesler 1983, 528-531. (388) Siegmund 1998, 89 tabelle 12; Wernard 1998, 747-748, 769-771. (389) Siegmund 1998, 87; Giesler 1983, 528. (390) Siegmund 1998, 87. Reasons are local particularities and corrosion. (391) Müssemeier *et al.* 2003, 44-47. (392) Legoux/Périn/Vallet 2004, 14-5, 27-28. (393) Müssemeier *et al.* 2003, 44-47. (394) Müssemeier *et al.* 2003, 45. (395) Siegmund 1998, 87-93. (396) Siegmund 1998, 92-93; Müssemeier *et al.* 2003, 45. (397) Müssemeier *et al.* 2003, 53-54. (398) Siegmund 1998, 87-94. (399) Müssemeier *et al.* 2003, 53-54. (400) Müssemeier *et al.* 2003, 45. (401) Siegmund 1998, 93-94. (402) Müssemeier *et al.* 2003, 44-47. (403) Siegmund 1998, 87-92, 94.

Fig. 10.22
Leichter Breitsaxen (scale 1:4).

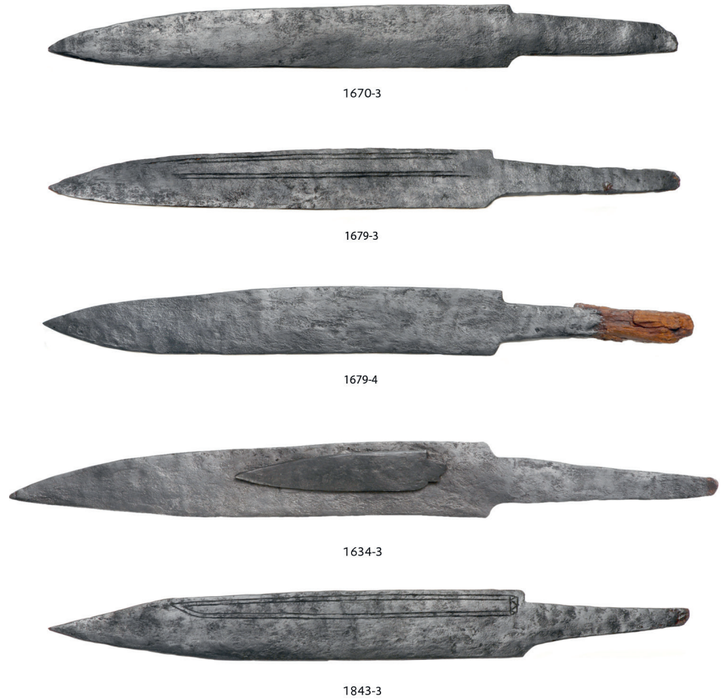


Fig. 10.23
Schwerer breitsaxen (scale 1:4).



Fig. 10.24
Langsaxen (scale 1:4).



Two specimens from this group were found with metal fittings of the scabbard, and two had some leather remains of the scabbard attached to it. This could imply that the use of leather scabbards with metal fittings both for decorative and fixation purposes was common with this type of seax. Leather remains were observed on the seaxes from graves 297 and 292, and metal scabbard fittings are also still present on the seax from grave 297. They will be discussed below. The Franken AG date these seaxes to their phases 6-9 (580/90-710), although predominantly to phases 7 to 8 (610/20-670/80).[404] Siegmund dates them to Rhineland phase 9 and to the beginning of phase 10 (640- c. 680).[405]

Langsaxen

Vrijthof: 70 (1394-2); 125 (1600-1); 278 (1817-10).

Three seaxes can be ascribed to the group of '*Langsaxe*' (fig. 10.24).[406] In the typology of the the Franken AG these seaxes have blades longer than 41 cm, in Siegmund's typology they have blades longer than 40 cm.[407] The Franken AG did not consider the width of the blade as a relevant parameter. Siegmund, on the other hand, claims that *Langsaxen* have an index (blade length/width) which is larger than 10. It appears that the three Vrijthof seaxes can all be classified as *Langsaxen* according to Franken AG typology; only the seax form grave 125 would be a *Schwerer bresitsaxe* according to Siegmund's typology.

Two of the seaxes show some remnants of the scabbard. On the tip of the seax from context 70 (find context unknown) some leather remains with a series of nails that served to fix the open end of the scabbard are still present. A part of the blade and the iron grip is missing of this seax, but the remaining blade fragment is long enough to classify the seax as a *Langsax*.

The other *Langsax*, from grave 278, still has the greater part of the scabbard folded around it on which a decorative pattern can be distinguished. This seax was found with four bronze decorative rivets of the scabbard and an iron plate buckle and three additional iron fittings of a belt, all decorated with an animal style decoration of polychrome inlay. These belt fittings are classified as Siegmund Gür 5.4 and date to Rhineland phase 9 (640-670), what is one phase earlier than the phase the *Langsax* of this grave dates to. However, the belt elements probably date late in phase 9.

The seax from grave 125 is part of a grave goods assemblage which consists of various weapons. Traces of a scabbard were not found in this grave. This grave also contained an *umbo* (shield boss) and a lance head, which both date to the seventh century. The associated iron belt fittings with silver inlay plausibly date to the first half of the seventh century. The belt is dated to an earlier phase than the *Langsaxe* are generally assigned to. It may therefore better be dated as a schwerer Breitsaxe, to 640- c. 680 (Siegmund) or 610/20-670/80 (Franken AG).

The Franken AG date *Langsaxe* in the end of their phase 8, and from then on to phase 10 (670/80-740).[408] Siegmund dates them from the middle of Rhineland phase 10 to phase 11 (685-740). It must be acknowledged that *Langsaxen* from Maastricht are relatively short, and that they may thus be early examples of this group.

Seax scabbards

The metal fittings seax scabbards are mainly associated with seaxes that date to the seventh century, the so called '*Breitsaxen*' and '*Langsaxen*'. They have both a decorative and practical function in that they served to fix the leather of the scabbard. The 'decorative rivets' can be considered the most prominent (remaining) metal fittings of these scabbards. These rivets are predominantly of bronze, but can occasionally be of silver or gold. They had a decorative function and can be distinguished on the basis of shape and decoration. It is claimed that the rivets show a clear chronological development from flat, disc shaped rivets to hollow (flat or spherical) rivets of which the examples with a pearl or carved rim are the youngest.[409] The leather for the scabbard was fold in two, and the large rivets, together with an extensive amount of nails, were used to close and fix it. Metal fittings at the back of the

(404) Müssemeier *et al.* 2003, 46. (405) Siegmund 1998, 94. (406) A photograph of the seax from grave 125 is not available; a drawing can be found in the catalogue of graves and finds. (407) Siegmund 1998, 91-92, 94; Müssemeier *et al.* 2003, 46. (408) Müssemeier *et al.* 2003, 46-47. (409) Neumayer 1993, 66; Koch 1977, 108; Haas-Gebhard 1998, 26.

scabbard, which served to attach the scabbard to the belt, were also secured with these rivets (see the section below).[410] It is known that the number of these rivets can vary up till six. A considerable number of small, predominantly bronze, (small) nails fixed the leather scabbard in conjunction with the rivets, on the basis of which it is in some instances possible to reconstruct the shape of the scabbards (see the sections below). Edge-reinforcers at the mouth, point and closed side of the scabbard, generally of bronze, were applied for strength. The various metal fittings are the only form of evidence for the former presence of a seax scabbard. The presence of the seax itself does not fully prove this and, reversely, the presence of scabbard elements do not necessarily indicate that a seax was deposited in the grave. The scabbard and seax can be seen as two separate entities, which could have had variable meanings and uses in funerary rites.[411] It is therefore interesting to determine which seaxes are associated with scabbards and which are not (and reversely), and to determine which associations between belts, scabbards and seaxes can be observed. The data of the Vrijthof and Pandhof cemeteries show that seaxes of the seventh century were not necessarily associated with a scabbard (metal fittings were not always found), but that a scabbard is nearly always associated with a seax (see the sections below). Leather scabbard remains are preserved on some of the Vrijthof seaxes; on the remains of one of them, the applied decoration can still be observed (grave 278). In the following the metal elements and leather remains of the scabbards of the Vrijthof and Pandhof cemeteries will be discussed.

Scabbard rivets: undecorated

Vrijthof: 173 (1450-1); 0 (1687-2); 0 (1739-4).

A number of undecorated rivets, both with flat and domed heads, are known as single specimens from some of the Vrijthof graves (fig. 10.25). The rivet from grave 173 can be related to a seax. They stray finds are for now identified as the rivets of a seax scabbards.

Scabbard rivets: flat, perforated rim

Vrijthof: 30 (1630-3, 4, 5, 6); 86 (1387-2, 3, 4, 5); 92 (1403-5, 6, 7, 8, 9); 0 (1843-2).

Flat bronze rivets with three perforations along the edge were found in numbers of four in graves 30 and 86. Five were found in Vrijthof grave 92. One similar rivet (1843-2) was found with a seax, but cannot be assigned to a grave anymore. It can be assumed that originally more than one rivet was associated with this seax. All the rivets have a diameter of 1.3 to 1.7 cm (fig. 10.25). Only those from grave 86 show a decoration of two rows of stamped in points along the edge. The rivets were attached to the scabbard with the pins at their backs, but it can be assumed that the perforations served as an additional fixation. A seax was found in grave 86 (the presence of seaxes in the other two graves could only be deduced from the remark that these find numbers are 'in restauratie').[412] The seax from grave 86 is classified as Sax 2.2, a so-called 'Schwerer Breitsax'. Flat rivets with perforations are generally associated with these seaxes.[413] Siegmund classified similar rivets as type Sax 4.1, which dates to Rhineland phases 8-9 (610-670).[414] The Franken AG maintained this type and date these rivets to their phases 7-8 (610/20-670/80).[415]

Scabbard rivets: flat hollow head, cast animal style decoration

Vrijthof: 11 (1665-1, 2); 16 (1679-1, 2); 39 (1603-1, 2).

Six bronze rivets with a flat hollow head and cast animal style decoration are known from the Vrijthof cemetery (fig. 10.25). They were all found in pairs of two. The two rivets from grave 11 have a diameter of 2.2 cm and have identical decorations. These rivets were found with a schwerer Breitsax (Franken AG, Sax 2.2 phase 6-9 (580/90-670/80), predominantly 7-8 (610/20-670/80)) and bronze scabbard fittings.

The rivets from grave 16 have a diameter of 1.9 cm. The cast decoration on both rivets can be identified as animal style decoration, but are not identical. These rivets were associated with a seax of type Sax 2.1 (two seaxes are associated with this grave by mistake, but both are classified as Sax 2.1.) This is a so-called leichter Breitsax, which dates to Franken AG phases 3-7, although predominantly in phases 6-7 (580/90-610/20).

The rivets from grave 39 have a diameter of 2 cm and are according to the documentation associated with a seax, which, however, is now lost. The decorations on these two rivets are not identical. For both the pairs with non-identical decorations it can be assumed that one of the rivets became missing and was replaced with a matching, although not identical, decoration (it was probably difficult to find another identical specimen). The question remains whether the rivets were used in numbers of two or that the grave goods assemblages are incomplete. It hardly seems a coincidence that in all the graves only two rivets were found.

Siegmund classified similar rivets as type Sax 4.3, which dates to Rhineland phase 9 (640-670). The Franken AG sub-divided Siegmund's typological group (Sax 4.3: comprises all the rivets with a hollow head, except those with a pearl or carved rim) into a group 4.3a (those with three perforations) and a group 4.3b (those with animal style decoration). The rivets with animal style decoration date to their phases 7 and 8 (610/20-670/80). This coincides with the dating of the associated seaxes from grave 11. The seax from grave 16 dates to an earlier phase.

(410) Dannheimer 1974, 133 Abb. 2, 136 Abb. 3. (411) Theuws/Alkemade 2000, 419-435. (412) 'In restauratie' means in the process of being restored or conserved. Discovering in which laboratory this work was executed and where these seaxes are at present turned out to be impossible. (413) Müssemeier *et al.* 2003, 46. (414) Siegmund 1998, 94. (415) Müssemeier *et al.* 2003, 46. (416) The outline of what seems to be a seax was drawn near the right foot on the excavation drawing. In view of the other finds from this grave (rivets, nails and an edge-reinforcement of a seax scabbard) it is very well possible that a seax was once part of this grave. (417) Siegmund 1998, 95. (418) Müssemeier *et al.* 2003, 47. (419) Dannheimer 1974, Tafel 33-2a/b.

Scabbard rivets: flat hollow head, carved rim

Vrijthof: 278 (1817-5, 6, 7, 8); 284 (1815-2, 3, 4, 5).

Eight bronze scabbard rivets with flat hollow heads and carved rims were found in the Vrijthof cemetery (fig. 10.25). The four rivets were from grave 278 were found with a seax, those from grave 284 without a seax. The rivets from grave 278 were found in the same position as the seax and belt elements. Although they were not in association with the seax anymore, it can be assumed that four was the original number of rivets attached to the scabbard. From grave 284 the seax is missing, and it is uncertain whether other finds, such as an additional number of rivets, are also lost.[416]

The bronze rivets are nearly identical: they have a hollow flat head, a carved lower rim and a diameter of approximately 2 cm. Scabbards with several relatively large rivets also have edge-reinforcers and a high number of bronze nails, and are generally related to the seaxes of the seventh century. The seax from grave 278 is classified as Sax 3; the youngest type according to the typology of the Franken AG. Hollow rivets with a flat head and pearl or carved rim can be classified as type Siegmund Sax 4.4 and date to Rhineland phase 9 (640-670).[417] This type is maintained by the Franken AG and dates to the end of their phase 7 to phase 8 (640/50-670/80).[418] The rivets from grave 278 thus date to an earlier phase than the associated seax.

Scabbard rivets: domed head, carved rim

Vrijthof: 0 (1755-2, 3, 4, 5, 6, 8).

The six rivets with a domed head and a pearl- or carved rim (fig. 10.25) cannot be assigned to a grave anymore, but some other finds of the former grave goods assemblage are known; a knife and a biconial pot. The heads of the rivets have an average diameter of 1 cm. This is remarkably smaller than the rivets described above, which have an average diameter of approximate 2 cm. The six rivets may have been used to fasten the edge-reinforcement that was folded around the mouth of the seax scabbard. This is for example illustrated with the reconstruction of the seax of St. Jakob near Polling (which dates to the seventh century), where six rivets, identical to those of the Vrijthof cemetery, fixate the edge-reinforcement.[419] The unidentifiable bronze remains that are associated with these rivets might be the remains of the edge-reinforcement that was folded around the mouth of the scabbard. However, the rivets may also have been used in an ornamental way as is demonstrated by the remains of a seax scabbard in the cemetery of Lommel-Lutlommel. There small dome headed rivets of 1 cm in diameter are fixed in groups of three between large flat rivets with a pearl-rim (diameter 2 cm) and between the small nails along the edge of the scabbard.[420] It can be concluded that medium

Fig. 10.25
Seax scabbard rivets (scale 1:2).



sized dome headed rivets may have been used in different ways on seax scabbards. They seem to be part of the scabbards of the heavier and thus younger seaxes of the seventh century. Siegmund and the Franken AG did not identify similar rivets.

Nails

Vrijthof: 11 (1665-7); 70 (1394-2); 278 (1817-11); 284 (1815-7); 297 (1703-6).

Bronze nails that were associated with seax scabbards served, together with the decorative rivets, to fasten the outer sides of the folded leather scabbard. The bronze nails and rivets are often the only indication for the former presence of a scabbard, even if the seax is missing from the grave. The original number of bronze nails of a single scabbard is hard to estimate since they are small and only scarcely preserved at their original position on the scabbard. A small number of bronze nails from graves 70 and 297 were found attached to the seaxes (fig. 10.23 and 10.24). The nails are still present at the tip or near the tip of the seaxes, on the basis of which their original location on the scabbard can be identified. The nails associated with the other seaxes were probably also part of their scabbards, but were not found or recorded as such, except for a number of nails from graves 11; they were found attached to copper alloy scabbard fittings. Bronze scabbard nails are often found with decorative rivets and usually belong to the scabbards of *Breitsaxe* and *Langsaxe*. The scabbards of these seaxes are considered to be the most elaborately decorated ones. Bronze nails can be dated according to the *Breitsaxe* and *Langsaxe*.

Edge-reinforcements

Vrijthof: 11 (1665-3, 4, 6); 15 (1669-1, 1670-4); 30 (1630-8); 39 (1603-3); 86 (1387-6); 284 (1815-6); 297 (1703-4, 5).

Next to decorative rivets and nails other metal scabbard fittings were identified. These are the so-called edge-reinforcements (fittings that strengthen the mouth, side and point of the leather scabbard), and some less obvious identifiable elements (fig. 2.26). Some bronze remains could be identified near the tip of the seax from grave 297. They can be interpreted as parts of the scabbard which served to protect or strengthen the point. Some other bronze elements were at the same position as the seax. Two of these fittings, with a concave shape and one remaining nail, formed an L-shaped reinforcement of the scabbard mouth. It is presumed that the other fragments, of thin bronze plates, were applied to some part of the scabbard and that they also served to reinforce scabbard.[421]

The concave bronze fittings from graves 11, 39, 86 and 284 are interpreted as parts of L-shaped scabbard mouth reinforcements. These mounts all consist of multiple parts. The only mouth reinforcement in one piece is known from grave 284. This is a concave L-shaped fitting of bronze with one nail hole and the remnants of one nail.

The bronze thin plates from grave 15 are all flat with some small bronze nails attached to them. The associated L-shaped mount (find number 1670-4) is identified as the reinforcement of the scabbard mouth, and it can be assumed that the thin plates were also associated with the scabbard from this grave.[422]

The plate from grave 30 can have been folded around the scabbard for strengthening purposes.[423]

Siegmund classifies mouth reinforcements as Sax 4.5 and, which are considered to be associated with the scabbards of *Breitsaxe* and are dated accordingly to Rhineland phase 9 (640-670).[424] The Franken AG maintained this type and dates it in their phases 7-8 (610/20-670/80).[425] Legoux, Périn and Vallet identified three types of mouth reinforcements. The L-shaped reinforcements date to their phases MR2 (630/40-660/70).[426]

Only Legoux, Périn and Vallet identified seax point-reinforcements, as described for the seax from grave 297, as a typological group. However, they are classified (type 74) as parts of the scabbard of a knife. It can be assumed this type applies also to seax scabbards. This specific scabbard element dates to their phases PM-MA3 (440/50-600/10), but predominantly to phases MA1-MA2 (470/80-560/70), what is early considering that seaxes with associated scabbard elements are generally dated later. No classifications are known for the edge-reinforcements of seax scabbards, but it can be assumed that these (as will the point reinforcements do) date to the same phases as mouth reinforcements of seaxes.

Leather scabbard remains

Vrijthof: 278 (1817); 297 (1703); 292 (1794); 0 (0-4-3).

Leather remains were observed on three of the Vrijthof seaxes (fig 10.23 and 10.24). A decoration pattern can still be observed on the leather fragment, of considerable proportions, which is attached to the blade of the seax from grave 278. The rate of conservation of leather scabbard remains is rare and decoration patterns are rarely observed.[427] It can be imagined that the application of some kind of decoration on the leather scabbard was a normal phenomenon, especially on the scabbards that were also decorated with bronze rivets, nails and various mounts. The seax is the predominant feature for archaeologists. It can be assumed that the scabbard was, in view of its visibility and decoration and thus the bearer of meanings, the most important element of the seax/scabbard set (a composite artefact) in the context of burial and everyday life. Some small leather fragments with decoration can be identified on the seax from grave 297 and grave 292. A quite prominent decoration pattern can be observed on a seax found in soil removed form the Vrijthod quare; the decoration consists of two entangled snakes bodies ending in heads with 'beaks'.

(420) Bostraeten 1965, 21-23, afb. 3, nr. 15. (421) Dannheimer 1974, 133, Abb. 2. The described elements can be part of the strips that were folded around the scabbard horizontally. (422) Photographs of the scabbard mounts from grave 15 are not available; drawings can be found in the catalogue of graves and finds. (423) A photograph of the scabbard mount from grave 30 is not available; a drawing can be found in the catalogue of graves and finds. (424) Siegmund 1998, 95. (425) Müssemeier *et al.* 2003, 46. (426) Legoux/Périn/Vallet 2004, 15, 28, 52 (type 67). (427) Some examples of decorations on scabbards (remains) can be found in Ypey 1980. See also Wernard (1998, 768-769) for some good examples of preserved decorated leather scabbards and decoration techniques.

Fig. 10.26
Seax scabbard fittings (scale 1:2).



It can be assumed that scabbards were used throughout the Merovingian period. They served to protect and carry the seax. The earliest seaxes were probably carried in a wooden scabbard without any metal elements, which explains the absence of any scabbard mounts in the graves with these seaxes.[428] Because of the bad preservation of the leather not much is known about the differences in the appearance, decoration patterns and therefore chronological development of the morphological features of scabbards. The dating therefore depends on the actual seax and the accompanying bronze scabbard elements.

Seax related metal belt fittings

Several metal (belt) fittings served to attach the seax to the belt. The seax is often deposited as an ensemble with the waist belt. The position of the various fittings are therefore not always conclusive for their identification as mounts of either the belt, scabbard, or straps that attached the seax to the belt.

Seax related plate buckles

Vrijthof: 11 (1664-1).

The small bronze plate buckle from Vrijthof grave 11 (fig. 10.26) was found on the pelvis, the seax and decorative rivets of the scabbard were found near the left foot. The plate buckle was attached to a strap with a width of approximately 2 cm, which is considered to be too small for a waist belt that carried a seax with scabbard.[429] The plate end is not rounded but profiled, and it has three loops on the back. The plate buckle from grave 277 of the cemetery of Schretzheim has an identical plate shape and is also part of a grave goods assemblage which consists of a seax.[430] This plate, however, does not have loops on the back, but the rivets (small in contrast to the rivets of bronze plate buckles of waist belts) resemble the rivets on the Vrijthof specimen. The seax from the Schretzheim grave is associated with perforated rivets of a scabbard, whereas the rivets from the Vrijthof grave are decorated; they date later than the perforated ones. Because the only finds from grave 11 are a seax and seax related objects (apart from the biconical pot), the plate buckle is identified as a fitting of the seax gear, which was probably attached to a strap that served to attach the seax scabbard to the waist belt.

Loops

Vrijthof: 278 (1817-12).

In grave 278 a loop (German: '*Tragbügel*') was found.[431] Such loops were applied on the back of the scabbard with two rivets.[432] Four rivets that resemble the rivets in the reconstruction of Dannheimer[433] were also found in this grave, on the basis of which it can be assumed that the loop was originally applied to the back of the scabbard. These loops created an opening for a strap, which probably attached the scabbard to the belt. The seax that is associated with this loop is classified as type Sax 3 of Siegmund and the Franken AG and dates to Rhineland phases 10 and 11 (670-740) and in the end of phase 8 to phase 10 (640/50-750) of the Franken AG.

(428) Wernard 1998, 761-764. (429) Seaxes with scabbards are especially associated with the broad belts of the seventh century which consisted of multiple iron fittings with inlay (see the section on these belts above). (430) Koch 1977, 125, grave 277, Taf. 72. (431) A photograph of the loop from grave 278 is not available; a drawing can be found in the catalogue of graves and finds. (432) Dannheimer 1974, 133 abb. 1,2; 136 abb. 3; Ament 1993, 79-81, 80 abb. 68.8; Pescheck 1996, 57, Taf. 20, 1-2. (433) Dannheimer 1974, 133 abb. 1,2; 136 abb. 3.

Francisca's and axes

Siegmund maintained the general categorization of '*Franzisken*, *Beile* and *Äxte*' and refers for a typological discussion to Dahmlos and Hübener who addressed typological questions with regard to axe-like objects.[434] The article of Dahmlos is useful because it introduces clear metric criteria (which Siegmund did not use) that discriminate francisca's from axes (and broad axes).[435] Hübener aimed at the definition of an extended range of types.[436] The chronological significance of this typology, however, can be questioned. The periods of deposition, that were established for each type, show a considerable overlap.[437] The weight of the francisca's and axes and the discovered correlation between type and geographical distribution are other important aspects of Hübener's article. The weight of the francisca's and axes of the Vrijthof cemetery were not established. Their actual condition (from very fragmented and corroded to completely restored) does not nearly represent their original weight.

Legoux, Périn and Vallet identified 13 types in the group of '*Haches*'. One type (*hache 2: hache profilée*, *francisque*) corresponds with the wide spread group of francisca's.[438] Type *hache 3* (*Hache semi-profilée*) can, according to the terminology of Dahmlos and Siegmund, also be defined as a francisca. It is remarkable that Legoux, Périn and Vallet made use of precise metric criteria (for types 2, 3 and 4), but that these are very different from those of Dahmlos. The imaginary horizontal axis is drawn from the upper point of the back in an angle of 90 degrees (with the extended line of the back) towards the cutting edge. Dahmlos draws this line from the middle of the back to the middle of the cutting edge. It seems that a range of different criteria are used to classify francisca's, as Siegmund already mentioned in his reference to the typologies of Böhner and Hübener.[439] The Franken AG maintained all the types as identified by Siegmund.[440] These classifications will be used to date the Vrijthof specimens, and compared with the classification of Legoux, Périn and Vallet. Where relevant some references will be made to other research.

Francisca's

Vrijthof: 288 (1786-1); 305 (1823-1; 1823-2); 310 (1783-2).

Four francisca's are identified in the Vrijthof cemetery on the basis of Dahmlos' metric criteria (fig. 10.27).[441] The top of the lower edge of the blade is located above the imaginary horizontal middle axis of their blades and the angle between this imaginary horizontal middle axis and the axis of the shaft opening is more than 90°, which indicates an obtuse angle.

Fig. 10.27
Francisca's and umbo (scale 1:4).



Two of the Vrijthof francisca's were assigned to grave 305. The field drawings and excavation documentation do not mention the find of two francisca's in this grave so a mistake must have occurred in the find administration. It is not clear which of the two francisca's actually belonged to grave 305; probably one of them is one of the missing fransisca's from other graves (see the section below).[442] Of grave 305 only parts of the long bones of the legs of the deceased person are preserved. The francisca that belongs to this grave was found to the right of the legs. No other finds are known from this grave.

Francisca 1823-1 (from grave 305) has a blade length of 14.8 cm (the length of the horizontal middle axe) and has a clear s-shaped upper edge with a pronounced upper side of the cutting edge. These features can also be observed on the francisca from grave 310. It has a blade length of 17.2 cm. Although this grave is partly disturbed, the francisca, together with a lance and bronze plate buckle, were found in their original position near the right lower leg. The blades of the two other francisca's have a less pronounced s-shaped upper edge and cutting edge. The specimen from grave 288 has a blade length of 19.0 cm. This francisca was found with a seax to the right side of the lower body. The other finds from this grave are a biconical pot (found next to the left foot) and a fire-steel and flint (found at the position of the pelvis). The second francisca that was ascribed to grave 305 (1823-2) has a length of 17.4 cm, and (in the case that it was part of this grave) was found next to the right leg.

Dahmlos considered the S-shaped upper edge of the blade and the clearly pointed ends at both sides of the cutting edge of the blade as significant morphological criteria that distinguish francisca's from other axe-like objects. Siegmund used comparable morphological characteristics for the classification of three types of francisca's.[443] The morphological criteria for the first group (FBA 1.1.) are clearly defined, in contrast to the criteria that define the two other groups (FBA 1.2 and 1.3).[444] The absence of metric criteria and the occasionally small differences between the examples of these groups make an unambiguous identification of the Vrijthof francisca's as one of these types difficult. None of the Vrijthof francisca's can be identified as Siegmund's typological group FBA 1.1. It seems that they all belong to group FBA 1.3, but, as mentioned, the criteria for this identification are ambiguous. It is therefore suggested that the chronological time span for the francisca's of the Vrijthof cemetery covers the period that is established for both the typological group FBA 1.2 and FBA 1.3, on the basis of which they can be dated to Rhineland phases 3-5 (485-570). The Franken AG date FBA 1.2 and FBA 1.3 to their phases 2-5 (400-580/90).[445] The Vrijthof francisca's can be identified as types *hache* 2 and 3 according to the classification of Legoux, Périn and Vallet; they date predominantly to their phases MA1-MA2 (470/80-560/70).[446]

Axes

Vrijthof: 15 (1670-2).

The axe from grave 15 has a nearly straight upper edge and an asymmetric shaped cutting edge. The blade has a length of 23.6 cm.[447] The top of the lower side of the blade lies below the imaginary horizontal middle axis of the blade and is therefore, according to Dahmlos' criteria, not a francisca but an axe.[448] Of the skeleton belonging to this grave only the skull and the left arm and leg are preserved. The axe was found with a seax and an iron plate buckle and counter plate with silver inlay on the right side of these skeletal remains, next to the lower left leg. Because of the obvious distortion of the right half of the skeleton it is not clear whether this was their original position. The majority of the Vrijthof fransica's, however, were originally located next to the right lower leg.

This axe can be assigned to group FBA 2.1 of Siemund's typology, which dates to Rhineland phases 6-7 (570-610).[449] The Franken AG maintained this type and date it to their phases 5-6 (565-610/20).[450] This axe can be identified as type 4 in the typology of Legoux, Périn and Vallet and dates to their phases MA2-MA3 (520/30-600/10).[451]

Francisca's/Axes (indeterminate or missing)

Vrijthof: 104 (1582-1*); 139 (1552-1*); 271 (1825-1); 0 (1846-1*).

Four francisca's or axes are known from the excavation administration but are now missing. The axe/francisca from grave 271might has been one of the two axes assigned to grave 305 (see above). Further classification of these specimens cannot be obtained from the available documentation.[452] All these Vrijthof francisca's/axes were found in graves and were identified as the only finds from these graves, except for the object with find number 1846-1, which is a stray find (its former presence is known from some of the available lists). The axe/francisca from grave 104 was found next to the right side of the body, the one from grave 139 just below the pelvis, and the one from the disturbed grave 271 was found next to the right leg. It is generally accepted that axes and francisca's do not date after approximately 600 AD, and it can be assumed that this also applies to these Vrijthof axes/francisca's.

Umbo

Vrijthof: 125 (1598-1).

The umbo (shield boss) from grave 125 has a flat and relative broad base in which no rivets or rivets holes can be observed (fig. 10.27).[453] The collar is oblique and the head curved. The umbo is part of the grave goods assemblage of a man consisting furthermore of iron belt fittings and a seax.[454]

Umbo's are generally dated from the late fifth century to the first half of the eight century, and several researchers used their morphological features as chronological indicators to arrive at a

(434) Siegmund 1998, 106. The common morphological feature which distinguishes francisca's from axes and broadaxes is the obtuse angle between the horizontal middle axis of the blade and the axis of the shaft opening. Other features of francisca's are the S-shaped upper edge of the blade and the simple curve of the lower edge of the blade. These and other features on the basis of which francisca's are classified are much more descriptive and therefore quite ambiguous. See Moosbrugger-Leu, Abb. 32. (435) Dahmlos 1977. (436) Hübener 1980. (437) Hübener 1980, 81, Abb. 8. (438) Legoux/Périn/Vallet, 2004, 14, 23-24. (439) Siegmund 1998, 107. (440) Müssemeier et al. 2003, 50-52. (441) Dahmlos 1977, 144. (442) The francisca from Vrijthof grave 271 is missing. The find number of this francisca is 1825, which resembles find number 1823. It is very well possible that one of the francisca's ascribed to grave 305 originally belonged to grave 271. It can, however, not be reconstructed which of the two francisca's belongs to either grave 271 or 305. (443) Siegmund 1998, 106. (444) Siegmund 1998, 106-107. (445) Müssemeier *et al.* 2003, 50-51. (446) Legoux/Perin/Vallet 2004, 13, 23, 52 (type 2 and 3). (447) A photograph of the axe from grave 15 is not available; a drawing can be found in the catalogue of graves and finds. (448) Dahmlos 1977, 142-144. (449) Siegmund 1998, 107. (450) Müssemeier *et al.* 2003, 51. (451) Legoux/Périn/Vallet 2004, 14, 23, 52 (type 4). (452) In the written documentation of the Vrijthof cemetery axes and francisca's are generally described as *bijl* (axe). This description cannot be trusted as to actually identify the missing objects specifically as axe. (453) This is probably due to the choices made in the process of restoration, since it can be assumed that the only way to attach the umbo to the shield was by rivets through the umbo base. (454) The belt is dated to the seventh century (see the section on iron belt fittings with silver inlays).

more precise dating. Werner created the first typology of umbo's, which Hinz refined on the basis of the finds of the cemetery of Eick. Pirling applied and tested this new typology on the cemetery of Schreztheim, of which the results formed the starting point for the typology of Siegmund.[455] The Vrijthof umbo can be classified as Siegmund type Sbu 6 on the basis of the shape of the collar (high and oblique) and the head (substantially curved). The Franken AG maintained this type. Siegmund dates this type to Rhineland phases 9-10 (640-705), the Franken AG to their phases 7-9 (610/20-710).[456] Siegmund mentioned the distinction Pirling made within this type between specimens with broad and flat rivets (Sbu 6a; older shape), and those with higher and less wide rivets (Sbu 6b; younger type). These features, however, cannot be established for the Vrijthof umbo. It is likely, in view of the observation that umbo's tend to become higher in the course of the seventh and early eight century, that the Vrijthof specimen dates to the second half of the seventh century or even to the later part of it. Legoux, Périn and Vallet identified four types of umbo's. The specimen from the Vrijthof can be classified as type 80 according to their typology and dated to their phases MR1-MR2 (600/10-660/70).[457]

Lance heads

Vrijthof: 125 (1601-1); 300 (1820-1*); 310 (1783-4); 0 (1843-4).

Only four lances (fig. 10.28) were found in the Vrijthof cemetery, of which one is now lost (the one from grave 300). Besides the remarks in the find administration, no further documentation is available for this lance. The other find from this grave was a pottery jug.

The lance from Vrijthof grave 310 has a closed shaft (but this can also be the result of rigorous restoration practices) with a round section and has a length of 28.4 cm. It is associated with a francisca and a bronze plate buckle.

The context of lance 1843-4 is unknown, but it was found in association with a seax, an iron plate buckle and a flat perforated bronze rivet, which are generally related to seax scabbards. The lance has a split shaft with a round section, and a total length of 25.6 cm. The blade has a rhomboid section.

The lance from Vrijthof grave 125 is part of an assemblage that consists of a seax, umbo and an elaborate belt of iron fittings with silver inlay (partly lost). It has a closed shaft with a round section. The section of the blade is rhomboid. It has a total length of 35.6 cm.

The relative length of the blade and the shape of the shaft are according to Siegmund the most important typo-chronological features of lances, on the basis of which he developed an extended classification scheme.[458] The Franken AG maintained this classification for the greatest part.[459] A considerable number of lance-types, of which the main defining typological criteria relate to the length of the total lance point, the relative length of the blade and to the shape of the shaft, are also identified by Legoux, Périn and Vallet.[460]

The lance with split shaft (1843-4) is a short lance with a relative short blade and can, in line with Siegmund's scheme, be classified as type Lan 1.1a.[461] This type dates to Rhineland phases 4-6 (530-585). The Franken AG maintained this type, which dates to their phases 4-5 (510/25-580/90).[462] On the basis of these characteristics this lance can be classified as type 31 in the typology of Legoux, Périn and Vallet. This type dates to their phases PM-MA3 (440/50-600/10).[463]

The lance with closed shaft from grave 125 can be classified as Siegmund's Lan 2.4 on the basis of the shape of the blade (oval) and the relative long blade length, although it is, with a total length of 35.6 cm, considered a short example. This type dates to Rhineland phase 8B-10 (625-705).[464] The Franken AG changed the maximum length of this lance type from 38.5 cm to 38 cm which, however, has no consequences for the type identification of the Vrijthof lance. This type is dated to their phases 4-9 (510/25-710).[465] The lance from Vrijthof grave 125 can be classified as type 36 in the typology of Legoux, Périn and Vallet which dates to their phases MA3-MR2 (560/70-660/70), although predominantly to phase MR2 (630/40-660/70).[466] The lance from grave 310 is classified as Siegmund's Lan 2.5 on the basis of the shape of the blade (rhomboid). This type dates to Rhineland phases 8B to 9 (610-670).[467] The Franken AG date this type to their phase 7-9 (610/20-710).[468] On the basis of the closed shaft, the length of the total lance point and the relative length of the blade this lance is classified as type 34 in the typology of Legoux, Périn and Vallet which dates to their phases MA3-MR3 (560/70-700/10), although predominantly to phase MA3-MR1 (560/70-630/40).[469]

In view of the high number of seaxes in the Vrijthof cemetery a total number of only four lances in this cemetery is remarkable. It appeared that three of the four lances are part of grave goods assemblages that also contained a seax, and of which two graves also contained an elaborate belt set and one an umbo. It can be assumed that lances were predominantly deposited with other weaponry, in contrast to the graves with axes or francisca's (although these are not necessarily weapons, although often incorporated as such in the analysis of weaponry in Merovingian cemeteries), which were frequently the single interred object with the dead.[470]

(455) Siegmund 1998, 108. (456) Müssemeier *et al.* 2003, 53. (457) Legoux/Périn/Vallet 2004, 15, 29, 52 (type 80). (458) Siegmund 1998, 100-101, Abb. 35.1, 35.2. (459) Müssemeier *et al.* 2003, 47-50. (460) Legoux/Périn/Vallet 2004, 14, 25-26. (461) Siegmund 1998, 99. (462) Müssemeier et al. 2003, 47. (463) Legoux/Périn/Vallet 2004, 14, 25, 52 (type 31). (464) Siegmund 1998, 102-103. (465) Müssemeier et al. 2003, 49. (466) Legoux/Périn/Vallet 2004, 14, 26, 52 (type 36). (467) Siegmund 1998, 103. (468) Müssemeier *et al.* 2003, 49-50. (469) Legoux/Périn/Vallet 2004, 14, 26, 52 (type 34). (470) An analysis of the combination of weaponry in graves from the fourth to the fifth century can be found in Theuws 2009. (471) On the basis of Siegmund's criteria (length more than 15 cm, shaft diameter more than 1.6 cm) this object should be identified as a small lance-head (Siegmund 1998, 95-96). Because it is much smaller than the actual lances of the Maastricht cemeteries, and the dimensions

Arrow heads

Vrijthof: 13 (1680-3); 201 (1501-3).

The arrowhead from grave 13 has a length of 15.2 cm and a closed shaft with a diameter of 1.8 cm (fig. 10.28).[471] The blade has an oval shape and measures approximately half of the total head. Two iron rods, of which the function cannot be identified, were found attached to this arrowhead. The grave goods assemblage it belongs to consisted furthermore of a knife, a fire steel and a pottery vessel (lost). The iron objects were all found next to the left side of the left arm, the pottery vessel in between the feet.

The arrowhead from grave 201 was corroded (now restored) to such an extent that not much is left of it after the restoration (fig. 10.28). Part of the shaft is missing, and the remainder of the blade is thin. The length of the remains of the shaft and blade is 10.6 cm. The blade can be identified as more or less rhomboid. This arrowhead was part of a grave goods assemblage which consisted furthermore of a bronze buckle (of a purse), a knife and a flint. These objects were all found around the location of the pelvis.

Siegmund refrained from a classification of arrowheads for the Lower Rhine region, as did the Franken AG for their research area.[472] Legoux, Périn and Vallet identified various types of arrowheads and the main criteria for their classification are basically the shape of the blade and shaft. The arrowhead from grave 13 can be classified as type 26 on the basis of the closed shaft and oval blade. This type dates to their phases MA1-MA3 (470/80-600/10), although some reservations are made regarding the precision of this dating.[473] The arrowhead from grave 201 is difficult to classify, but an identification of this specimen as type 23 or 24 according the typology of Legoux, Périn and Vallet seems plausible. These types both date (with the same reservations made regarding the precision) to their phases PM-MA3 (440/50-600/10).[474]

Sword: simple

Vrijthof: 263 (1838-1).

This simple iron sword (completely restored) has a blade length of 80.4 cm and a blade width of 5.4 cm.[475] It sword was found next to the right side of the body, in a grave of which no other finds are known. No further specifics can be given for this grave and sword. Siegmund and the Franken AG especially classify the remnants of the sword scabbard and elements such as the hilt knob. These classifications are of no much use to classify what appears now to us as a simple iron sword. Legoux, Périn and Vallet identified simple iron swords without any additional elements as type 95.[476] They were not able to date this type of sword to a specific phase or phases of the Merovingian period. It is neither dated more precisely in Menghin's elaborate classification of swords.[477]

Fig. 10.28
Lance heads and arrow heads (scale 1:2).



come close to the demarcation criteria as established by Siegmund, this object is for now identified as an arrowhead. (472) It is not clear why Siegmund refrained from a further classification of arrowheads. Arrowheads were found in the lower Rhine Area as can be observed in the tables and diagrams in which the differences between lances and arrowheads are depicted (Siegmund 1998, 96-97, Abb. 30, 31 and 32, Tabelle 14). The typological difficulties regarding arrowheads and their absence in the typology are neither explained in the work of the Franken AG. (473) Legoux/Périn/Vallet 2004, 14, 24, 52 (type 26). (474) Legoux/Périn/Vallet 2004, 14, 24, 52 (type 23, 24). (475) A photograph of the sword from grave from grave 263 is not available; a drawing can be found in the catalogue of graves and finds. (476) Legoux/Périn/Vallet 2004, 15, 29, 52 (type 95). (477) Menghin 1983.

Belt appendages/Utensils

Belt pendants and amulets

The expression *Gürtelgehänge* (belt pendants) refers to a variety of objects, generally known from graves of women, which are regularly found in the area of the upper legs (usually the left upper leg). Apart from the simple bronze and iron rings, they are amulets (rock-crystal balls, decorative discs made of antler or bronze, specific shells and snails, specific animal teeth, chatelaines and '*Herkuleskeule*' (*Donar-amulette*))[478] and jewels, but also as more common objects such as combs and knives (discussed in the sections on purses and utensils). It is thought that these objects were attached to thin straps or simple rings that were hanging down from the waist belt or that they were the contents of purses, which themselves were often also attached to the waist belt.

Simple rings: iron and copper alloy

Simple bronze and iron rings of different sizes are quite common grave goods, found in graves of both men and women. Simple rings of bone are less frequently found, although this may be due to their fragility. When found around the area of the pelvis and upper legs, it is assumed that simple rings served as the fastener of a purse flap that was hanging down from the belt, or that they were hanging down from the waist belt to hook things like knives, combs, tweezers etc. on to it.[479] A bracelet or arm ring, however, can also be found at the position of the pelvis or upper legs (depending of how the arms were positioned in the grave), and the identification of simple rings with a considerable diameter as bracelets/arm rings is therefore also an option. Siegmund identifies simple iron rings as 'arm rings' (bracelets) when they are found in the area where the hands are supposed to be and when they have a diameter between 6.2 and 8 cm.[480] When simple rings are found in graves of men they are often interpreted as an element of rider accessories. How can the simple rings of bronze, iron and bone of the Maastricht cemeteries be identified? An identification as bracelets can be rejected for the small rings from the graves of women.

Table 10.6
The distribution of simple rings of iron, bronze and bone over the Vrijthof cemetery.

	Iron	Bronze	Bone	Total
Vrijthof 97	2	-	-	2
Vrijthof 110	5	2	-	7
Vrijthof 194	-	1	-	1
Vrijthof 230	-	1	-	1
Vrijthof 258	1	-	-	1
Vrijthof 274	1	-	-	1
Vrijthof 0 (context unknown)	1	4	-	5
Vrijhof total	10	8	-	18

The identification of the other rings remains ambiguous as will be discussed below. For now it suffices to mention that the iron rings (ten) outnumber the bronze rings (eight) in the Vrijthof cemetery (table 10.6). Sometimes some metal remnants are still attached to the rings. These can be the remains of formerly attached objects. Furthermore, a grave can contain a variable number of rings as it can for example be observed in grave 110, which is exceptional with a total number of seven iron and bronze rings.

Simple rings: iron

Vrijthof: 97 (1474-1, 1475-1); 110 (1627-1, 1628-1,-3,-5,-12); 258 (1832-1); 274 (1798-1); 0 (1849-4).

The diameters of the iron rings vary from 3.8 to 8.3 cm.[481] They were all found in the graves of women. The excavation of grave 110 led to the discovery of two bronze and five iron rings. From the iron rings one stands out in size. Ring 1628-3 has an outer diameter of 8.3 cm and is the largest of the iron rings from this grave but also of all those found in the Vrijthof cemetery. One of the bronze rings from this grave is with an outer diameter of 8.4 cm of comparable size. Siegmund refers to iron rings with a size between 6.2 and 8 cm as bracelets.[482] The iron ring with a diameter of 8.3 cm was found at the location of the left upper leg (somewhat lower than the position of the left hand can be assumed to have been), together with the other, much smaller, simple (iron and bronze) rings (except iron ring 1627-1, which was found at another location). It can be assumed that all these rings were hanging down from the waist belt and were used to carry various objects. None of these rings are for now interpreted as the fastener of a purse flap, because a small bronze buckle and strap end from this grave are identified as purse fittings (assuming that just one purse was deposited), which were found at the same location as the rings. A knife, a little bronze bell and a decorated bone pin are objects from grave 110 that could have been attached to the iron and bronze rings, but could also have been the contents of the purse. Ring 1627-1 was also found near the left upper leg, but as a singular find just above the cluster of the other rings. An identification of this ring as a small bracelet (outer diameter 5.3 cm) is possible.

The remaining iron rings from the Vrijthof graves are all found at the position of the left upper leg and it can therefore be assumed that they were purse fasteners or belt appendages. Only the ring from grave 274 was found next to the body at the position of the left hand. The outer diameter of this ring measures 5.8 cm, and it could therefore be identified as a small bracelet (in view of the measurements of iron bracelets mentioned by Siegmund). From this grave no objects are known that could have been attached to the ring or that could be identified as the contents of a purse.

In grave 97 two iron rings were found. From this grave various objects (comb, boar teeth, '*Herkuleskeule*') are known that can either be identified as the contents of a purse or as objects that were hooked to a ring and hanging down from the belt. It can be assumed that ring 1474-1 had the function of girdle hanger to which the comb was attached. This ring shows some bronze remains (rests of a chain?) and the excavation drawing shows that the comb (of which only a fragment remains) was found beneath this ring. The other ring (1475-1) was found at the position of the left hand, and the diameter of 5.9 cm may indicate that it was a small bracelet. A function as purse fastener can also be assumed; the purse was then deposited in the left hand of the deceased.

Siegmund dates the larger simple iron rings, which he identifies as bracelets, in his phase 8 (610-640).[483] He identifies the smaller iron rings as components of girdle hangers but does not date them to a specific phase. Simple iron bracelets or small rings are not identified by the Franken AG. Legoux, Périn and Vallet classify simple iron rings as elements of girdle hangers and date them to their phases MA2-MR1 (520/30-630/40).[484]

Simple rings: copper alloy

Vrijthof: 110 (1628-2, 4); 194 (1502-2); 230 (1767-12); 0 (1106-1); 0 (1740-1); 0 (1849-1, 1849-2).

The find context is not known for four of the bronze rings.[485] The absence of their context information makes it difficult to ascribe a specific function to these specimens. The diameter of the bronze rings from both cemeteries varies from 1.1 to 8.4 cm; the majority is rather small compared to the iron specimens.

The ring from grave 194 is, with a diameter of 1.1 cm, remarkable small. It belongs to the grave contents of a man (on the basis of the seax). This ring was found at the location of the left upper leg and is for now indentified as a belt hanger or the fastener of a purse flap.

The two bronze rings from grave 110 are part of an assemblage of seven rings (see above) found in the grave of a woman. The rings of this assemblage (except one iron ring) are identified as girdle hangers to which various objects were attached. The bronze ring with a diameter of 8.4 cm from this grave could have been a bracelet, although it is found somewhat lower than the assumed position of the left hand.

The bronze ring from grave 230 was found left of the left upper leg, together with shears, a key, flints, a decorative disc of antler and a small bronze plate buckle (purse buckle). In view of the associated finds, this ring probably functioned as a girdle hanger, which carried the purse (with contents?). The appearance of this ring (diameter 8.3 cm) is different from the other simple bronze rings. It is partly thickened, and the section is facetted at this part of the ring; the thinner part has a circular section. The two extremities of the ring are folded around each other. The ring is asymmetric; the diameter varies between 4.6 and 8.3 cm. On the basis of these features it can also be assumed that it was worn as a bracelet.

Simple bronze rings are not classified by Siegmund or the Franken AG, nor are they by Legoux, Périn and Vallet.

Iron ball in a sliver frame

Vrijthof: 0 (8888-3).

A 'ball' of iron in a silver frame was found in the Vrijthof cemetery (fig. 10.29). Its find context and associated finds are not known. The iron ball is very weathered, as is the silver frame. This frame consists of two silver bands without decoration, which have partly decayed. Another folded band forms a loop and is fixed to these two bands on top of the ball with a nail. A fragment of a small bronze ring is still attached to this loop. It probably served to attach the ball to some part of the clothing.

The framed iron ball from the Vrijthof cemetery does not fit into the categorization of Hinz.[486] Hinz especially focuses on rock-crystal balls and their relation to the clothing. The find locations of these objects in graves point towards a considerable uniformity in the way they were worn. The rock-crystal balls are particularly found in 'rich' equipped graves of women.[487] Hinz dates the majority of the rock-crystal balls in the middle and the second half of the sixth century.[488] Siegmund (after Hinz), dates rock crystal balls in Rhineland phases 4-8 (530-640).[489] The Franken AG maintained this type and date it to their phases 3-7 (460/80-640/50).[490] Legoux, Périn and Vallet date rock-crystal balls in their phases MA1-MA3 (470/80-600/10).[491] Because the context of the Vrijthof find is not known, nothing can be said about the grave goods assemblage it belonged to and neither about the way this amulet was related to the body at the moment of deposition. Hinz, however, thinks that balls of other materials date to the same period as rock-crystal balls.[492] The iron ball in a bronze casing from the cemetery of Schretzheim was found in the grave of a woman (probably of old age), which dates to Stufe 6 (660-680).[493] It seems plausible to date the framed ball from the Vrijthof cemetery in the seventh century.

Hercules club

Vrijthof: 97 (1500-1).

One example of a so-called *Herkuleskeule* or *Donar-Amulett* of bone is known from grave 97.[494] It has a length of 4.2 cm, is prismatic and is decorated with incised lines. The suspension loop is partly missing. The *Herkuleskeule* was found at the location of the left upper arm, which does not correspond with the general assumption that these objects were girdle hangers or carried in a purse. In this grave two iron rings were found in the area of the left upper leg.

(478) Siegmund 1998, 82; Koch 1977, 79, 85-86. (479) Pescheck 1996, 42-44. (480) Siegmund 1998, 80. (481) The photographs can be found in the catalogue of graves and finds. (482) Siegmund 1998, 80-81. (483) Siegmund 1998, 81. (484) Legoux/Périn/Vallet 2004, 19, 41, 54 (type 357). (485) The photographs can be found in the catalogue of graves and finds. (486) Hinz 1966. (487) Hinz 1966, 218, 220. (488) Hinz 1966, 218. (489) Siegmund 1998, 82. (490) Müssemeier *et al.* 2003, 40. (491) Legoux/Périn/Vallet 2004, type 339, 19, 40, 54. (492) Hinz (1966, 22) mentions various materials for the balls in silver frames. (493) Koch 1977, Teil 1, 86; Teil 2, grave 598, 127, Taf. 157.8. (494) The drawing of this object can be found in the catalogue of graves and finds.

Fig. 10.29
Various belt appendages (scale 1:2).



The other girdle-hangers from this grave such as a boar tooth and a fragment of a comb (complete comb on excavation drawing but now lost) were probably attached to these rings. The *Herkuleskeule* perhaps moved from its original position in the grave. Parallels for this type of object are known from many cemeteries over an extended area.[495]

Siegmund only classified bronze specimens which he dates to Rhineland phases 8 (610-640). The Franken AG maintained this type but also consider the specimens of bone. Both the bone and bronze *Herkuleskeule* are dated to the second half of the sixth and the first half of the seventh century.[496] Legoux, Périn and Vallet date these objects (*massue d'Hercule*) in their phases MA3-MR2 (560/70-660/70).[497]

Decorative disc: antler

Vrijthof: 100 (1435-1); 230 (1767-9).

Two decorative discs of antler were found in the Vrijthof cemetery.[498] The disc from grave 230 is weathered to such a degree that it cannot be established whether this object originally had some kind of decoration. The disc from grave 230 shows some small and one large perforation along the edges. The large perforation probably served as a suspension hole. Although flints were also found in this grave it is identified as that of a woman, based on the comb with case and the string of beads (now lost, but recorded on the excavation drawing) found at the location of the neck. The other finds are a pair of shears, a key and a latch lifter key, which were found, together with the flints and the decorative disc, near the left arm. These objects could have been the contents of a purse of which its former presence is assumed on the basis of a bronze plate buckle that is identified as the fastener of a purse flap.

Only a small weathered fragment remains of the disc from grave 100. Some traces of incised lines along the edge can be observed on this fragment. It was part of the grave goods assemblage of a woman (based on the presence of various beads) and found near the left upper leg.

Decorative discs of antler are quite common finds from Merovingian cemeteries and are known to have been found in graves of women with grave good assemblages of variable 'richness'.[499] The edges of, for example, the decorative discs from the cemetery of Schretzheim are extensively perforated and most of the discs from this cemetery are decorated on both sides.[500] Objects of antler are supposed to have been associated with fertility and growth, because of the yearly renewal of antlers.[501] As many parallels show, decorative discs were attached to a strap hanging down from the waist belt and are often found on the left upper leg.

Decorative discs of antler were not identified in the research area of Siegmund, nor are they identified by the Franken AG. The discs from Schretzheim, which are much alike those of the Vrijthof cemetery, date to the second part of the sixth century.[502] In Kleinlangheim a decorative disc, with on both sides extended circle decoration and perforations along the edge, was found in grave 226. It was the grave of a woman who died at an age between 20-25 years.[503] Because it was found with objects that are typically purse contents, it is suggested by Pescheck that this disc could also have served as a form of fastener or decoration of the purse.[504] This grave dates to the AM III (560/70-600). Legoux, Périn, and Vallet date these objects in their phases MA3 (560/70-600/10).[505]

Animal tooth

Vrijthof: 97 (1498-2).

Two parts of the tusk of an animal, probably of a boar (swine), from grave 97 belong to a grave goods assemblage of a woman (determined by the *Herkuleskeule*) and were found at the position of the left upper leg together with a comb and iron ring. It can be assumed that the tooth, like the comb, was attached to the iron ring (with an additional wire?), found at the same position, that was probably hanging down from the belt, or that it formed the contents of a purse. The tooth is quite weathered and a suspension loop can therefore not be discerned. Animal teeth are quite common grave goods. It is believed that wearing such teeth transferred the strength of the associated animals, and/or that it was of help when suffering from dental problems. It is therefore not surprising that teeth like these are the only amulets made of the skeletal remains of animals that are also known from graves of men.[506] It was mentioned by Koch that the occurrence of the tooth of boars but also bears are rare in Schretzheim.[507] The grave of a girl in which a tusk of a boar was found dates to Schretzheim Stufe 4 (590/600-620/30).

Siegmund does not mention the presence of animal teeth in the lower Rhineland, nor do the Franken AG for their research area. Legoux, Périn and Vallet mention animal teeth but do not differentiate between the different animals they belonged to. They describe these teeth as pendants and date them in their phases MA1-MA3 (470/80-600/10).[508] The two graves of Kleinlangheim in which a tooth of a boar was found are both the graves of women and date to the AM III (560/70-600).[509] Regarding the dating of some other finds from grave 97 (two iron plate buckles of shoes that date to the second half of the sixth century) it seems plausible to date the Vrijthof boar tusk to the second half of the sixth century and beginning of the seventh century.

Spindle whorls: glass and ceramic

Vrijthof: 105 (1470-3); 264 (1837-2).

One ceramic spindle whorl is known from grave 105. It was found near the right side of the pelvis. The spindle whorl from grave 264 is of green transparent glass with combed threads of opaque white glass (fig. 10.29). It was found quite far from the right side of the body (right upper leg) and the actual assignment of the spindle whorl to this grave is uncertain.

Legoux, Périn and Vallet classified spindle whorls of baked clay as type 347 and date them to their phases MA1-MR1 (470/80-630/40).[510] They classified spindle whorls of glass as type 367 which dates predominantly to their phases PM-MA1 (440/50-520/30), and sporadically to phases MA2-MA3 (520/30-600/10).[511] Siegmund identifies spindle whorls of green glass with opaque white threads as belt hangers (Ggh1.2) and dates them to Rhineland phases 3-4 (485-555).[512] The Franken AG maintained this type and date it to their phase 3 (460/80-510/25).[513] Both Siegmund and the Franken AG did not classify spindle whorls of beaked clay. If these were also belt hangers remains questionable. The spindle whorl from Vrijthof grave 105 could also have been carried in a purse.

Amber pendant

Vrijthof: 110 (1628-6).

The pendant from grave 110 is a large polished cone-shaped piece of amber, is approximately 5 cm long and has a suspension hole (fig. 10.29). Because of the measurements it is not considered to be a 'normal' amber bead. For its amulet character, however, no hard evidence can be given and parallels of such objects are not known up till now. The main suggestion for its identification as amulet is evoked by the position in the grave. It was found near the left side of the upper left leg, together with a range of simple iron and bronze rings (which were probably hanging down from the belt), a bronze bell and a purse buckle and strap end. It can be assumed that this amber pendant was carried in the purse or that it was hanging down from the belt, attached to one of the rings. Objects with a 'magical' character could have been worn as visible and therefore decorative items.[514] A relatively large piece (4.4 x 1.5 cm) of unprocessed amber was found in grave 101 of the cemetery of Rödingen. [515] According to the *Handwörterbuch des deutschen Aberglaubens*, as Herget mentions, amber has protective and curing characteristics. Amber beads are used as grave goods throughout the Merovingian period. An exact date for the large pendant is difficult to establish.

Copper alloy bell

Vrijthof: 110 (1628-11).

The remains of a little bronze bell-shaped object with a suspension loop and fragments of bronze rings attached to it was found left to the left upper leg in grave 110.[516] This indicates that the bell was probably hanging down from the belt, although it could also have been carried in the purse that was found at the same position. Because a functional explanation for such small bell's is hard to imagine, it is for now identified as an amulet.

Small bronze bells are not unusual finds in Merovingian cemeteries. Three specimens were for example found in the cemetery of Müngersdorf.[517] Grave 142 of this cemetery contained, next to the bell, six rings, which is another similarity with Vrijthof grave 110 (which also contained six rings), as is the fact that both are the graves of a woman. The same can be concluded for Müngersdorf grave 91, although this grave contained only three rings. Müngersdorf grave 149, in which the third bell was found, was also the grave of a woman. In this grave no rings were found. The graves of Müngersdorf date to the end of the sixth and beginning of the seventh century.[518] Another bell that is comparable to the Vrijthof specimen was found in the cemetery of Schretzheim of which the concerning grave dates to Stufe 4-5 (590/600-650/60).[519]

(495) See for example Aufleger 1996 (643) and Werner 1964 (176-197). **(496)** Müssemeier *et al.* 2003, 40. **(497)** Legoux/Périn/Vallet 2004, 19, 40, 54 (type 344). **(498)** Dijkman/Ervynck 1998, 40-41, Fig. 26, 70. **(499)** Koch 1977, 82. **(500)** Koch 1977, 81-82. **(501)** Aufleger 1996, 643; Koch *et al.* 1996, 989-990. **(502)** Koch 1977, 81-82. **(503)** Pescheck 1996, grave 226, 30-31, 103, Taf. 52,18. **(504)** Pescheck 1996, 103. **(505)** Legoux/Périn/Vallet 2004, 19, 41, 54 (type 359). **(506)** Kokabi 1994, 92. **(507)** Koch 1977, 85, grave 133, Taf. 33,3-12. **(508)** Legoux/Périn/Vallet 2004, 19, 40, 54 (type 343). **(509)** Pescheck 1996, graves 227 and 299, 30, Taf. 53,24; 77,4; 83,227,14; 85,299,9. **(510)** Legoux/Périn/Vallet 2004, 19, 40, 54 (type 347). **(511)** Legoux/Périn/Vallet 2004, 19, 41, 54 (type 367). **(512)** Siegmund 1998, 82. **(513)** Müssemeier *et al.* 2003, 40. **(514)** See for example Pescheck's references to the magical characteristics of amber and glass beads (Pescheck 1996, 104, note 827). **(515)** Herget 2006, 90-91, Abb. 30,101. **(516)** The drawing of this object can be found in the catalogue of graves and finds. **(517)** Fremersdorf 1955, 142-13; 149-13; 91b-19 **(518)** Fremersdorf 1955, Teil 1, 131-135. **(519)** Koch 1977, grave 543, Tafel 139,10.

Although small bronze bells are present in the cemeteries of Müngersdorf and Oberkassel, which both belong to Siegmunds research area, they are not discussed and classified in the Rhineland typology, nor are they by the Franken AG. Similar objects are neither mentioned by Legoux, Périn and Vallet neither mention objects of this kind. It seems plausible, with regard to the dates of graves from other cemeteries that contained bells, to date the Vrijthof bell in the second half of the sixth century and first half of the seventh century.

Keys

Vrijthof: 99 (1413-4*); 166 (1540-1); 230 (1767-8).

The three bronze keys from the Vrijthof cemetery are all different in form (fig. 10.29). The key from grave 230 has a solid stem and a loop in the shape of a ring. It was part of a grave goods assemblage of a women and was placed in a purse or hanging down from the belt.

The key from grave 166 does not have a stem and is attached to a separate bronze ring. It was also part of a grave goods assemblage of a woman. The location of the key in the grave indicates that it could have been part of the contents of a purse or that it was hanging down from the belt.

The key (went missing after excavation; recorded as find on the field drawing and finds lists) from grave 99 is part of a grave goods assemblage that on the basis of the finds (for now) can only be identified as neutral (two glass vessels and a bronze plate buckle with strap end). The little bronze plate buckle is classified as fitting of the waist belt, so no indications for the former presence of a purse can be identified in this grave. The key was found to the right of the presumed position of the pelvis (no skeletal remains are present except a skull). The grave seems to be disturbed so this position is probably not the original one.

A key that resembles the one from grave 230 was found in Cutry grave 952 (of a woman) and is dated to Cutry phase C/D/E (520/30-600/10).[520] Bronze keys from Merovingian graves are considered as one typological group by Legoux, Périn and Vallet and are classified as type 350, which dates to their phases MA1-MA3 (470/80-600/10).[521] Siegmund defined one type for keys of various forms and placed them in the group of '*Gürtelgehänge*' and therefore as specific items found in the graves of women. Keys were, according to Siegmund, used as grave goods throughout the Merovingian period.[522] Keys were not identified by the Franken AG.

Chatelaine: copper alloy, decorative

Vrijthof: 138 (1551-1*).

A copper alloy part of a chatelaine was found in grave 138, but went missing (fig. 10.29). Photographs and drawings from the archive of Ypey are available, so a reconstruction and description of this find can be made. The decorative element is made of bronze and has a length of 4.5 cm. The upper extension has a suspension hole, of the three lower extensions (or 'legs') one is missing. These 'legs' have an opening in their far ends. The object has some punched-in circle decoration on both sides around the opening in the middle. Another hole can be observed on the left side of the central part of the object.

A chatelaine generally consists of bronze and/or iron shackles with different sorts of decorative elements. Chain-elements, however, are not found in grave 138. The decorative element was found on the left side of the chest, what is an unusual position for girdle hangers. The grave, however, is undisturbed. No other finds are known from this grave.

The decorative elements of chatelaines show a variety of forms. An exact parallel for the specific decorative element of the Vrijthof cemetery is not known to me, although a specimen from Coulommes-et-Marqueny (French Ardennes) shows some resemblance to it.[523] This bronze element consists also of three 'legs' and an upper extension with a suspension hole. The entire surface is covered with a punched in dot-in circle decoration. The two additional horizontal extensions (arms) of the upper extension are not present on the Vrijthof specimen. The specimen from France is complete in the sense that some shackles of the chain to which it was attached to the girdle are still present and that five small (bronze?) objects (a bell, two crosses of metal foil and two cones) are still attached to the extensions. It can be assumed that small objects were originally also attached to the Vrijthof specimen. The chatelaine from France dates to the seventh century.

Siegmund identified chatelaines as a type, but does not discuss the decorative elements that can form a part of these girdle hangers. He dates chatelaines in Rhineland phase 8 (610-640).[524] The Franken AG maintained this type and neither discuss the variety of decorative elements. They date these girdle hangers to their phases 6-8 (580/90-670/80).[525] Legoux, Périn and Vallet identified four types of decorative elements of chatelaines.[526] None of these, however, resemble the Vrijthof specimen. The four types of Legoux, Périn and Vallet all date predominantly to their phase MR1 (600/10-630/40), but can also occur sporadically in the phases before (560/70-600/10) and after (630/40-660/70). It seems plausible to date the Vrijthof specimen in the first half of the seventh century.

Chains elements

Vrijthof: 48 (1593-2, 1594-1).

Chain elements of iron and/or copper alloy can be part of the chains of chatelaines.[527] The bronze chain elements (1594-1) from grave 48 can be considered as the remains of a chain, which was in its original state probably longer (fig. 10.29). They were found at the position of the lower left arm together with a bronze plate buckle. It can be assumed that this chain was attached to the belt. The buckle and chain probably moved from their original position in the grave. The other chain element from this grave (1593-2) was found at the position of the pelvis. It consists of a bronze ring with three bronze elements. This object was perhaps also attached to the belt It is uncertain whether the chain elements were part of a chatelaine or that they served to attach various objects to the girdle. The other objects from this grave are various beads, a finger ring and bronze belt fittings, on the basis of which it is identified as the grave of a woman.

Siegmund dates chain elements (although only the components of '*Stangengliederketten*') to Rhineland phase 8 (610-640).[528] The Franken AG date these to their phases 6-8 (580/90-670/80).[529] Legoux, Périn and Vallet identified various chain elements as one type and date them to their phases MR2-MR3 (630/40-700/10).[530] It seems plausible to date the Vrijthof shackles in the seventh century.

Latch lifter key, iron

Vrijthof: 230 (1767-7).

The iron latch lifter key from grave 230 has a shank with a T-shaped extremity and a suspension hole at the top of the shank (fig. 10.29). It was found with other utensils or belt pendants such as a comb with case, a small bronze key, a pair of shears and a knife (fig. 10.30. The associated plate buckle that served as a fastener of a purse flap has been found with these 'utensils' near the left upper leg, which indicates that these objects were deposited in a purse.

Martin suggests that (iron) keys of this kind were not used for doors but for little wooden boxes in which a woman retained her personal possessions.[531] Grave 27 of the cemetery of Basel-Bernerring, in which an iron latch-lifter key was found, was constructed in the period around 570.[532] Pescheck also refers to iron latch-lifter keys as openers for wooden boxes in which toilet utensils were kept.[533] The iron key from the cemetery of Kleinlangheim was found in a grave of a woman which dates to AM III (560/70-600).

Siegmund does not identify latch-lifter keys, nor do the Franken AG. Legoux, Périn and Vallet classified all the iron latch-lifter keys as type 351 and date them to their phases MA1-MA3 (470/80-600/10), although this is mentioned to be based on a small number of examples from their research area.[534]

Purses

Purses can be found both in the graves of women and men, and were often attached to the waist belt. The contents of the purses of men show a variety of objects such as fire-steels and flints, shears, keys, tweezers, knives and combs. The contents of the purses of women show the same range of objects, although generally without fire-steels and flints.[535] Here just the purse itself will be discussed, of which the leather or textile has mostly decayed. Other objects should therefore be sought for to indicate their former presence. These objects can be metal fittings such as buckles, strap ends and plates being recovered at the presumed position of the purse (generally the upper legs and pelvis). An additional indication for the identification of such fittings as part of a purse is the presence of the above described objects at the same location. Therefore, as for many other categories of objects, the position in the grave is essential for the identification of buckles, plate buckles, strap ends and a diversity of other appliqués as the components of purses.

Purse: copper alloy fittings with bird heads

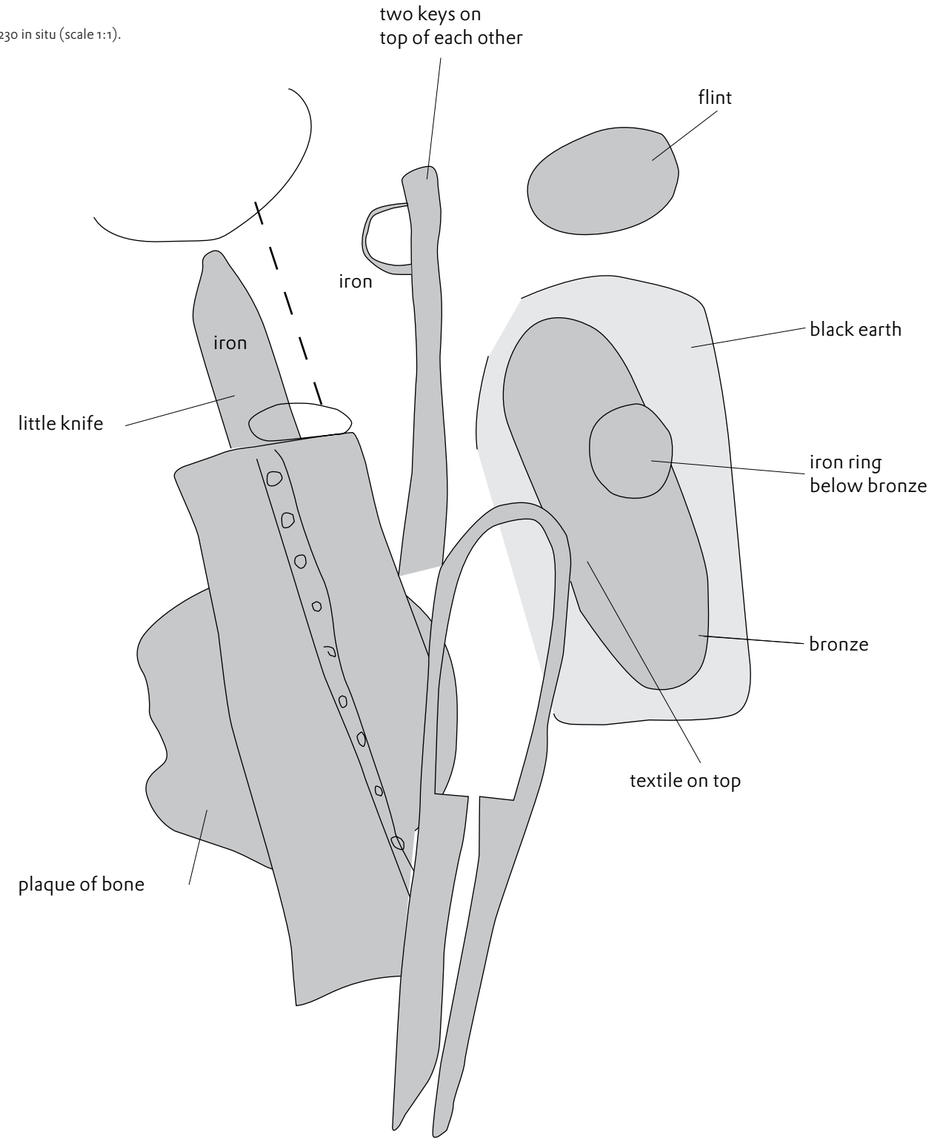
Vrijthof: 166 (1540-2, 3, 4, 5, 6, 7, 8, 9, 10)

One bronze plate buckle, one bronze strap end, and 7 bronze metal fittings, which all belong to a single purse, were found in grave 166 (figs. 10.31 and 10.32). The excavation documentation reveals that the objects were already recognized as the components of a purse during the excavation of the grave. A drawing of the position of the elements in situ exists. Therefore the exact position of these in relation to each other is known, although no leather or textile remains of the purse are left (with the exception of some traces on the strap end and one of the fittings). The plate buckle is small and consists of a rectangular loop with a fixed plate, which is decorated with three punched in dot-in-circles. The strap end shows the same decoration and has some textile or leather remains attached to it, which probably are remnants of the actual purse. Four triangular mounts are identified as the corner fittings of the purse (see drawing). Besides these four mounts two bird shaped fittings are identified. Their locations are reconstructed at the right and left side of the purse, which means that the birds are both outward looking. The circular fitting was placed at the centre of the purse. All the fittings show the same punched in dot-in-circle decoration, and the circular fitting also a cut-out cross motive. It has been suggested that the central position of this mount and thus the central position of the cross indicates that it refers to Christian values.[536] On the other hand it has been suggested that the bird's heads refer to ancient Germanic religious values in that they are Odin's eagles. In Werner's view this multiplication of symbols (both Christian and Germanic) was intended to enhance their protective value.

(520) Legoux 2005, 120, grave 952, planche 143 (521) Legoux/Périn/Vallet 2004,19, 41, 54 (type 350). (522) Siegmund 1998, 83. (523) This specific find is published in 'Childeric-Clovis. Rois des Francs' 1983, 91-92, nr. 117. The original publication of this find in not known to me. (524) Siegmund 1998, 83. (525) Müssemeier *et al.* 2003, 40-41. (526) Legoux/Périn/Vallet 2004, 19, 41, 54 (types 363-366). (527) Siegmund 1998, 83.

(528) Siegmund 1998, 83. (529) Müssemeier et al. 2003, 40-41. (530) Legoux/Périn/Vallet 2004, 19, 41, 54 (type 356). (531) Martin 1976, 89, 261-269, grave 27.7. (532) Martin 1976, 140. (533) Pescheck 1996, 46, grave 299, Taf. 77,10. (534) Legoux/Périn/Vallet 2004, 11, 19, 41 (type 351). (535) Purses and their contents are frequently discussed. See for example Koch 1977, 131; Pesceck 1996, 67; Haas-Gebhard 1998, 43; Ament 1993, 92-94. (536) Werner 1950, 55-56.

Fig. 10.30
Various objects from grave 230 in situ (scale 1:1).



The purse of grave 166 belongs to a grave goods assemblage of a woman, as the other objects, a necklace of beads and a garnet disc brooch, indicate. The only object that can be interpreted as the contents of this purse is a bronze ring with a bronze 'key' attached to it. It was found at the same location as the purse, at the lower left arm. This position does not correspond with the position (the upper left leg) were purses are generally found. This could be a consequence of some movement of the objects during burial or afterwards. The purse might also have been buried with the deceased holding it, or it was 'hanging down' from the shoulder.

A nearly similar purse was found at Niederzier, Kr. Düren (Germany).[537] This purse was also recognised as such during the excavation of the grave and consequently lifted as a block after which it was analysed in a laboratory. The actual size of this purse was 12 by 12 cm, and the locations of the various fittings on the purse could be established. These fittings are considered to represent the front flap of the purse. Like for the purse from the Vrijthof, four of these fittings show a triangular shape, two of them are bird-shaped and one of them, located on the middle of the purse, is round. The bird-shaped fittings, however, are somewhat different in shape than those of the Vrijthof purse, as is the plate of the plate buckle. The Vrijthof plate is rounded whereas the plate from Niederzier is triangular. All the Niederzier mounts show the same dot-in-circle decoration as those of the Vrijthof purse. From the specimen from Niederzier one fitting is identified as a corner fitting of the purse behind the flap (the other one is missing). A round leather button is identified as the fastener of the purse flap. No button or additional corner fittings were found with the specimen form the Vrijthof grave.

The purse from Niederzier was found at the left lower leg. This raises questions about how the purse was related to the body during burial.[538] Becker and Päffgen refer to grave 41a in Ingelheim were a similar purse is considered to have been hanging down from the shoulder.[539] For the purse from Niederzier it is thought to have been hanging down with a leather strap from the belt.

The purse from Niederzier is placed within a group of women's purses of the later seventh century, first described by Werner in connection with the *Fürstengrab* in Wittislingen.[540] Although rectangular purses such as those of the Vrijthof cemetery are considered a single group, the variety in decoration with metal fittings is considerable as Werner already demonstrated. The almost identical ornamentation of the Maastricht and Niederzier examples is remarkable. Similar purses were mainly found in Belgium, northern France and the Rhine valley north of Mainz.[541] From Siegmund's research area no such purses are known. Legoux, Périn, and Vallet classified similar purses as type 361 and date them in their phases MR1-MR2 (600/10-660/70).[542]

Purses: buckles, rectangular
Vrijthof: 96 (1528-1); 201 (1501-1); 210 (1744-1); 205 (1654-3); 259 (1834-1); 0 (1618-2).

Six bronze rectangular buckles that may have been associated with purses were found in the Vrijthof cemetery (fig. 10.31). They could have served as the fastener of the purse flap or could have attached the purse to a leather strap. The buckles have approximately the same size of which an average strap width of 1 cm can be deduced. The preserved tongues (3x) are made of iron and are of a 'simple' shape. Four of the six buckles show a facetted rim, just one shows some decoration.

All six buckles are identified as components of purses, although traces or remains of leather or textile are absent. Their identification as purse fittings is mainly based on their relation to the body. All the buckles were found at the position of the pelvis, and the size of these buckles is too small for a function as fastener of a waist belt. The location at the pelvis indicates that the purse was either attached to the belt or that it was attached to a strap that was wrapped around the shoulder at the moment of deposition. Moreover, the associated finds, with some of the buckles, are in general identified as purse contents. Similar buckles can be placed in Siegmunds typological group Sna. 1.1.[543] The buckles of this group are described as little bronze rectangular buckles without additional elements and are considered to belong to a purse or strap attached to the waist belt. They date to Rhineland phase 5 (555-570). Legoux, Périn and Vallet make a distinction between buckles with flat loops and those with faceted loops within the category of rectangular buckles; a distinction not made by Siegmund. This morphological element does not have any chronological significance because both type 124 and 125 date to their phases MA1-MR1 (470/80-630/40).[544] Legoux, Périn and Vallet do not refer to their association with purses.

Fig. 10.31
Various purse fittings (scale 1:2).



(537) Becker/Päffgen 1994. (538) Becker/Päffgen 1994, 173. (539) Zeller 1990, 309-312, Tafel 13 and 17. (540) Werner 1950, 52-57, Tafel 12. (541) Becker/Päffgen 1994, 49. (542) Legoux/Périn/Vallet 2004, 19, 41, 54 (type 361). (543) Siegmund 1998, 40. (544) Legoux/Périn/Vallet 2004, 15, 30, 52 (type 124 and 125).

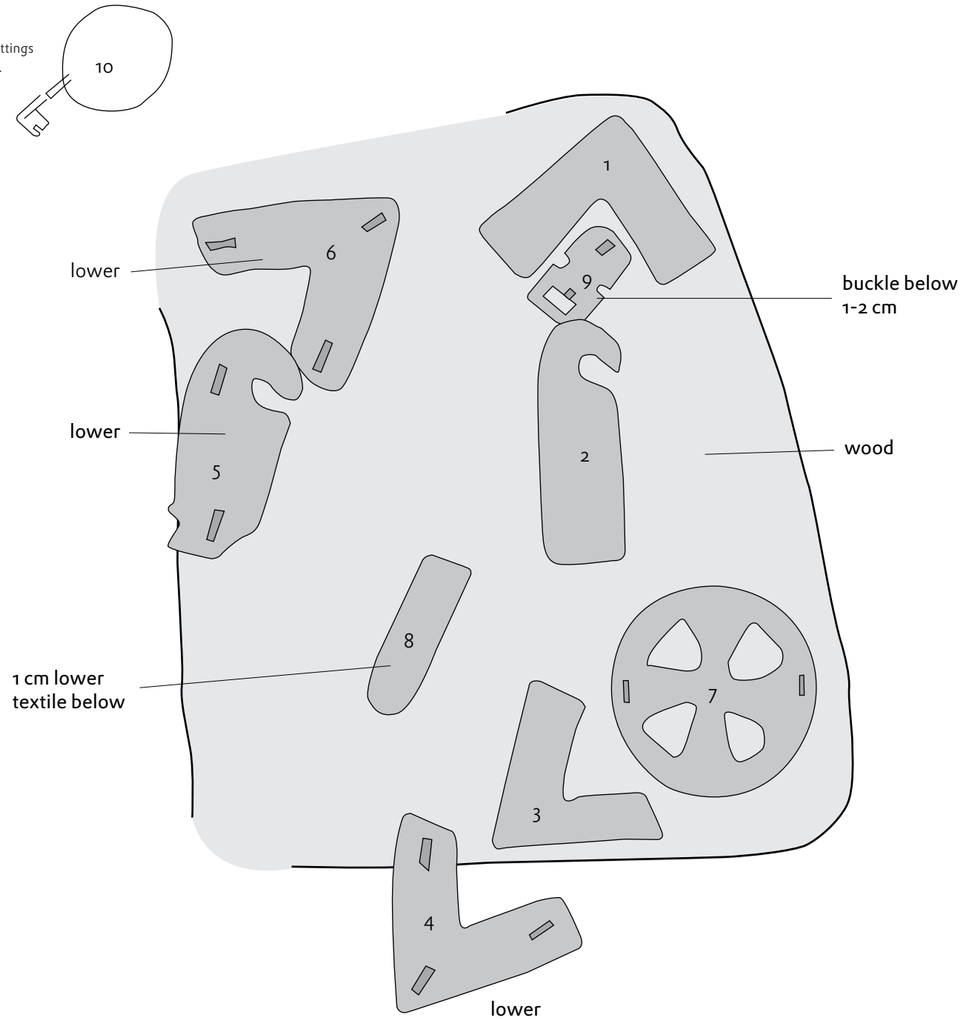


Fig. 10.32
The location of the purse fittings from grave 166 in situ (1:1).

Purses: plate buckles

Vrijthof: 48 (1590-1); 110 (1628-7, 8); 230 (1767-1, 2); 293 (1702-1); 0 (1175-1).

Five plate buckles from the Vrijthof cemetery can be identified as components of purses (fig. 10.31). Again the position in relation to the body and the associated purse contents are regarded valid evidence for their identification as such. As with the simple buckles, however, no leather or textile remains are found to substantiate this conclusion. The plate buckles vary considerably in shape.

The specimen from grave 230 shows a rounded fixed plate with some punched in decoration of little triangles and dots (fig. 10.8). This plate buckle was found at the location of the upper left leg together with a small slotted plate. It was associated with some typical contents of a purse, namely two pieces of flint, a shear, a key, a latch lifter key, a decorative disc of antler and a comb.

The Vrijthof plate buckle with round plate 1175-1 (without context) is undecorated. It is identified as the fastener of a purse flap, although it very well could have been part of the leg wear if it was originally part of a pair. These plate buckles are not known from the lower Rhineland. Legoux, Périn and Vallet describe a type of plate buckle that resembles the Vrijthof specimens, but they define the examples of this type exclusively as shoe buckles.[545] These date to their phases MA3-MR1 (560/70-630/40).

A plate buckle with a fixed triangular plate is known from grave 293. This plate buckle resembles type 130 in the typology of Legoux, Périn and Vallet, although they defined this type also exclusively as a shoe buckle.[546] The position of this plate buckle in the grave, at the pelvis, indicates that an identification as purse component is more likely. The buckle is probably too small to have functioned as the fastener of a waist belt. This plate buckle can be ascribed to Siegmund's Sna. 2.2, although these are interpreted as an element of the leg wear (W*adenbindengarnitur)*. Similar plate buckles are, according to Siegmund, part of leg wear and generally found in graves of women, whereas the plate buckle from grave 293 belongs to a grave goods assemblage of a man. Siegmund dates these buckles in Rhineland phases 7-8 (585-640) although they can already be found sporadically in phase 5 (555-570).[547] Legoux, Périn and Vallet date these plate buckles to their phase MA2-MR1 (520/30-630/40).[548]

Of the plates of the other two plate buckles only some remains are present. The loop of the plate buckle from grave 110 is ribbed; a feature that can be observed on the buckles identified as type 120 in the typology of Legoux, Périn and Vallet.[549] The Vrijthof plate buckle is much smaller and can on the basis of the location at the upper left leg and the associated finds (mainly a series of iron and bronze rings) be defined as an element of a purse. Siegmund distinguishes just one category of small bronze buckles with plate (Sna 2.2), but identified them as fittings of leg wear. It is possible to identify the plate buckle from Vrijthof grave 48 as such too, because it was found near the left knee of the deceased. This find, however, does not have a counterpart on the other leg and is for now identified as an element of a purse. The plate buckles from graves 110 and 48 are difficult to classify on the basis of existing typologies. Dating it to the second half of the sixth century and first half of the seventh century seems plausible. Further research on the function and date of small buckles and plate buckles is required for the Merovingian period.

Purse: strap end

Vrijthof: 86 (1389-1).

Three strap ends from the Vrijthof cemetery are identified as components of purses. The purse from grave 166 provides us with an example for the position of a strap end on a purse (see above). The strap end from grave 110 was found with a plate buckle (see above). The strap end from grave 86 was found on the pelvis without any other metal purse fittings. It belonged to a strap with a width of approximately 2 cm. It can be assumed that this strap end is too small for a waist belt (a belt with a reconstructed width of approximately 5 cm was found in this grave) what makes its identification as part of a purse more likely. This grave contained an elaborate belt with iron fittings and a seax and rivets that can be associated with the seax scabbard. An identification of this strap end as part of a strap that attached the seax with scabbard to the waist belt is also an option, but its separate location from the seax indicates otherwise.

It is difficult to classify or date strap ends without any additional information. Siegmund and the Franken AG only mention them in relation to other belt- or strap fittings. Legoux, Périn, and Vallet, however, classified simple strap ends as type 199 and date them in their phases MA1-MR1 (470/80-630/40).[550]

Utensils

Some objects are here referred to as utensils because of their close resemblance to objects used in present times, or their obvious identification as every day objects. These objects are combs, tweezers, shears, knives, fire steels and flints, spindle whorls, toilet utensils, etc. The associations that people of Merovingian times had with these items, especially in the context of the funerary rite, however, need not be exclusively a functional one.

Combs

A number of graves contained combs or parts of combs, which are published by Dijkman and Ervynck as a separate category of objects from excavated sites in Maastricht.[551] Combs from the Merovingian period are known from a limited number of bone/antler workshops and from settlements, but are more numerous in grave contexts. In the middle Meuse region workshops are known from Huy, Namur, Mouzon and Maastricht.[552] Combs are predominantly made of antler and less frequent of bone.[553] The combs from the Vrijthof cemetery are all made of antler. It is difficult to state whether combs were common or rather exclusive grave goods in Northern Gaul because their preservation is dependent on specific soil conditions. The number of recovered combs varies substantial from cemetery to cemetery, which is both due to the conditions of the soil as to the prevalent ritual choices.[554]

Though combs are generally referred to as being part of grave goods assemblages of both women and men, certain types of combs seem to have an association with a specific gender.[555] Undisturbed graves show that combs were predominantly found in the area of the pelvis and upper legs. From this position and their association with other 'functional objects' like knives, tweezers, fire-steels etc., it is concluded that combs were often part of an assemblage that was carried in a purse or bag attached to the waist belt, or that they were attached to rings or leather straps hanging

(545) Legoux/Périn/Vallet 2004, 16, 30, 53 (type 131). **(546)** Legoux/Périn/Vallet 2004, 16. **(547)** Siegmund 1998, 40. **(548)** Legoux/Périn/Vallet 2004, 16, 30, 53 (type 130). **(549)** Legoux/Périn/Vallet 2004, 15, 30, 52 (type 120). This type dates to phase MA3 (560/70-600/10). **(550)** Legoux/Périn/Vallet 2004, 17, 34, 53 (type 199). **(551)** Dijkman/Ervynck 1998. In this publication all worked animal skeletal remains from Roman and Early Medieval Maastricht are discussed. **(552)** Plumier/Plumier-Torfs/Regnard/Dijkman 1999, 54-55. **(553)** Aufleger 1996, 642; Koch et al. 1996, 989-990. **(554)** Siegmund 1998, 114. **(555)** Aufleger 1996, 642. **(556)** Aufleger 1996, 642.

down from the belt. The material of the combs, antler, is considered to have a symbolic reference to fertility, strength and growth because of the yearly renewal of antlers.[556]

Combs vary from simple specimen made of one piece of antler or bone, to composite pieces carried in comb cases of antler. The construction of these combs and the parts of the antler that are used for specific elements of the combs and their cases are already quite extensively studied, as is the typology of combs.[557] Siegmund offers the most recent typo-chronology although it does not differ much from the already existing classifications.[558] Siegmunds findings will be compared with the dating of the Vrijthof combs provided by Dijkman and Ervynck. The main typological distinction is made between single or composite combs and between one- or two sided combs. From the whole of the Servatius complex only composite combs are known. These are made of a number of plates that are attached to each other with iron or bronze nails. Siegmund tried to establish the chronological significance of the average number of comb teeth per centimetre. Because of Siegmunds conclusion that combs are known throughout the whole Merovingian period, and that chronological indicators are scarce, counting comb teeth is refrained from for the combs of the Servatius cemeteries.

Combs: single sided, composite

Vrijthof: 313 (1019-1).

Just one specimen of this type is known from the Vrijthof cemetery (fig. 10.33).[559] This rare occurrence, though part of a small sample, is in accordance with the general picture of the presence of single-sided combs in Merovingian graves.[560] Besides being single-sided and composite, the main characteristics of this comb are the curved back and the slightly convex section of the connection plates. The decoration, although vague, consists of an engraved semi-circular pattern.[561] The comb from grave 313 is, because of the ambiguous typological distinction difficult to classify as either Ger. 311 or Ger 3.12. The back of the combs and the section of the connecting plates of group Ger 3.12 are more strongly curved than those of group 3.11. Exact criteria for the types are not available, and the Vrijthof comb can therefore be ascribed to both groups. The Franken AG maintained the distinction between the two groups and follow the same descriptive criteria considering the curve of the back, but state that the shape of the section of the connection plates is an irrelevant chronological criterion.[562] The combs that are classified as type Siegmund Ger 3.11 are generally associated with the interments of men and are difficult to date.[563] The comb of Vrijthof grave 313 is part of the grave goods assemblage of a woman (based on the presence of beads). It is therefore more plausible to classify this comb as Siegmund Ger 3.12 or Franken AG-Ger 3.1 and date it in Rhineland phase 10 (670-705) or Franken AG phases 7-9 (610/20-710), which corresponds with the dating of Dijkman and Ervynck for such combs (seventh century).[564] Whereas Siegmund and the Franken AG created four types for the group of one-sided combs with a more or less curved back, Legoux, Périn and Vallet created just one typological group for all single sided combs with a curved back, and date them in phases MA1-MA3 (470/80-600/10)[565]. They date the first appearance of such combs considerably earlier than Siegmund, the Franken AG and Dijkman and Ervynck. The beads of Vrijthof grave 313 cannot solve this dating problem. I am inclined to follow the dating of Siegmund and the Franken AG and therefore a date of this comb in the seventh century is considered more likely.

Combs: double-sided composite

Vrijthof: 76 (1530-1); 95 (1479-1, 3)[566]; 178 (1406-1(fragment)[567]; 230 (1767-3, 4).

Three double-sided composite combs, and a fragment of such a comb, are known from the Vrijthof cemetery (fig. 10.33).[568] Because of the absence of peculiarities in shape, all these combs are placed in the broad group of double-sided combs as defined by Siegmund (Ger 3.2).[569] All these combs consist of one side with coarse and one with fine teeth. Two of the combs (graves 95 and 230) are associated with a case of antler (Siegmund Ger 3.23). A small fragment of a teeth segment plate from Vrijthof grave 178 shows some remains of rivets and teeth at both sides and is therefore interpreted as part of a double-sided composite comb. This fragment is part of the grave goods assemblage of a woman (based on the presence of a necklace of beads) and is found near the right lower leg. The combs from grave 76 and 230 are almost complete. They are lacking decoration on the connecting plates.[570] The comb from grave 76 shows a perforation at one of the short sides; it was probably a suspension hole. The comb seems to have been located at the location of the middle or lower part of the legs. This is the only find known from this disturbed grave. The comb with matching case from grave 95 is missing from the finds that are actually present, but is none the less published by Dijkman and Ervynck, so details can be recorded. It was found on the middle or lower part of the left leg, which is in general the find location of combs with cases.[571] The set was found with artefacts that can be associated with a woman (earrings, a necklace of beads and a garnet disc brooch). The comb with case from grave 230 was found near the left knee in association with other items (keys, a shear, a decorative disc of antler and two pieces of flint) that are generally known to have been hanging down from the waist belt or have been the contents of a purse. The contents of this grave points towards the burial of a woman (beads, although missing), although the flint pieces suggest otherwise.

These combs are less exceptional than single-sided combs and were, according to Siegmund, in use as grave goods throughout more or less the entire Merovingian period and are thus difficult to date more precisely. Siegmund only discussed some specific types within the broad group of double-sided combs, which are mainly distinguished on the basis of the particular shape of their plates or the presence of a comb case.[572] Combs with cases are quite rare in the Rhineland and date to phases 4-7 (530-610). From the Vrijthof two examples are known (graves 95 and 230). Siegmund did not date the remaining double-sided combs without case (neither distinguished as a type by the Franken AG) precisely. Dijkman and Ervynck, however, state that some chronological tendencies are observable regarding the double-sided combs. These tendencies concern the length and length-width ratio of the combs and the shape of the section of the connection plates.[573] The shape of the section is, however, discarded as chronological significant by the Franken AG.[574] The lack of decoration is not chronologically indicative, although there seems to be a chronological development from simple to more complicated decoration patterns.[575] Dijkman and Ervynck date the undecorated comb from grave 76 in the seventh century. Legoux, Périn and Vallet identify two categories for all double-sided composite combs found in northern France; those with simple sides and those with worked, (section below) and therefore more profiled and unusual, sides.[576] The combs with simple sides can be classified as their type 324 (*peigne simple*) and date to more or less in the whole Merovingian period: in phases MA1-MR1 and even later (470/80-700/10).

Combs: cases

Vrijthof: 95 (1479-1, 3); 97 (fragment: 1498-1); 230 (1767-3, 4); 0 (8888-1).

The Vrijthof excavation revealed four comb cases (or their remains) of which two are associated with a comb (see section on double-sided combs above: graves 95 and 230). Comb cases for double-sided combs are rectangular and consist of four connecting plates and two end plates. The cases often show more complicated decoration patterns than their associated combs. Comb cases are according to Siegmund only found in the graves of women.[577] All the combs with cases from the Vrijthof (fig. 10.33)

Fig. 10.33
Various combs (scale 1:2).



(557) Dijkman/Ervynck 1998; Aufleger 1996; Theune-Großkopf 1994; Ambrosiana 1981. (558) Siegmund 1998, 114-116. (559) Dijkman/Ervynck 1998, 36-37, nr. 52 (fig. 24-52), 70. They assigned it to grave 1156, which number should now be discarded. (560) Siegmund 1998, 115. (561) Dijkman/Ervynck 1998, 37. (562) Müssemeier *et al*. 2003, 55. (563) Siegmund 1998, 115. (564) Dijkman/Ervynck 1998, 70. (565) Legoux/Périn/Valllet 2004, 19, 39, 54 (type 325). (566) Missing (but published in Dijkman/Ervynck 1998, 32 (fig 22- 29A+B). (567) Not in Dijkman/Ervynck 1998. (568) Dijkman/Ervynck 1998, 30-37 (nrs: 29A+B, 32A +B, 51), 68-70. (569) Siegmund 1998, 116. (570) Dijkman/Ervynck 1998, fig. 22-29B. (571) Siegmund 1998, 116. Siegmund claims that combs with cases were carried as '*Gürtelgehänge*' and therefore found around the area of the left knee. (572) Siegmund 1998, 116. (573) Dijkman/Ervynck 1998, 70. According to Dijkman and Ervynck the width of double-sided combs becomes smaller (de length of the teeth diminishes), the length becomes less in relation to the width, and the connecting plates more plano-convex during the Merovingian period. (574) Müssemeier *et al*. 2003, 55. (575) Dijkman/Ervynck 1998, 69. (576) Legoux/Périn/Vallet 2004, 39. (577) Siegmund 1998, 116.

are indeed associated with the burials of women. The case fragment from Vrijthof grave 97 is a fragment of a connecting plate; it is fully decorated with lines of quarter circles and dot-in-circle pattern. This fragment was found near the left upper leg, which is accordance with the general observation regarding the position of combs with cases in undisturbed graves. It is part of a grave from which also the metal remains (plate buckle and strap end) of the footwear, a '*Herkules*keule', a boar tooth and two iron rings are known (which is altogether a strong indication for the burial of a woman). A comb with case can very well have been part of this ensemble. The connecting plate without find-number and therefore unknown context is decorated with vertical and oblique lines and a dot-in-circle pattern. The bronze nail in one of the extremities indicates that this was a connection plate of a comb case. The two nearly complete cases of graves 95 and 320 are both rectangular and fully decorated, although the patterns are quite different. The case from grave 230 shows a circle and dot-in circle pattern, while the one from grave 95 shows sections defined by vertical lines filled with a cross and a dot-in-circle pattern.[578] As already mentioned, both cases were found at locations in the graves were these objects are generally deposited, and both are associated with a comb.

Siegmund defined combs with cases as his type Ger 3.23 and dates them in phase 4-7 (530-610). The Franken AG maintained this classification but mention that they cannot be dated that precisely.[579] Legoux, Périn and Vallet do not make a distinction between double-sided combs with or without case and classify both as type 324, which dates to their phases MA1-MR1 (470/80-700/10) and even later.[580]

Dijkman and Ervynck rather concentrate on the decoration patterns as chronological indicators. They mention that the cases always show more decoration than the combs themselves, and argue that more complicated decoration patterns can be seen more frequently in the sixth century.[581] It can therefore be argued that all the double-sided combs with cases should preferably be dated to the sixth century but that they could also be of a later date.

Knives

Vrijthof: 13 (1680-1); 29 (1629-1*); 30 (1630-7); 58 (1634-4); 70 (1394-1); 73 (1584-5); 75 (1381-4); 79 (1397-1); 95 (1480-1*); 96 (1529-3*); 101 (1491-1); 105 (1473-3); 110 (1553-3); 126 (1572-1); 168 (1534-1); 178 (1515-1); 201 (1501-2); 210 (1744-6); 230 (1767-6); 259 (1833-1); 264 (1837-1); 278 (1817-9); 279 (1797-2); 292 (1794-1); 293 (1701-1); 297 (1703-2); 0 (1755-7); 0 (1487-4); 0 (1322-1).

Twenty-nine knives are known from the Vrijthof cemetery. Three knives (graves 29, 95 and 96) are now lost. It is generally acknowledged that knives are used over an extended period and are difficult to date. The only exceptions are knives with a clear angled back, *Hackmesser* (cleaver/kitchen knives) and *Klappmesser* (clasp knives).[582] Legoux, Périn and Vallet consider knives with a curved back and straight cutting edge as a characteristic form of the seventh century.[583] Five knives with an angled back are found, the other knives do not show any of the above-mentioned chronological features.

The knife from grave 105 has a total length of 13.4 cm and some wood remains of the handle are still present. The back of this knife does not run parallel with the cutting edge. Starting at the handle, the back slightly bends upwards. The pronounced angle is more or less positioned at the middle of the back of the blade. This knife is part of an grave goods assemblage of a man, which consists furthermore of a seax, a fire steel and three flints, a spindle whorl of baked clay, a globular glass beaker and belt fittings of iron with silver and brass inlay. The majority of this assemblage dates to the seventh century.

The blade of the knife from Vrijthof grave 292 also has an obvious angle, more or less at the middle of the back. The knife has a total length of nearly 17 cm (the blade is 12.4 cm). It was found with a seax and a biconical pot, which date to the first half of the seventh century.

Some leather scabbard remains and a bronze band that is folded around these remains and the blade of the knife, more or less at the middle of the blade, cover the knife from grave 293. The band probably served as a reinforcement of the scabbard. Despite these scabbard remains an angled back at the middle of the blade can be assumed on the basis of the visible parts of the iron blade. It is a relatively small knife with a length of 9.2 cm. The only other find from this grave is as small bronze buckle with fixed plate, probably the fastener of a shoe.

In grave 178 a knife was found on which a slight angle at the middle of the back of the blade can be observed. This knife was found with an unguent bottle, a fragment of a comb and various beads, on the basis of which this grave is identified as that of a woman. The glass bottle from this grave dates to the sixth century.

The knife with find number 1487 (find context unknown) also shows an angled back, approximately at the middle of the blade. Two decorated rivets of a seax scabbard, a silver buckle with garnet inlay and a belt stud are associated with this knife. It is not certain, however, if they originally belonged to the same grave goods assemblage.

Knives with angled backs are classified as Siegmund's type Ger 1.2 and date to Rhineland phase 10-11 (670-740).[584] The Franken AG maintained this type, yet proposed a stricter definition. Only knives with a back that runs parallel with the cutting edge and with the angle positioned just before the point of the knife can be classified as this type and can be dated, more precisely than other knives with angled backs, to the end of their phase 7 to phase 10 (640/50- 710).[585] This implies that the knife from grave 105, with a back that does not run parallel with the cutting edge, cannot be classified according to the definition of the Franken AG. Neither can the other knives with an angled back from the Vrijthof cemetery; the position of their angled back lies more or less in the middle of their blades.

The other knifes can be described on the basis of the shape of their back (curved or straight) and cutting edge (curved or straight), although these features cannot always be established due to their condition (severe corrosion and absent parts). Legoux, Périn and Vallet only classified knives with a curved back and straight cutting edge. This type dates to their phases MR2-MR3 (630/40-700/10).[586] Such knives are not identified among the collection of knives from the Vrijthof cemetery. Although the rest of the knives cannot be dated to a specific phase, some details are of interest to discuss.

The knife from grave 75 has a relatively large handle, which is nearly as long as the blade of this knife. Perhaps this is due to the wood remains of the handle. This could indicate that the original wooden handles were much longer than the iron core of the handle, which is often the only remnant that can be observed.

The knife from grave 58 was found attached to a seax. This knife was probably deposited in a scabbard that was fixed to the scabbard of the seax. The scabbards of both the knife and the seax have completely decayed. Knives were also frequently deposited in a purse or as a girdle hanger (find location around the left upper leg or on the pelvis). The find location in the grave is essential for its determination as component of a seax or as a girdle hanger.

Fire steels and flints

Vrijthof: Firesteel: 13 (1680-2); 73 (1584-3); 79 (1397-2); 96 (1529-2); 105 (1473-4); 205 (1652-1); 259 (1834-3); 288 (1788-1). Flint: 73 (1584-4); 79 (1397-3); 96 (1529-4); 105 (1473-5,-6,-7); 201 (1501-4); 210 (1744-3); 230 (1767-10,-11); 259 (1835-1); 288 (1788-2).

Six of the eight fire-steels are accompanied by one or more flints (graves 73, 79, 96, 105, 259, and 288).[587] In most graves only one flint was found. In grave 105 a number of 3 flints and in grave 230 two flints were found. Most fire-steels have a widened to triangular middle part and more or less curved extremities, which is a long-lasting form in the Merovingian period.[588]

The fire steel from grave 96 is complete and restored. The extremities are curved upwards and curled what results in rounded extremities with an opening in the middle. The flint became fixed to this fire-steel due to corrosion. They were found at the right side of the pelvis together with a pair of shears and a gold coin. It can be assumed that these objects were deposited in a purse (originally hanging down from the shoulder or placed at this position on the body at the time of the funeral).

The extremities of the fire-steels from graves 13, 205 and 259 are rounded and curved upward. The fire-steel from grave 13 was found with a knife and an arrow head near the left side of the left arm. The fire-steel and knife were probably deposited together as the contents of a purse. The other find from this grave is a biconical pot (now lost) which was found in between the feet.

The fire-steel from grave 205 was found with a small bronze buckle (identified as the fastener of a purse flap) on the left side of the breast. It can be assumed that the fire-steel was carried in a purse.

The fire-steel from grave 259 was found with a flint, a pair of tweezers and a small bronze buckle of a purse to the left side of the pelvis, what makes an identification of these objects as purse contents at the time of funeral plausible. A knife (now lost) was also found in this grave, but on the right side of the pelvis. Some fragments of a bronze and of a gold coin are attached to the flint. It can be assumed that the coins were carried with the flint in the same purse.

The extremities of the fire-steel from grave 79 are also curved upward, although with a much more angled corner than the ones described above. This fire-steel was found with a flint, a knife and a fish hook to the left side of the upper body. In view of this ensemble it can be suggested that they formed the contents of a purse. Due to some disruption of the grave (the skeletal remains are not in their original position) the 'purse' probably moved from its original position (near the pelvis) in the grave. The other finds from this grave are a pottery bowl on a foot (a unique specimen for which no exact parallels are known), which was found near the knees, and a bronze plate buckle with strap end (found near the skull). None of the finds were found at their supposed original position.

The only fire-steel without a triangular middle part is known from grave 73. It has a straight middle part with upward bending extremities with straight ends. It was found on the pelvis, together with a flint, a knife and a bronze plate buckle. The plate buckle is identified as the fastener of a waist belt. It can be assumed that the other objects were placed in a purse, which was attached to the waist belt.

The fire-steels from graves 105 and 288 are corroded and broken, their shape is difficult to determine. The fire-steel from grave 105 was found with a flint, a knife, an iron plate buckle, a seax (now lost) and a counter plate with inlay, all to the right side of the body. It can be assumed that they were deposited as an ensemble (waist belt, purse with contents and seax). This ensemble, however, lies just outside the outline of the grave and it is not certain whether it actually belonged to grave 105.

The fire-steel from grave 288 was found with a flint at the right side of the pelvis, they were probably carried in a purse.

Siegmund only pays brief attention to the fire steels and does not make any typological or chronological comments, the Franken

(578) The comb from Vrijthof grave 95 is missing (but published in Dijkman/Ervynck 1998, 32 (fig 22- 29 A+B). (579) Müssemeier *et al.* 2003, 55. (580) Legoux/Périn/Vallet 2004, 19, 39, 54 (type 324). (581) Dijkman/Ervynck 1998, 69. (582) Siegmund 1998, 112. (583) Legoux/Périn/Vallet 2004, 15, 28, 52 (type 37). (584) Siegmund 1998, 112. (585) Müssemeier et al. 2003, 53. (586) Legoux/Périn/Vallet 2004, 15, 28, 52 (type 73). (587) Photographs of these objects can be found in the catalogue of graves and finds. (588) Pescheck 1996, 68.

AG do not mention fire-steels at all, and neither do Legoux, Périn and Vallet.

Pescheck, on the other hand, proposed a typological development for fire-steels (numbered 1-7) on the basis of the finds from the cemetery of Kleinlangheim, for which, as he claims, the chronological significance needs to be tested against the finds from other cemeteries.[589] The typological development is mainly based on the form of the extremities of fire-steels with a widened to triangular middle field (which is a long-living form throughout the Merovingian period). These fire-steels develop from specimen with slightly curved to more inward curved and curled extremities. Can the Vrijthof fire-steels be placed in this typology, and has it any chronological significance?

The fire-steel with rounded ends from grave 96 resembles number 4 of Pescheck's typology.[590] The example for fire steel type 4 was found in grave 106 of Kleinlangheim, which dates to the JM III (670/80-720). The oldest object from grave 96 is a small rectangular bronze buckle (of a purse), which dates around 600, the other objects from this grave are difficult to date more precisely. It seems plausible to date this grave to the first half of the seventh century. This, however, contradicts with the date ascribed to Peschecks's type 4.

The fire-steel from grave 79 can be compared with type 2 of Pescheck's typology.[591] The example for type 2 was found in Kleinlangheim grave 127, which dates to JMI-JMII (600-670/80). The grave goods assemblage of the Vrijthof grave dates to the end of the sixth century, based on the associated belt fittings. On the basis of this grave alone it is difficult to state whether type 2 of Peschecks typology should be rejected as a characteristic for the first three quarters of the seventh century.

The other fire-steels from the Vrijthof cemetery (except for the specimen from grave 105 of which the original shape is difficult to identify due to corrosion) are comparable with type 3 of Pescheck's typology.[592] The grave from Kleinlangheim (grave 238) with a fire-steel of this type dates to AM III (560/70-600). The Vrijthof graves with this type of fire-steel date to various phases.

The conclusion for now is that Pescheck's proposed typochronology of fire-steels by is difficult to subscribe on the basis of the Vrijthof finds, but that further research to substantiate or reject the chronological significance of the proposed classification is required.

Tweezers

Vrijthof: 101 (8888-2*)[593]; 210 (1744-2); 259 (1834-2).

The pair of tweezers from grave 259 is made of iron, the pair from grave 210 of bronze. The pair of tweezers from grave 101 was lost after excavation but can be described on the basis of the remaining drawings (although it cannot be determined of which material it was made).[594] The iron pair of tweezers from grave 259 consists of a fused head of which the top is missing. The remaining length of the tweezers is 9.3 cm. It consists of straight blades with incurved jaws and an extra blade in the middle. This pair of tweezers was found with a fire-steel, a flint and a small rectangular bronze buckle near the left side of the pelvis, which seems to indicate that these objects form the contents of a purse. It is probably the grave of a man. A pair of tweezers with an additional blade in the middle was also found in the cemetery of Lavoye, although this specimen is of bronze and has a different shape than the Vrijthof pair.[595] Joffroy describes this extra blade as a peculiarity of which the function is not clear. At the time of publication Joffroy knew only two other pairs with a blade in the middle (from cemeteries in France). Such pairs are also known from several cemeteries in Germany, but no specifications on the function of the middle blade are at this moment known to me.[596]

The pair of bronze tweezers from grave 210 has a rounded top, slightly extending blades and incurved jaws. It has a length of 7.0 cm. The blades are decorated with incised lines. This pair was probably part of the grave goods assemblage of a man (determined only on the basis of the flint) and was found at the position of the belly. Next to the flint a small rectangular bronze buckle was found, which indicates that the pair of tweezers was deposited as the contents of a purse.

The find location of the missing pair of tweezers from grave 101 is indicated near the left foot. It was found with a small oval bronze buckle. The grave does not seems to be disturbed, so it can be assumed that this position is, although unusual, the original one. This pair of tweezers resembles the pair from grave 210, although it is smaller with a length of 5.6 cm. A ring is attached to the head of the tweezers.

As Siegmund mentions, tweezers are specifically associated with the burials of men, which matches with the grave goods assemblages the Vrijthof tweezers form part of.[597] Joffroy also mentions this nearly exclusive association with men for the cemetery of Lavoye, where a relatively high amount of pairs of tweezers were found. With regard to their find position in the graves (near the pelvis) of the cemetery of Lavoye it was concluded that pairs of tweezers were nearly always carried (or deposited) in a purse.[598]

Despite the acknowledged difficulties to ascribe pairs of tweezers to limited chronological phases, eight types are defined for the finds from the lower Rhine area.[599] The Franken AG maintained this classification and concluded too that some of the types are chronologically indifferent.[600] Siegmund only identified one type of iron tweezers. The examples of this type are morphologically different from the one of grave 259. Moreover, the third blade in the middle and the fused top are not known as discriminating elements in the classification of Rhineland finds, either iron or bronze. Legoux, Périn and Vallet identified tweezers with a third blade (although the fused top such as the one of the Vrijthof specimen is not identified) as type 322 and date them in their phases MA2-MA3 (520/30-600/10).[601] In their scanty description of this type it is mentioned that tweezers of this kind are predominantly of iron, although they can also be of bronze.

The decoration pattern on the pair of tweezers from grave 210 could point towards a classification as Siegmund's type Ger 2.5 (Rhineland phase 2-3: 440-530). The described 'substantial' decoration, however, does not apply to the Vrijthof pair.[602] The bronze tweezers from graves 101 and 210 are therefore both classified as Siegmunds type Ger. 2.6 which dates to Rhineland phases 8-9 (610-670).[603] According to the typology of Legoux, Périn and Vallet, both pairs of tweezers can be classified as type 321.[604] Tweezers of this type can sporadically be found in graves that belong to their phase MA2 (520/30-560/70), but date predominantly to phases MA3-MR1 (560/70-630/40). A date for the bronze tweezers from Maastricht in the first half of the seventh century seems plausible.

Shears

Vrijthof: 96 (1529-1); 230 (1767-5); 283 (1811-1).

The three iron shears from the Vrijthof cemetery are much alike.[605] Shears are deposited as grave goods throughout nearly the entire Merovingian period, and it is difficult to find morphological criteria that are chronologically significant. The pair of shears from grave 96 (length: 16.8 cm) is part of the grave goods assemblage of a man and was found together with a fire-steel, flint and a gold coin to the left side of the belly. These items were probably the contents of a purse that was, according to the position in the grave, probably carried around the shoulder.[606]

The pair of shears from grave 230 (length: 16.4 cm) is part of a relatively elaborate grave goods assemblage. It was found with a bronze key, an iron latch lifter key, a knife, two flints, a decorative disc of antler, a comb with case and a small bronze plate buckle with additional belt plate (*Riemenöse*) near the left upper leg. The administration of a necklace of beads on the field drawing (the beads are lost) and the decorative disc of antler indicate that these finds formed, despite the presence of flints, the grave goods assemblage of a woman.

It is not clear whether the pair of shears from grave 283 (length: 17.3 cm) belongs to a grave goods assemblage of a man or a woman. This pair of shears is the only identifiable find from this grave, although a string of beads at the position of the neck as well as the contours of a seax near the left upper leg were recorded on the field drawing. Both objects are lost, as is the pottery vessel that was found near the right foot. The pair of shears was found, together with the 'seax', at the left side of the upper left leg. However, no other documentation points towards the find of a seax, whereas the presence of beads is mentioned in the excavation diary. It is probably the safest option to consider the objects as elements of the grave goods assemblage of a woman.

Siegmund mentions that for the Rhineland no clear correlation can be found between shears and the gender of the deceased. The number of shears that are associated with men is only somewhat higher than those associated with women.[607] Shears with a length of more than 20 cm, however, were in the Rhineland only found in the graves of men, smaller shears were found in the graves of both men and women. Siegmund does not date shears to a specific phase. The Franken AG did not identify this category of grave goods for their research area. Legoux, Périn and Vallet classified shears as type 355 and date them in their phases MA1-MR3 (470/80-700/10).[608]

Pins: bone and copper alloy

Vrijthof: 110 (1565-1); 0 (1221-1).

A bone pin with a length of 12.9 cm, which is completely decorated with incised horizontal and diagonal lines and a dot in circle pattern, was found in the grave of a woman (nr 110, based on the various associated beads and garnet disc brooch). The head of the bone pin is flattened and two holes with remains of iron nails to fix the pin can be observed. It is for now not clear what the function of this pin was.

A resembling object of bone, although with less decoration, was found in grave 5 of the cemetery of Basel-Bernerring (dates around 540/50).[609] This pin, however, was found in the grave of a man and is associated with horseman accessories (it is described as a reinforcement of the saddle, although the author himself questioned this identification). Because the Vrijthof pin was found in the grave of a woman, and no objects associated with a horseman are known from this grave, its identification as saddle reinforcement seems unlikely.

The bronze pin with find number 1221-1 (stray find) is discussed in this group because it also has a flattened head and remains of a nail, which served to fix it. It can be assumed that the pin served the same function as the bone pin from grave 110. No parallels are known to me, and the bronze pin can also be an object from the Roman period (find context not known). No other finds can be associated with this pin.[610]

(589) Pescheck 1996, 68-69, Abb. 20. (590) Pescheck 1996, 68, Abb. 20.4. (591) Pescheck 1996, 68, Abb. 20.2. (592) Pescheck 1996, 68, Abb. 20.3. (593) Lost; information available on drawings and from descriptions in the Ypey-archive. (594) The photographs and drawings of these objects can be found in the catalogue of graves and finds. (595) Joffroy 1974, 34-35, grave 110, fig. 15. (596) See for example the pair of tweezers from grave 61 of the cemetery 'Unteren Wied, Neuwieder Becken', Grünewald 2001, Taf. 78. (597) Siegmund 1998, 113. (598) Joffroy 1974, 34. (599) Siegmund 1998, 113. (600) Müssemeier *et al.* 2003, 54-55. (601) Legoux/Périn/Vallet 2004, 19, 39, 54 (type 322). (602) Siegmund 1998, 114. (603) Siegmund 1998, 114. (604) Legoux/Périn/Vallet 2004, 19, 39, 54 (type 321). (605) The photographs and drawings of these objects can be found in the catalogue of graves and finds. (606) See the section on purses. (607) Siegmund 1998, 117. (608) Legoux/Périn/Vallet 2004, 19, 41, 54 (type 355). (609) Martin 1976, grave 5, 136, 213-217, 5.18. (610) The photographs and drawings of these objects can be found in the catalogue of graves and finds.

Touchstone

Vrijthof 92 (1403-10).

A black stone of basanite (volcanic rock) with a length of 6.2 cm was found in the grave of a man.[611] This stone is identified as a touchstone, used to verify the quality of gold. It was found with a seax, rivets of its scabbard and several belt fittings (of which the iron plate buckle with silver inlay is an elaborate specimen) to the right side of the body. The finds from this grave date primarily to the seventh century.

Ring rods: iron

Vrijthof 15 (1671-2); 168 (1534-3, 4); 259 (1834-4); 0 (1487-6).

Five iron rods with a ring head were found in the Vrijthof cemetery.[612] The iron rod from grave 15 was part of the grave goods assemblage of a man, which consists furthermore of an axe, a seax and a plate buckle and counter plate of iron with silver and brass inlay.

Grave 168 is also that of a man. Apart from the two iron rods this grave contained a seax, a knife, an iron buckle and a carinated pottery dish. The iron ring rod from grave 259 is part of a grave goods assemblage of a man, which was identified as such on the basis of the fire steel and associated flint. The iron rod (1487-6), of which the find context is not known, was found together with a silver buckle with garnet, a knife and two decorative rivets which probably were part of a seax scabbard. On the basis of these finds it can be assumed that this iron rod was deposited in the grave of a man.

Coins (Roman/Merovingian)

Vrijthof: 95 (1478-2, 4); 96 (1529-6); 259 (1835-3, 4); 0 (1078-1); 0 (1526-1).

The majority of seven coins are late Roman, only one could be dated to the sixth century (fig. 10.34 and table 10.7).[613] A further analysis of the individual coins (also those from the Servatius cemetery) and their circulation- and distribution patterns will follow in the volume on the Servatius cemetery in which a higher number and an interesting collection of coins was found. The two (1586-3;-2) coin pendants are discussed in the section on strings of beads.

Fig. 10.34
Various coins (scale 1:1).



Table 10.7
The Roman coins dates compared to the date ranges of the associated graves.

Context/Grave	Coin	Date coin	Date context/Grave
V 0 (1087-1)	As; Domintianus	82	-
V 0 (1526-1)	Dupondius/As; Crispina	177-183	-
V 259 (1835-3)	Indet	-	510/25-580/90
V 259 (1835-4)	Indet	-	
V 95 (1478-2)	Antoninianus; Quintillus	270	580/90-670/80
V 95 (1478-4)	Antoninianus; barbarian imitation	270-300	
V 96 (1529-6)	Imitation Justinianus I	527-565	510/25-580/90

Pottery

Numerous pottery vessels of the middle Roman, late-Roman and Merovingian period were found in the Vrijthof cemetery (table 10.8).[614] Next to complete or nearly complete vessels a considerable quantity of potsherds was found. Not all of the (nearly) complete vessels can be assigned to a grave, and some of the pots which were administered as 'find' are now lost. These circumstances are mainly due to the excavation method, administration problems and post-excavation developments. Because of the character of the site all pots for which the contexts remained unidentifiable are considered as former grave goods or related to burial activities and will be analysed as such. Potsherds on the other hand are only regarded as part of a grave goods assemblage if they can with certainty be assigned to a grave, although most of them will have been residual finds.[615] The basic vessel categories biconical pots, jars, jugs, bottles, dishes and beakers or goblets of both the Roman and Merovingian period were found in the Vrijthof cemetery. Biconical pots are the most common vessels. They are characteristic for the Merovingian period, and a series of specialised studies for this specific pot form is available, of which the work of Will on the pots of the Upper Rhine Valley can be mentioned as the most recent one at this moment.[616]

Middle Roman, late Roman and later fifth century pottery

Six middle Roman, late Roman or later fifth century pots were found in the Vrijthof cemetery. It is interesting to explore whether the Roman and late Roman pots were re-used in the Merovingian graves, and how the graves in which the pottery of the fifth century was deposited can be dated. I did not deal in great detail with the discussions on the dating of the Roman pottery within the first to third centuries here. For our present purpose this is less relevant.

Plates/dishes: terra sigillata

Vrijthof: 235 (1749-1).

Plates or dishes are distinguished from bowls (although the distinction can be somewhat ambiguous) by their lower wall, larger diameter and more open appearance. From the Vrijthof cemetery one dish or plate of East Gaulish samian ware can be identified (fig. 10.35). A plate of type Dragendorff 32 is known from grave 235. It was found in a grave with a glass vessel, various beads and a belt element (now lost), all Merovingian in date. The plate dates to the late second century and first half of the third century.[617] The plate is an antique in this grave.

Fig. 10.35
Roman pottery (scale 1:4).



Table 10.8
The distribution of Roman and Merovingian pottery forms in the Vrijthof cemetery.

Roman / late-Roman/ fifth century pottery	
Plates	1
Bowls	1
Beakers	1
Jars	1
Jugs	1
Crater	1
Subtotal	6

Merovingian pottery	
Biconical pots	23
Plates/bowls	10
Jars	1
Jugs	5
Bottles	1
Beakers	3
Globular pot	1
Subtotal	44

Total	50

(611) The photograph and drawing of this object can be found in the catalogue of graves and finds. (612) The photographs and drawings of these objects can be found in the catalogue of graves and finds. (613) The determinations of the Roman coins were provided by drs. Paul Beliën (by then curator of Ancient Coins and Engraved Gemstones at the Geldmuseum, Utrecht); the determinations of the early medieval coins were provided by drs. Arent Pol (by then curator of Early Medieval coins at the Geldmuseum, Utrecht). (614) The analysis of the pottery from the Pandhof cemetery was done by drs. R. Terluin (AAC, University of Amsterdam) and was supervised by drs. J. Hendriks (Municipal Bureau for Archaeology and Built Heritage of Nijmegen/AAC, University of Amsterdam). (615) The pottery sherds from the Vrijthof cemetery were studied by drs. M. Dijkstra (AAC, University of Amsterdam). (616) Will 2005. (617) Oswald/Davies Pryce 1920, 205-206; Gose 19763, 9 Tafel 3, 31-33.

Beakers: dark-colour-coated ware
Vrijthof: 75 (1377-1).

A beaker with a dark engobe was found in grave 75 (fig. 10.35). This beaker has a height of 11.4 cm, a globular belly, and stands on a foot. The belly shows two carved bands. It is of a white fabric and its surface has the remains of black, metal-glazed engobe. Similar beakers are classified as type Oelmann 33a, but the Vrijthof specimen lacks the typical rounded rim. Because of the fabric, which probably derives from the production centres in the Argonne,[618] this particular form can be dated to the first half of the third century and possibly somewhat later.[619] This beaker was found in a grave with a dish and belt elements from the Merovingian period. It is clearly a Roman survival in a Merovingian grave.

Jugs and jars
The terms jugs and jars are used to refer to Roman pots with either one or two handles and with or without spout. The distinction between these two categories is more strictly defined for Merovingian pots (see the section on jugs and jars of the Merovingian period). Jugs will in this section on Roman pottery be referred to as specimens with one or more handles and a spout. They are used to pour liquids. Jars are here referred to as vessels with one or two handles but without a spout. They might have a relatively wide mouth. Jars were rather used for storage purposes, although, of course, they might have been used to pour out liquids.

Jars, narrow mouth
Vrijthof: 225 (1699-1).

The smooth-walled Roman jar from grave 225 has a short handle, fixed to the neck and ending on the shoulder (fig. 10.35). The jug has a globular body on a foot stand and a long profiled neck without clear rim. It is of a fine white fabric. This type of jar and its smooth fabric is not only fairly common in the middle Roman cemeteries of e.g. Tongeren, but also in the larger area between Tienen en Maastricht. Therefore, they are also known as 'Haspengouw' jars. The best known production centre of these jars is located in the vicus of Tienen.[620] This specimen can be classified as type Vanvinckenroye 1967.71.72, which dates to the second half of the second century.[621] This jug is the only find from this grave, and although it is difficult to establish whether the grave belongs to the late Roman or Merovingian period, it is fairly save to suggest that it is a Roman survival in a Merovingian grave, for the Vrijthof cemetery was not in use as a burial ground as early as the second century.

Jugs: with handle and spout
Vrijthof: 168 (1536-1).

The one handled jug from grave 168 is of a fine white fabric, has a globular body, a foot stand, and a relatively thin neck with spout (fig. 10.35). A remarkable feature is that the spout can be found near the beginning of the handle, not opposite to it. The handle is applied just underneath the rim and ends at the shoulder of the vessel. This specimen can be classified as type Oelmann 64 and resembles other jugs like the type Brunsting 19 or Vanvinckenroye 1991.369, which can be dated to the end of the third and possibly to the beginning of the fourth century.[622] This jug was found in a grave with characteristic items of the Merovingian period such as a seax, a knife, two rods with a loop and a ceramic bowl.

Crater: terra sigillata, barbotine
Vrijthof: 0 (1692-1).

A terra sigillata crater from East Gaul with two handles and barbotine decoration is classified as type Dragendorff 53 (Ludovici Vme). The barbotine decoration presents a scroll of plant motives (fig. 10.35). The object is associated with the remains of a Roman cellar found at the location of the Vrijthof cemetery. It was not used as a grave good.

The crater from Maastricht resembles one found in the Rheinzabern production centre where the barbotine technique was a popular decoration technique.[623] The specimen of Maastricht can be dated to the second half of the second century and first half of the third century on the basis of this find.

Merovingian pottery
The Merovingian pottery vessels of the Vrijthof cemetery can be categorized in the basic shapes plates, bowls, jars and jugs, bottles, beakers, biconical pots and globular pots. A general consensus exists, except for the category dishes/bowls, regarding the criteria that define these categories. Differences in the typological classifications within these broad groups, however, can be observed in numerous publications of Merovingian cemeteries and pottery. The biconical pots have received the most attention in early medieval pottery research because they are characteristic of Merovingian material culture and are produced in enormous quantities during a period of nearly 200 years and dispersed all over the Merovingian world. The other vessel forms are found in lesser quantities.

Dishes/bowls
Evident criteria to distinguish between dishes and bowls are lacking. Siegmund refers to both shapes as S*chalen* because, according to him, a division between these shapes does not serve any chronological purpose. He recognizes, however, that such a division can be useful for research that focuses on functional explanations.[624] It can be imagined that this division serves even more research goals; especially those concerned with the understanding of the Merovingian funerary rite and the choice of objects involved in it.

Legoux, Périn and Vallet only distinguish between oxidized or reduced atmospheres of production; shape or decoration are not considered as typological criteria.[625] Although regarded as one category, Siegmund offers the most recent and extended typology for Merovingian dishes and bowls. These vessels are divided in two groups: those with carinated walls, and those without.[626] In general, most of the carinated dishes/bowls seem to date later than the dishes/bowls without carinated walls, although the chronological distinction is not very obvious but rather fluid.

Siegmund makes a further distinction on the basis of the shape of the foot/bottom, the fabric and surface treatment (fine, burnished or coarse), the shape of the upper wall and the shape of the rim. This resulted in the identification of 17 types, of which four types are without carinated walls and 13 types are with carinated walls. Siegmund considers the shape of the foot to be an important typological criterion for the dishes/bowls with carination. Five foot-shapes are identified: the foot stand, the foot plate, the ring stand, the flat bottom and the sagging bottom. For the Vrijthof cemetery all these shapes, except the sagging base, are relevant. Aspects such as the decoration pattern, fabric and surface treatment are not considered important criteria.

The Franken AG adopted Siegmund's classification for the greatest part. Next to a minor alteration (see type Sha 2.41) they dated most of the types to longer periods.[627]

Tilkin-Peters addressed the problem of the chronological evolution of Merovingian dishes and bowls of the Meuse-region.[628] She mentions that the earliest Merovingian dishes and bowls are produced in an oxidised atmosphere and that their colour and shapes refer to late-Roman types (terra sigillata ware).[629] Later on, especially in the seventh century, bowls and dishes can also be of a grey and black fabric. Tilkin-Peters observed some general developments through time: an evolution from various foot forms to simple flat bottoms, the decoration moves from the lower part of the wall to the upper part of the wall or disappears, and fine burnished ware is replaced by a coarser ware. Further chronological refinement or alterations to existing typo-chronologies were not proposed by her.

All the dishes (except for one) from the Vrijthof cemetery have carinated walls and are made of a fine burnished red/orange fabric of which only two specimens are decorated. Four of the five foot types such as identified by Siegmund are present. Siegmund did not describe the shapes of the foot-types in an unambiguous way, and the examples for each type (except the uncomplicated shape of the flat bottom) show some differentiation within the group and similarities with the examples of other groups. An unambiguous foot-shape description, on the basis of Siegmund's foot-types, will be attempted here (fig. #).

The foot stand is here referred to as a foot with a considerable height that can be distinguished from the other types because it has the appearance of a (short and thick) stem. This is the rarest type within the category of dishes and bowls. The form foot plate is here referred to as a plate, clearly separated from the wall by a constriction, with a flat or nearly flat bottom. The foot plate is clearly less high than the foot stand. The stand ring is also separated from the lower wall, but the bottom of the foot is concave so that the dish or bowl stands on a 'ring'. This 'ring' can have different morphological appearances. A fluid transition from a plate stand to a ring stand can be observed, also in the group of dishes and bowls from the Vrijthof cemetery. Finally, there is the dish/bowl with a flat bottom. The foot-types such as described will be used in the classification of the bowls and dishes of the Vrijthof.

Bowl: with carinated wall and foot stand
Vrijthof: 79 (1420-1).

The bowl of a fine grey fabric from grave 79 is placed on a high foot stand (fig. 10.36). The bowl has a total height of 7.8 cm and a mouth diameter of 13.5 cm. The foot and the outer surface of the wall shows some decoration of incised lines and the inner surface of the dish shows a vague engraved spiral of points. Some marks of use are also visible on the inner surface of the bowl. The bowl appears to be of high quality. It was found between the feet of the deceased and is part of a grave goods assemblage that consists of a knife, a fire-steel with flint and a bronze plate buckle (lost, photograph available) with strap end. In view of these finds the bowl was most likely deposited in the grave of a man. Parallels for this specific bowl are rare.

One bowl on a foot that resembles the Vrijthof specimen is known from the cemetery of Grez-Doiceau.[630] This bowl does not show any decoration and has a somewhat plainer appearance and is of a lesser quality (it is somewhat asymmetric), but the shape shows considerable similarities with the Vrijthof bowl. Another parallel is known from Risstissen in the Alamannic area.[631] This dish is also of a grey fabric. It has a decoration of an engraved

(618) Vilvorder/Bocquet 1994. Although this fabric resembles other products from the Argonne; other workshops in Eastern Gaul must not be excluded as a possibility. Cf. Symonds 1992, 39 ff.; Vilvorder 1999. (619) Vanvinckenroye 1991, 48-49, plaat 20, types 216, 220, 221; Van Enckevort 2003, 242-244, type 3060; Pirling/Siepen 2006, 81, Gellep 362-363. For similar specimens see also Päffgen 1992, I, 170; II, 594, nr. 6, 596 nr. 4; III, tafel 87, nr. 3, tafel 89, nr. 1. (620) Willems 2005, 66-67. (621) Vanvinckenroye 1967, 43-44, pl. 14, type 71/72. Vanvinckenroye 1991, 94-95, plaat 43, type 423. (622) Oelmann 1914, 59, Tafel 3, type 64; Cf. Brunsting 1937, 103, pl. 4, type 19; Vanvinckenroye 1991, 80-81, plaat 36, no. 369. (623) Oswald/Davies Pryce/Simpson 1966, 226-230, plate LXXXI, nr. 6. (624) Siegmund 1998, 153 (note 128). (625) Legoux/Périn/Vallet 2004, type 403 and 406, 20, 46. (626) Siegmund 1998, 155, Abb. 67 (classification scheme). (627) Müssemeier *et al.* 2003, 67-68. (628) Tilkin-Peters 1986, 228. (629) Tilkin-Peters 1986, 228; 238, fig.11. (630) Vrielynck 2007, 39, fig. 10. (631) Fuchs *et al.* 2001, 180-181, Abb. 188.

Fig. 10.36
Various bowls (scale 1:4).



undulating line along the vertical upper wall, and one on the upper surface of the horizontal outward folded rim.

This form of bowl may be a continuation of the Roman *Räucherkelche* that date from the first to the fourth century.[632] Gose states that in the course of time the upper part of the wall becomes more vertical, such as can be observed on the Vrijthof specimen.

The Vrijthof bowl cannot be classified as type Siegmund Sha 2.11, (440-485) which shows some similarities, but is probably a later, according to the finds from Grez Doiceau, variant of this bowl. The bronze belt elements of the Vrijthof grave date to Rhineland phase 6 (570-585). Similar bowls are not known from the research area of Siegmund or the Franken AG, nor do Legoux, Périn and Vallet identify them. According to the remarks made above it seems plausible to date this bowl to the sixth century.

Bowl: foot plate
Vrijthof: 291 (1804-1).

The single fifth century bowl from the Vrijthof cemetery was found in grave 291 (fig. 10.36). No other finds are known form this grave. It has a shiny red engobe, although the bowl itself is of poor quality. It is a slow wheel thrown bowl, asymmetric in height and the footplate is poorly finished. It can be suggested that this bowl, on the basis of the foot plate[633], dates to the second half of the sixth century and first half of the seventh century, although parallels from the Rhineland and Meuse valley are not available. It shows some resemblances with type 413 as defined by Brulet, which he dates to the fifth century.[634] Vrijthof grave 291 is for now placed in the fifth century, although a later date cannot be ruled out.

Bowls: red carinated wall, not decorated, straight to inward curved upper wall, foot plate
Vrijthof: 18 (1661-1); 0 (1683-1).

It is difficult to make and exact distinction between bowls on a foot stand and those on a foot plate following the description and examples of Siegmund.[635] The identification of the two Vrijthof specimens as bowls on a foot plate is based on the relatively high foot of these bowls, next to their straight to slightly inward curved upper wall, pronounced carination and thickened lip (fig. 10.36). Siegmund describes that these elements are characteristic for bowls with a foot plate (Sha 2.21).[636] Because of their relatively high foot (compared to the other specimens on a foot plate) a classification as bowls on a foot stand seems also possible for these bowls. The concave bottom also shows some resemblance to ring stands (see below).

The bowl from grave 18 shows has a pronounced carination, straight upper wall and rounded lip. It is part of an assemblage, which only consists of pottery (next to the bowl there is a trefoil jug). The gender of the deceased cannot be established on the basis of these finds.

Bowl 1683-1 (context unknown) is larger and has a relatively higher upper wall. No other finds can be associated with this bowl.

Similar red bowls on a foot plate are identified by Siegmund as type Sha.2.21 (on the basis of their pronounced carination and straight to slightly incurved upper wall) and date to Rhineland phases 5 to 8 (555-610/640).[637] The Franken AG maintained Siegmund's type Sha 2.21 and date these bowls in their phases 4 to 7 (510/25-640/50).[638]

Plates/bowls: red, undecorated, carinated wall, outwards curved upper wall, foot plate
Vrijthof: 19 (1606-1); 75 (1378-1); 0 (1838-5).

Three undecorated bowls from the Vrijthof are identified as bowls on a foot plate (fig. 10.36). Their foot shapes are more or less comparable with the foot shapes of the specimens described in the section above. The bowls are distinguished from this group by their less pronounced carination, outwards curved upper wall and thin rims. The bowl from grave 19 was found in a grave with a biconical pot and a seax (now lost). These objects date to the sixth and seventh century. The bowl from grave 75 was found with iron belt fittings, a knife and another pottery vessel. The finds date mainly in the sixth century. The context of bowl 1838-5 is not known.

According to Siegmund's typology these bowls can be classified as type Sha 2.21, just as the forgoing group, which dates them in Rhineland phase 5-8 (555-610/640).[639] This coincides with the dates of the finds that are associated with the Maastricht bowls.

Bowl: red bowl, carinated wall, footplate, roulette stamp decoration
Vrijthof: 168 (1535-1).

This bowl is the only specimen, which has a clear distinguishable foot plate and is decorated (fig. 10.36). The decoration consists of a single line of roulette stamped decoration of small rectangles applied on the upper wall. The bowl is part of a grave goods assemblage of a man (based on the presence of a seax) and is found together with a jug near the feet. The seax dates to the sixth century, the iron buckle in the second half of the fifth and first half of the sixth century, the other finds (a knife and iron rods) are difficult to date precisely. According to Siegmund this bowl should be classified, as the bowls described above, as type Sha 2.21. The bowls without decoration date to Rhineland phase 5-8, those with roulette decoration to Rhineland phase 6-8 (570-640).[640]

(632) Gose 1976, nrs. 443-448. (633) Siegmund 1998, 155, Abb. 67. (634) Brulet 1990, type 413: assiette a large marti horizontal, pâte brun clair ou rougeâtre à rose, surface lisse, engobe rouge orange. (Derive du type CHENET 313), 39, planche 3. (635) Siegmund 1998, 154-156. (636) Siegmund 1998, 154-156. (637) Siegmund 1998, 154-156. (638) Müssemeier *et al.* 2003, 67. (639) Siegmund 1998, 154-156. (640) Siegmund 1998, 154-156.

Plates/bowls: carinated wall, ring stand
Vrijthof: 110 (1541-1); 279 (1797-1).

One of the Vrijthof bowls on a ring stand is not decorated, the other one is decorated with a roulette stamp decoration of multiple lines of rectangles applied on the upper wall (fig. 10.36). Both the bowls have a rim which is not thickened and a slightly outward curved upper wall. The decorated bowl from grave 110 is part of the grave goods assemblage of a woman which consists furthermore of various glass beads, a biconical pot and a number of simple bronze and iron rings. These finds mainly date to the sixth century.

The bowl without decoration, from grave 279, was found with a knife, which is difficult to date precisely.

Bowls of this kind can best be classified as Siegmund's Sha. 2.31, although this type is characterised by a straight or slightly inward curved upper wall.[641] This type dates to Rhineland phase 4 (530-555). The decoration is not considered to be a chronological significant feature for these bowls. This is difficult to verify on the basis of the small sample from Maastricht. The Franken AG maintained this type and date it to their phases 3-5 (460/80-580/90).[642]

Bowls: flat bottom
Vrijthof: 0 (1838-4).

The context of the bowl (1838-4) with a flat bottom is not known (fig. 10.36). It remains uncertain whether the glass vessel and four other vessels with which it is associated belonged to the same context. The bowl is of a fine grey fabric and has a carinated wall. The bowl shows some resemblance with the examples of type Sha 2.5 from Siegmund's research area, although these are often baked in an oxidised atmosphere. Moreover, the straight or slightly outward curved upper wall and slightly thickened rim do not match with Siegmund's description of this type. Bowls of this kind are not identified by the Franken AG, neither are they by Legoux, Périn and Vallet. The bowl is probably a local product.

Jugs and jars
The number of handles and the presence or absence of a spout makes the distinctions between Merovingian jugs and jars (this is different from the terminology for Roman jugs and jars, see section above). Jugs never have more than one handle, and are distinguished from jars by the presence of a spout. For the Merovingian period jugs are usually divided into two groups based on the shape of their spout: jugs with a trefoil spout and jugs with a little spout (formed by the slight outwards bending of the rim).[643] From the Vrijthof cemetery only jugs with a trefoil spout are known. In the category of trefoil jugs a distinction is made between the elongated and the spherical body shapes.[644]

Jars can have one or more handles, but from the Vrijthof cemetery only a specimen with one handle is known. The criteria by which they are classified are the relative width of the mouth (narrow mouthed specimen are early, wide mouthed are later) and the shape of the body.[645]

Jugs and jars are often of a grey and coarse fabric and as a consequence regularly regarded as ordinary objects, which received little specialized scholarly attention, opposed to the biconical pots (see section below) which are of a fine fabric and are often polished and with decoration. For now the Vrijthof specimens will be classified according to the typologies of Siegmund, the Franken AG and Legoux, Périn and Vallet and the finds they are associated with will be discussed.

Trefoil jugs: elongated
Vrijthof: 18 (1662-1).

The relation of body height to belly diameter served Siegmund to divide between elongated jugs and globular jugs. Jugs with an index less than 1 are considered to be elongated specimens, those with an index which equals or is more than 1, are identified as globular jugs.[646]

The only elongated specimen from the Vrijthof cemetery (fig. 10.37) was found in grave 18 and is a relatively small jug (height: 10 cm). It was found with a glass palm cup which dates to Rhineland phase 9 (640-670).

Elongated jugs are according to Siegmund (type Kan 1.12) deposited in Rhineland phases 2-4 (440-555) yet mainly in phase 3 (485-530).[647] The jug from grave 18 can be considered a relatively old object or survival in the grave, what is in contrast with the idea that these grey jugs are somewhat ordinary vessels for which a motivation for their prolonged preservation is difficult to perceive.

The Franken AG, however, question the validity of the index to distinguish the elongated specimen so strictly from the globular specimens.[648] The Franken AG did not strictly classify a considerable number of trefoil jugs because their index lies close to 1. They were not used as datable objects for graves. Accepting a transitional zone in which also the associated grave finds are used to date the jugs concerned seems a plausible solution. The elongated jug from the Vrijthof cemetery of which the find context is known, could be dated somewhat later. Its index, however, is not very close to 1. Giving a precise date for these jugs remains ambiguous considering their associated finds. The Franken AG united types Siegmund Kan 1.11 and 1.12 as one type, which dates to their phases 2-4 (400-565).[649] Legoux, Périn and Vallet also make a difference between elongated and squat trefoil jugs, but clear criteria to distinguish them are absent. Elongated jugs are classified as type 401, which dates to their phases PM1 (440/450-470/80) and more sporadically in phase MA1 (470/80-520/30).[650]

(641) Siegmund 1998, 156. **(642)** Müssemeier *et al.* 2003, 67-68. **(643)** Siegmund 1998, 146-153 **(644)** Siegmund 1998, 151. **(645)** Siegmund 1998, 146. **(646)** Siegmund 1998, 150-151. **(647)** Siegmund 1998, 151. **(648)** Müssemeier *et al.* 2003, 66. **(649)** Müssemeier *et al.* 2003, 66 **(650)** Legoux/Périn/Vallet 2004, 20, 46, 55 (type 401).

Fig. 10.37
Various jus and jars (scale 1:4).



Trefoil jugs: squat
Vrijthof: 78 (1524-1); 85 (1421-1); 300 (1805-1).

In the category of trefoil jugs the globular vessels are more numerous in the Vrijthof cemetery than the elongated ones, although only the one from grave 300 can without doubt be classified as such. The two other jugs show an index close to the index determined to distinguish elongated from globular types, what makes their strict classification as Siegmund type Kan 1.2 (Rhineland phase 8: 610-640) somewhat arbitrary (fig. 10.37).[651]

The jug from grave 85 was found together with a globular glass beaker, which dates to Rhineland phase 7 (585-610) and various glass beads. The jug from grave 78 is associated with a biconical pot, which dates to Rhineland phases 7-8 (585-640).

The jug from grave 300 was found in a grave, which also contained a head of a lance (lost, date cannot be established).

The Franken AG maintained Siegmund's type but date it to their phases 5-7 (565-640/50).[652] Similar jugs are classified as type 402 in the typology of Legoux, Périn and Vallet, which dates to their phases MA2-MA3 (520/30-600/10), they can also sporadically occur in the phase before and thereafter.[653] I will further discuss the problems with the dating of the jugs in the volume on the Saint Servatius cemetery.

Jugs: carinated wall
Vrijthof: 228 (1644-1); 273 (1828-1).

The red jug of fine burnished ware with a carinated wall from grave 288 is exceptional considering the repertoire of shapes and colours generally associated with Merovingian jugs (fig. 10.37). The jug has a height of 15.2 cm, it has a flat base and a trefoil spout. The handle is fixed at the rounded rim and ends approximately at the middle of the body. It has a decoration of five grooves applied to the upper wall. No parallels for this jug are known to me until now and because no other finds can be associated with this jug it is difficult to date it more precisely than the period during which elongated jugs were generally deposited in graves (Rhineland phases 2-4: 440-555).

The black jug with carinated wall of fine burnished ware from grave 273 is exceptional, and similar vessels are not known to me up till now (fig. 10.37). It has the appearance of a fusion of a biconical pot (with sharp carination) with the pronounced trefoil spout and handle as known from Merovingian trefoil jugs. At the spout and on the carination underneath the spout, some remains of a liquid that was once poured out of the jug can be observed. Because the traces are visible it is likely that it was of an oily or greasy substance. Considering the shape of the jug it can be assumed that it was intended to imitate the shape of bronze jugs, for which this shape is more common. This suggestion is inspired by the presence of two bulbs on the handle where it is fixed to the rim, that seem to imitate bronze rivets by which the handle was fixed to the body on bronze specimens. Comparable bronze jugs of this kind are known from the collection of the Valkhof museum in Nijmegen, such as for example jug 233.[654] This specific bronze specimen dates probably from the second century. No other finds are known from this grave. Considering the character of the cemetery it can be assumed that the grave is Merovingian, the jug can date to an earlier period.

Jar
Vrijthof: 258 (1840-1).

The jar is of a coarse, grey fabric. It has a height of 11.3 cm and a relatively short handle (fig. 10.37). The jar has an open appearance because of the relatively large diameter of the mouth. It was found in a grave which also contained a pottery bottle and various beads. This jar can be classified as Siegmund Kru 1.3 and dates to Rhineland phase 5 (555-570).[655] The Franken AG did not identify this type. Legoux, Périn and Vallet classified similar jars as type 400, which dates to their PM-MA1 (440/50-520/30).[656] The pottery bottle which is associated with the jar is a unique specimen which was at first identified as an example of the late Merovigian period. On the basis of this jar it can be assumed that this bottle needs to be dated differently, possibly much earlier. Both the pottery vessels from grave 258 are difficult to date. The beads from this grave show a wide dating range but it is likely that the complete string dates to the first half of the sixth century. For now the jar is dated to the sixth century.

Beakers, ribbed wall
Vrijthof: 87 (1393-1); 0 (1691-1).

Two beakers of the Vrijthof cemetery have a ribbed wall. Beaker 1691 (context not known) has not been made carefully (fig. 10.38). Spots of the white paste underneath the grey/black surface can be observed. The beaker from grave 87 is also grey, its ribs are less rounded and the fabric is much harder. It has a height of 11 cm and the ribs are applied on the larger part of the outer surface. A good parallel for this beaker is known from Nittel-Junkertswies grave 8.[657] This beaker has a clearly pronounced foot and concave bottom and its ribs are more carefully applied. Böhner makes the remark that the ribs do not form one part with the Nittel-Junkertswies beaker but are fixed onto it. Böhner refers to Belgium and France as the main distribution area of such beakers and dates them to his Stufe IV (seventh century).[658] The Vrijthof specimen was found together with a glass vessel which dates to the end of the sixth and beginning of the seventh century.

Legoux, Périn and Vallet identified beakers with a ribbed wall as type 398 and date them to their phases MR1-MR2 (600/10-670).[659] Is seems plausible to date the Vrijthof beakers to the seventh century.

Beaker: globular, wide neck
Vrijthof: 258 (1839-1).

The beaker or bottle from grave 258 is of a very hard and compact fine shiny dark grey ware and is a unique specimen for the Merovingian period up till now (fig. 10.38). It is found in an undisturbed grave at the feet of the deceased, together with a pottery jar (Rhineland phase 5: 555-570). This bottle can therefore without doubt be dated to the second half of the sixth century and thereafter. A necklace of beads and a bronze ring are also known from this grave, which are indications for the burial of woman.

On formal grounds it is possible to place this beaker/bottle in Siegmund's typology. The indexes point towards type Fla 2.2 (bottle with a relatively wide neck and globular belly) although the sagging base and hollow rim are absent.[660] This type of bottles is dated to Rhineland phase 11 (705-740) what would make the accompanying jar an antique in this grave. This seems unlikely because of the plain appearance of the jar. Moreover, in view of the differences between the Vrijthof bottle and the specimens brought together by Siegmund under his type Fla 2.2 and an identification as this type is unlikely. Probably this bottle should be dated earlier than phase 11.

Beakers, various
Vrijthof: 299 (1816-1).

The beaker/goblet from grave 299 is of Mayener coarse ware, is orange/red and has a height of 6.8 cm (fig. 10.38). It has a small foot stand from which the wall extends in a globular shape with an inverted neck and slightly thickened outwards folded rim. Exact parallels for this beaker are not known. It can be compared with Krefeld-Gellep type 100/101 (Pirling/Siepen), although the examples of this type are of a yellowish colour and have a less thick wall.[661] This type dates around the middle and the second half of the fourth century. No other finds are associated with this beaker.

Globular pot
Vrijthof 36 (1622-1).

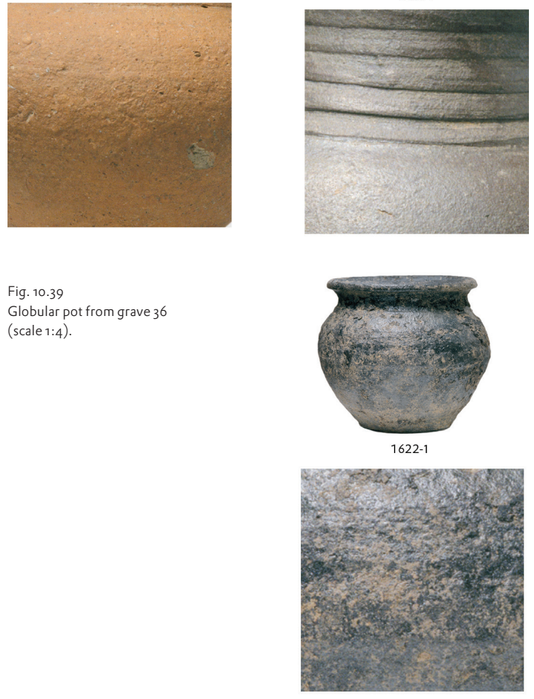
A black globular pot of a coarse, hard baked ware was found in grave 36 (fig. 10.39). Some organic fired residue can be observed on the pot. It has horizontal production ribs on the outer surface. Although globular, the form of this pot does not resemble the egg-shaped vessels (*Wolbwandtöpfe*). It was found in a grave with a glass palm cup which dates to the second half of the seventh century.

(651) Siegmund 1998, 150-151; Müssemeier *et al.* 2003, 66. (652) Müssemeier *et al.* 2003, 66. (653) Legoux/Périn/Vallet 2004, Type 402, 20, 46, 55. (654) Den Boesterd 1956, 67-68, plate X. (655) Siegmund 1998, 147. (656) Legoux/Périn/Vallet 2004, type 400, 20, 46, 55. (657) Bohner 1958, 46, Taf. 3, nr. 3 (type B3: *Zylindrische Fussbecker*). (658) Böhner 1958, 46. (659) Legoux/Périn/Vallet 2004, type 398, 20, 46, 55. (660) Siegmund 1998, 146. (661) Pirling/Siepen, 193.

Fig. 10.38
Various beakers (scale 1:4).



Fig. 10.39
Globular pot from grave 36 (scale 1:4).



Biconical pots

Twenty three biconical pots were found in the Vrijthof cemetery. Biconical pots, with their carinated wall as characteristic element, are the most common pottery type in Merovingian cemeteries. This pottery has formerly been considered as a 'luxurious' product, especially made for the deposition of food and liquids in graves. Research of pottery remains from early medieval settlements showed that biconical pots were used outside funerary rites as well.[662] The question remains whether the biconical pots used in funerary contexts are different from those used in more mundane contexts.[663]

The chronological analyses of pottery shapes and decoration patterns are mainly based on the complete or nearly complete vessels from graves.[664] Siegmund tested the chronological significance of the morphological characteristics that were established and used for a long time by German scholars.[665] Some specific morphological and decorative developments, according to Siegmund's analyses, are considered to be chronologically significant (for the lower Rhine area). For Siegmund's research area this resulted in a number of features that can be considered as evidently early or late, and features that are more difficult to place in the chronological sequence. The obvious chronological features are the shape of the upper wall (concave or straight), the pronunciation of the carination (sharp or rounded), the decoration (not decorated, grooves, single stamps or rouletting) and the general shape (squat or elongated). Siegmund captured these features in five basic form groups and four groups with specific chronological features; in combination this resulted in 28 new types with a chronological significance.[666] The Franken AG based their classification mainly on the decoration patterns, and altered the classification of Siegmund to some degree; their classification scheme consists of twenty-two pot types.[667]

Legoux, Périn and Vallet on the other hand made a classification of 12 biconical pot types on the basis of finds from northern France, although the variation in pot forms is comparable to Siegmund's research area.[668] Périn made the remark that the classification of this variation would result in an unworkable detailed typology, hence the identification of a limited number of pot types.[669] Legoux, Périn and Vallet defined proportional metric criteria, just as Siegmund, with the one difference that they are more descriptive in their definitions while Siegmund provides us with strict values for the assignment of pottery vessels to specific typological groups. Although described differently, the main chronological marker, which is the general pot shape, is central to both typology schemes.[670] The elements in which Legoux, Périn and Vallet differ from Siegmund are the significance of the position of the carination, the base/carination diameter ratio, the lower wall shape, and the indifference between ridges on the upper wall and those at the neck (*wulst* according to for example Siegmund).[671] Legoux, Périn and Vallet provide us with an additional classification of the various decorations applied by stamps. The variation in the stamped decorations on the Maastricht pots, however, is restricted and their classification is therefore of limited use.

Will provides us with the most recent work on the characteristics of biconical pots, based on the finds from Worms and surroundings.[672] He identified various features of biconical pots (mainly on the basis of the work of Böhner and Hübener), with the aim to discover certain statistical significant correlations between them. Numerous distribution maps of these specific features can be consulted in this study. The formerly neglected features of biconical pots that are discussed by Will are the rim-shape, bottom-shape and the complete decoration schemes (the combination of various decorations and their positions on single pots). Will's work is interesting because of the identification of and subsequent correlation of various characteristics in his research area, but it does not offer new clear cut typo-chronological type-groups for the chronological analysis of biconical pots.

The typologies of Siegmund, the Franken AG and Legoux, Périn and Vallet will form the basis for the classification of the biconical pots from Maastricht. The biconical pots from Maastricht are discussed per Siegmund type, after which also a Franken AG type and, when relevant, other types, are assigned to the pots.

The five basic pot forms of Siegmund are distinguished on the basis of their indexes (table 10.9). These five groups are supposed to represent a general chronological development. This general development is refined with specific chronological features such as the shape of the upper wall and decoration patterns.[673] There are however problems. Pots of very different sizes and colours, and therefore with very divergent appearances, can be classified, on the basis of proportional indices and identified chronological features, as examples of the same type. These features are not considered as distinguishing criteria by Siegmund and the Franken AG, neither are they by Legoux, Périn and Vallet. Another point of discussion is that it is always ambiguous to draw sharp typological lines between certain groups of objects defined on the basis of metric criteria.

Colour is until now hardly used as a typological criterion. Sporadically it is mentioned as a cultural aspect of the funerary rite. Basically two colours can be identified; the red/orange pots being fired in an oxidizing atmosphere, and the grey/black pottery being produced in a reducing atmosphere or being the result of an atmosphere with abundant smoke leaving a thin dark top layer. The way of firing was a deliberate choice of the potter, and the deposition of a certain pot was the choice of persons responsible for the burial. Interesting research questions for future research could concern the correlations between colour and other characteristics of biconical pots (or other forms of pottery), and between colour and other aspects of the burial rite or the deceased.[674] The majority of the Maastricht pots are grey/black (table 10.10). There is however a correlation between rounded carinations and red pots, which are two relatively rare features. More variation can be observed with regard to the absolute heights of the pots (table 10.10). It will be analysed how height relates to the identified types as discussed below.

Table 10.9
The five basic biconical pot groups according to Siegmund.

	Belly/Height	Mouth/Belly	Basic Shape	Phases
Basic group 1	≥ 1.27	≥ 0.85	Squat and open	3-7
Basic group 2	≥ 1.27	< 0.85	Squat and more closed	4-8
Basic group 3	1.27 > ≥1.07	≥ 0.85	Elongated and open	4-8
Basic group 4	1.27 > ≥1.07	< 0.85	Elongated and more closed	4-8
Basic group 5	< 1.07	-	Elongated	4-9

Table 10.10
The biconcial pots

Context	Pot	Type	Phase	H	Colour
V-88	1416-1	Kwt 2.12	4	13.2	black
V-0	1838-1	Kwt 2.21	3-4	5.9	red
V-187	1639-1	Kwt 2.31	5	9.9	black
V-274	1793-1	Kwt 2.31	5	8.5	black
V-110	1626-1	Kwt 2.31	5	7.6	black
V-230	1756-1	Kwt 2.31	5	9.7	black
V-0	1838-3	Kwt 2.32	4-5	9.1	black
V-0	1829-1	Kwt 2.32	4-5	9.2	black
V-19	1607-1	Kwt 2.42	7	7.6	black
V-105	1472-1	Kwt 2.43	8-9	6.9	black
V-223	1650-1	Kwt 2.43	8-9	7.7	black
V-292	1790-1	Kwt 2.43	8-9	9.1	black
V-0	1838-2	Kwt 2.43	8-9	9.5	red
V-88	1395-1	Kwt 3.12	6-7	13.9	black
V-288	1785-1	Kwt 3.21	7-8	9.8	black
V-287	1784-1	Kwt 3.21	7-8	11.8	black
V-0	1645-1	Kwt 3.22	End7-8B	8.6	black
V-218	1686-1	Kwt 3.22	End7-8B	11.0	black
V-0	1175-2	Kwt 3.22	End7-8B	11.9	black
V-78	1525-1	Kwt 3.22	End7-8B	13.1	black
V-11	1666-1	Kwt 3.23	8	9.8	red
V-84	1379-1	Kwt 4.11	7-8A	9.2	red
V-0	1755-1	Kwt 4.11	7-8A	14.2	red

Biconical pot: Siegmund type 2.12

Vrijthof: 88 (1416-1).

The pot from grave 88 is classified as Siegmund's type Kwt 2.12 on the basis of the combined decoration of single stamp impressions with grooves (fig. 10.40). The single stamp decoration consists of vertical undulating lines. The grooves are applied both above and below the zone with single stamp decoration. This pot was found together with a glass vessel and another biconical pot which is also placed in basic form group group 4 (see below). Pots of this type date to Rhineland phase 4 (530-555).[675] The Franken AG identify these pots as type Kwt 2B and date them mainly to their phases 4-5 (510/25-580/90).[676]

Biconical pot: Siegmund type 2.21

Vrijthof: 0 (1838-1).

Pot 1838 is a stray find; it is classified as Siegmund's type 2.21.[677] This type is characterized by a straight upper wall and single stamp impressions (fig. 10.41). The single stamp decoration on this pot consists of two columns and four rows of small rectangular impressions. In contrast to the other single stamps consisting of columns of rectangular impressions, the stamps on this pot are not applied in a straight horizontal line but stagger. This pot is associated with a glass vessel and four pottery vessels of various dates. It is uncertain whether these objects were originally deposited as one ensemble.

Fig. 10.40
Biconical pot: Siegmund type 2.12, grave 88 (scale 1:4).


1416-1



Fig. 10.41
Biconical pot: Siegmund type 2.21, no context, find number 1838-1 (scale 1:4).


1838-1



(662) See for instance: Un village au temps Charlemagne. Moines et paysans de l'abbaye de Saint-Denis du VIIe siècle à l'an mil, Paris 1988, 318-331; Will 2005, 69-71; Van Wersch 2006. It is also regularly present in settlements of the Southern Netherlands. (663) This question can of course be resolved by investigating the similarities and differences between pottery from cemeteries and from settlements. (664) Böhner was the first to pay extensive attention to the typo-chronology of pottery. For a more extensive bibliography of early medieval pottery research, see Verhoeven 1998. (665) Siegmund 1998, 119-135. See chapter 9 for a short discussion of Siegmund's methodology.

(666) Siegmund, 120-135. (667) Müssemeier *et al.* 2003, 56-63. (668) Legoux/Périn/Vallet 2004, 44-46, types 386-397 (and some examples of their types 383 and 385). (669) Périn 1980. (670) It is generally accepted that there is a chronological development from open wide forms to more closed and elongated forms. (671) Legoux/Périn/Vallet 2004, 238-239; Siegmund 1998, 120-135. (672) Will 2005. (673) Siegmund 1998, 120-135. (674) See also the discussion on the tensed relation between typology and the cultural aspects of funerary rites in chapter 1 of this thesis. (675) Siegmund 1998, 129. (676) Müssemeier *et al.* 2003, 58-59. (677) Siegmund 1998, 129.

The pots of Siegmund type Kwt 2.21 date to Rhineland phases 3-4 (485-555). The Franken AG classify similar pots as type Kwt 2B and date it to their phases 4-5 (510/25-580/90), and sporadically to phase 6 (580/90-610/20); according to their classification this pot dates somewhat later than it is dated by Siegmund. The stamp is identified as type 409 of Legoux, Périn and Vallet, which dates predominantly to their phase MA1 (470/80-520/30).[678] The Vrijthof pot may thus date to the end of the fifth century and the first half of the sixth century.

Biconical pots: Siegmund type 2.31

Vrijthof: 110 (1626-1); 187 (1639-1); 230 (1756-1); 274 (1793-1).

The grooves on the biconical pot from grave 110 are applied in two zones; one zone of three grooves can be found beneath the neck and one zone also of three grooves just above the carination (fig. 10.42). The pot is part of an extended grave goods assemblage of a woman, consisting of a string of glass beads, a gold pendant, a pendant of a ball of iron in a silver casing, several bronze and iron rings, some belt fittings and a pottery bowl.

The pot from grave 187 has a decoration of relatively deep grooves, which are applied as a spiral that covers the entire outer surface of the upper wall.[679] Similar groove decorations are not present on the other Vrijthof pots. This pot was found in a relatively 'rich' grave of a woman, which contained various beads, garnet disc brooches, golden filigree necklace pendants and two silver earrings with garnets.

The grooves on the pot from grave 230 are comparable to those on pot 1626-1; one zone of three grooves is applied underneath the neck, and one zone of, in this case, four grooves above the carination (fig. 10.42). The pot is part of an extended grave goods assemblage, probably of a man, consisting of several objects (comb, knife, flint, key etc.) and purse mounts.

The grooves of the pot from grave 274 are a few slightly discernible horizontal lines (fig. 10.42). This decoration is associated with a more pronounced but disordered zigzag line, which is applied just above the carination. This zigzag line could be a secondary alteration. This grave is that of a woman, it contained two garnet disc brooches, amber beads and one earring.

The four pots are all classified as Siegmund's type Kwt 2.31, which dates to Rhineland phase 5 (555-570).[680] The Franken AG classified similar pots as type Kwt 3A, which dates predominantly to their phases 4-5 (510/25-580/90) and sporadically to their phase 6 (580/90-610/20).[681] Grooves are a decoration that can, according to the Franken AG, be found on pots of all basic pot forms (groups 1-5) and are therefore dated over a longer period in their research area than they are in the Rhineland.

Biconical pots: Siegmund type 2.32

Vrijthof: 0 (1829-1); 0 (1838-3).

These two relatively small black pots are identified as Siegmund's type Kwt 2.32 on the basis of their dimensions and decoration of grooves (fig. 10.43).[682] The decoration on pot 1829-1 (context unknown) consists of one zone of two or three horizontal lines beneath the neck. The decoration on pot 1838-3 (context unknown) consists of two separate zones of each three lines on the upper wall; one beneath the neck and one above the carination. No other finds can be associated with these biconical pots.

Siegmund dates type Kwt 2.32 to Rhineland phases 4-5 (530-570). The Franken AG classified similar pots as type Kwt 2A and date them to their phases 4-5 (510/25-580/90),[683] thus a dating in accordance with Siegmund's date range.

Biconical pot: Siegmund type 2.42

Vrijthof: 19 (1607-1).

This pot without decoration is classified as Siegmund's type Kwt 2.42 (fig. 10.44). This pot is one of the smaller pots from the Vrijthof graves and has a rather pronounced neck ridge. The biconical pot was found together with a seax (lost) and a pottery bowl; it can thus be assumed that this pot was part of a grave goods assemblage of a man. Biconical pots of Siegmund's type Kwt 2.42 date to Rhineland phases 7-8B (585-640).[684]

Biconical pots: Siegmund type 2.43

Vrijthof: 105 (1472-1); 223 (1650-1); 292 (1790-1); 0 (1838-2).

A correlation between the absence of decoration and elongated and closed pot shapes can be observed; the pot from grave 19 (see above) is not that elongated and is an exception. Three of the undecorated pots are black and one is red (fig. 10.45). The red undecorated pot 1838-2 (context unknown) was found together with four other pottery vessels and one glass vessel. It remains uncertain whether these were part of one assemblage of grave goods. The black undecorated pot from grave 105 was found in a grave, which also contained iron belt- and shoe fittings with silver and brass inlays, a seax, a glass vessel and fire steel with flint. The datable finds from this grave date to the seventh century. The pot from grave 223 was from a grave in which also a foot fragment of a glass vessel (fifth and sixth century) was found. The pot from grave 292 was associated with a seax and a knife. The seax dates from the end of the sixth to the seventh century.

All the four elongated and undecorated specimens are classified as Siegmund's type Kwt. 2.43 and date to Rhineland phases 8-9 (610-670).[685] This type is maintained by the Franken AG and dates to their phases 6-8 (580/90-670/80).[686]

(678) Legoux/Périn/Vallet 2004, 20, 47, 55 (type 409). (679) A photograph of this biconical pot from grave 187 is unfortunately not available; a drawing can be found in the catalogue of graves and finds. (680) Siegmund 1998, 129. (681) Müssemeier *et al.* 2003, 59. (682) Siegmund 1998, 129-130. (683) Müssemeier *et al.* 2003, 58.

Fig. 10.42
Biconical pots: Siegmund type 2.31 (scale 1:4).



Fig. 10.43
Biconical pots: Siegmund type 2.32 (scale 1:4).



Fig. 10.44
Biconical pot: Siegmund type 2.42 (scale 1:4).





Biconical pots: Siegmund type 3.11 and 3.21

Vrijthof: 287 (1784-1); 288 (1785-1).

The large biconical pot of basic form group 2 from grave 288 can be classified as Siegmund's type Kwt 3.21 on the basis of its roulette stamp decoration consisting of multiple lines of rectangular roulette stamp impressions (fig. 10.46).[687] For the pot from grave 287 it is difficult to tell whether it is decorated with a stamp of multiple lines or single line; it seems to be a single roulette stamp impressions. The carination creates some difference regarding the appearance of the pots. The carination of the pot from grave 288 (pot 1785) is sharp, but divides the pot in a relatively short lower wall and long upper wall, which gives the pot a somewhat sagging appearance. The pot from grave 288 was found in a grave, which also contained a seax, francisca, fire steel, flint and belt fitting (lost, no further significant information available). The biconical pot from grave 287 cannot be associated with other finds. Pots of Siegmund's type Kwt 3.21 (multiple roulette stamp lines) date to Rhineland phase 7-8 (585-640).[688] This type can also be identified as type Kwt5B of the Franken AG, which dates to their phases 5-7 (565-640/50).[689] Pots of Siegmund's type Kwt 3.11 (single roulette stamp lines) date to Rhineland phase 6 and the beginning of phase 7 (570-c.600).[690]

(684) Siegmund 1998, 130. (685) Siegmund 1998, 130. (686) Müssemeier *et al.* 2003, 59. (687) Siegmund 1998, 130-131. (688) Siegmund 1998, 130-131. (689) Müssemeier *et al.* 2003, 61. (690) Siegmund 1998, 130.

Fig. 10.45
Biconical pots: Siegmund type 2.43 (scale 1:4).



Fig. 10.46
Biconical pots: Siegmund types 3.11 and 3.21 (scale 1:4).



Biconical pot: Siegmund type 3.12 (shiny surface)
Vrijthof: 88 (1395-1).

The second biconical pot from grave 88 is classified as Siegmund's type Kwt 3.12 on the basis of its uninterrupted 'complex' roulette stamp decoration (fig. 10.47). One roulette stamp line consists of uninterrupted alternating straight and reversed V-shaped impressions, and one single line of rectangular impressions is applied above it. This is the largest of the Vrijthof biconical pots and the single one with a shiny black surface. Siegmund's type Kwt 3.12 dates predominantly to Rhineland phases 6 (570-585) and sporadically to phase 7 (585-610).[691]

Biconical pots: Siegmund tye Kwt 3.12
Vrijthof: 78 (1525-1); 218 (1686-1); 0 (1175-2); 0 (1645-1).

Four pots are identified as Siegmund's type Kwt 3.12 on the basis of their dimensions and roulette stamp decorations consisting of single lines of rectangular impressions (in all probability single lines on pot 1525-1; these may also be multiple lines of roulette stamp impressions) (fig. 10.48). A combination with grooves can be observed on the pots from grave 78 and pot 1645-1 (context unknown). Some of these roulette stamps are carefully applied (as on pot 1645-1). On some pots the outlines of the rectangles are vague and the number of applied lines is difficult to distinguish.

Of the pots with lines of rectangular roulette stamp impressions the pots 1645-1, 1175-1 (contexts unknown) and the pot from grave 218 cannot be associated with other finds. Grave 78 contained also a trefoil pottery jug.

Fig. 10.47
Biconical pot: Siegmund type 3.12 (scale 1:4).

Fig. 10.48
Biconical pots: Siegmund type 3.12 (scale 1:4).



Siegmund's type Kwt 3.12 dates predominantly to Rhineland phases 6 (570-585) and sporadically to phase 7 (585-610).[692]

Biconical pot: Siegmund type 3.13
Vrijthof: 11 (1666-1).

The decorated red pot from grave 11 was part of an assemblage consisting furthermore of a seax and accompanying bronze scabbard fittings (fig. 10.49). These finds date to the seventh century. Siegmund makes a distinction between the early and late roulette stamp groups whereby a pattern of single lines of rectangle/triangle roulette stamp impressions is defined as the early group.[693] The roulette stamp impressions on the pot from grave 11 seem to be a result of a roulette stamp of single lined roulette stamp (but it is also possible that they are a result of a double lined roulette stamp; this cannot be identified unambiguously). Since the majority of the finds from grave 11 date to the seventh century it fits best with roulette stamp impression of multiple lines, which date later (Kwt 3.23, Rhineland phase 8: 610-640[694]) than roulette stamps impressions of single lines. The pot is however for now classified as Siegmund's type Kwt3.13, which dates to Rhineland phases 6-7 (570-610).[695]

Fig. 10.49
Biconical pot: Siegmund type 3.13 (scale 1:4).



(691) Siegmund 1998, 130. (692) Siegmund 1998, 130. (693) Siegmund 1998, 126-127. (694) Siegmund 1998, 131. (695) Siegmund 1998, 130.

Fig. 10.50
Biconical pots: Siegmund type 4.11 (scale 1:4).



Biconical pots: Siegmund type 4.11
Vrijthof: 84 (1379-1); 0 (1755-1).

These two pots are identified as Siegmund's type Kwt 4.11 on the basis of their rounded carinations (fig. 10.50). Both the pots are red, and this seems to be a significant correlation. The pot from grave 84 was found in a distorted grave of which the outline is difficult to establish. No other objects are known from this grave and is seems as if the pot was deposited buried near the left foot, although this remains uncertain in view of the distorted condition of the grave.

Pot 1755-1 (context unknown) is exceptional since it shows two different single stamp impressions in combination with grooves. One consists of a grid of five columns and six rows of small rectangular impressions, the other of undulating lines of triangular/rectangular impressions. Siegmund's type Kwt 4.11 dates to Rhineland phases 7-8A (585-625).[696] The Franken AG did not identify this feature as type-defining.

Glass vessels

In cooperation with drs. M. Tolboom and dr S. Van Lith.[697]

Twenty-two complete or nearly complete glass vessels are known from the Vrijthof cemetery (table 10.11 and fig. 10.51). For two vessels an unambiguous dating to either the late-Roman or Merovingian period is difficult to determine (table 10.11). Some glass forms are long-living forms, and a transitional phase instead of a sharp division between the two periods should be considered. The majority of the types, however, can unambiguously be identified as Merovingian. Glass vessels dating to the Roman period are not unusual in Merovingian graves; a number of glass vessels from the Pandhof cemetery of the Servatius complex are obvious Romen specimens in Merovingian graves.[698] Various publications are available for the classification of Merovingian glass vessels. Next to the work of Siegmund (lower Rhine area) some studies that are specifically concerned with early medieval glass are consulted. Feyeux established a detailed typo-chronology on the basis of the glass finds from the cemeteries of the Meuse region in northern France.[699] The publication of Alénus-Lecerf is an important reference work for the Belgium Meuse region, although she did not create a typo-chronology but presented an overview of early medieval glass vessels from Belgium.[700] Another important reference work is the publication of Koch in which the glass finds of the *Runde Berg* near *Urach* (Southern Germany) are published along with references to glass finds of numerous other locations in Germany.[701] Pirling's publications of the cemetery of Krefeld-Gellep are indispensible since a high variety of glass vessels from both the late Roman and Merovingian period were found in this cemetery.[702] The most recent work is that of Maul, in which the typo-chronology of bell beakers (*Stürzbecher* and *Glockenförmige Becher*) and palm cups (*Tümmler* and *Glockentümmler*) are discussed.[703] These studies give access to a detailed typo-chronology for early medieval glass.

Merovingian Glass

The Merovingian glass vessels are classified according to the typologies of Siegmund and the Franken AG, and will be compared with the typo-chronology of Legoux, Périn and Vallet. The results will be complemented with the more specific and detailed typologies of Koch, Feyeux and Maul.[704] The work of Maul offers a detailed typology of bell beakers and palm cups with an extended overview of various finds throughout contemporary Germany, Belgium, Northern France and England. Next to the typological and chronological discussions, in which an extended research history of Merovingian glass is incorporated, Maul also discuss-

(696) Siegmund 1998, 131-132. (697) Tolboom 2005; 2006. Unpublished doctoral-thesis on the glass finds from the cemeteries Maastricht-Vrijthof and Maastricht-Pandhof (supervised by dr. S.M.E van Lith, Amsterdam Archaeological Centre, University of Amsterdam). (698) This collection will be discussed in detail in publication of the 'Saint Servatius cemetery'. (699) Feyeux 1995; 2003. (700) Alénus-Lecerf 1993; 1995. (701) Koch 1987. (702) Pirling 1966; 1979; 1989; 1997; 2000; 2003. (703) Maul 2002. A univocal definition of the basic glass groups does not exist. For the Vrijthof cemetery no further differentiation in the groups of 'Bell beakers' and 'Palm cups', as Maul suggests, is applied because the numbers are too small. (704) Koch 1987; Cabart/Feyeux 1995; Feyeux 2003; Maul 2002.

Fig. 10.51
Various glass vessels (scale 1:4).



Table 10.11
An overview of the glass vessel forms from the Vrijthof cemetery.

Merovingian glass vessels	
Hemispherical bowls with glass threads	1
Bowl with vertical ribs	1
Palm cups with plain rim	1
Palm cups with outward folded rim	1
Squat jars with short neck	7
Squat jars with long neck	3
Bell beakers	1
Unguent bottles	4
Cylindrical bottles	1
Subtotal	20
Late-Roman / Merovingian glass	
Unguentaria	2
Total	22

es interesting subjects such as the general find position of glass vessels in the grave, the function of various glass vessels, the association in graves with other food- and drink related objects, the variation in glass colour, etc. For now chronological questions are the main focus in the analysis of the glass vessels from the Vrijthof cemetery, although as much information as possible will be presented to enable further research such as Maul has initiated.

Bowls: hemispherical, with an opaque white spiral thread underneath the rim

Vrijthof: 309 (1732-1).

The bowl from grave 309 is of a very light blue-green glass. It has a hemispherical shape with a convex bottom. Underneath the rim an opaque white glass thread consisting of two windings is applied. It is the only find from this grave.

The hemispherical bowl can be classified as Siegmund's type Gla 1.3.[705] The most important characteristics of this type are the hemispherical shape and the opaque white threads underneath the rim. Siegmund dates these bowls to Rhineland phase 2 (440-485). The examples Siegmund mentions for this type are, however, somewhat arbitrary. The two bowls from the cemetery of Krefeld-Gellep that are included in Siegmund's typological research have glass threads of the same colour as the bowl itself.[706] In the typology of Koch a distinction is made between bowls with glass threads of opaque white glass and those made of glass of the same colour as the bowl.[707] Koch dates hemispherical bowls with white opaque threads underneath the rim in the second half of the fifth century and the first quarter of the sixth century (450-525).[708] The Franken AG maintained Siegmund's type 1.3, although they made the remark that glass threads of the same colour as the bowl can also be observed.[709] The Franken AG date this type to their phases 2 and 3 (c. 440-510/25). Legoux, Périn and Vallet classify hemispherical cups as type 437 and date them in their phases PM-MA1 (440/50-520/30).[710] In view of these dates, the assignment of this type to Rhineland phase 2 seems to be too limited.

Bowl: vertical ribs

Vrijthof: 0 (1838-7).

One bowl with vertical ribs is known from the Vrijthof cemetery (find context unknown). This mould blown bowl is light blue-green, is somewhat asymmetric, and has conical sides with vertical ribs and an indented base with pontil mark. It is a complete bowl with a height of 4.7 cm. No other finds can be associated with this bowl.

Similar bowls of this kind are not known from the Rhineland and the Belgian Meuse region. Neither are they identified by Pirling, Koch and Legoux, Périn and Vallet. A comparable specimen, however, is known from the cemetery of Aulnizeux 'La Vignette' (prov. Marne, north-eastern France).[711] Feyeux dates type 81, the general group of which the bowl from Aulnizeux (sub-type 81.3k) forms a part of, in the sixth century. Sporadically they occur thereafter.[712]

Palm cups

Siegmund established an index on the basis of which high, slim palm cups are distinguished from the lower, broad palm cups.[713] The higher, slim palm cups are generally described as '*Glockentummler*' (bell cups). Both Vrijthof specimens belong to the group of low and broad palm cups. Within this group Siegmund identified palm cups with simple rims (slightly pronounced and not folded) as type Gla 2.1, and those with broad and outward folded rims as type Gla 2.2, a classification which the Franken AG maintained.[714] Koch also makes this distinction.[715] Maul presents an exhausting list of palm cups and identified two main groups, predominantly on the basis of the mouth/belly ratio.[716] Feyeux classified palm cups as general types 55, 57 (bell cups) and 60 (folded rim).[717] In these groups some sub-types are identified, mainly on the basis of their decoration.[718] On the basis of these classifications, two forms of low and broad palm cups can be identified in the Vrijthof cemetery.

Palm cup: low and broad with plain rim

Vrijthof: 87 (1392-1).

The palm cup from grave 87 has a height of 4.6 cm and a mouth diameter of 8.3 cm. It is light blue and has a rather conical shape. The cup is associated with a pottery beaker which dates to the seventh century.

The palm cup can be classified as Siegmund's Gla 2.1. Siegmund dates these palm cups to Rhineland phase 7 (585-610).[719] Other typological studies identify more types in the group of palm cups. Feyeux for example classifies palm cups as the one from Vrijthof grave 87 as type 55.0.[720] Palm cups similar to the Vrijthof cup are know from the Middle Meuse area and north-eastern France. Feyeux (north-eastern France) dates these palm cups to the second half of the sixth century till the beginning of the seventh century. The specimens from the Middle Meuse area are dated to the seventh century.[721] The palm cup from grave 87 resembles type Koch VB, although one of the characteristics of this type, the inward folded hollow rim, is not present.[722] Koch type VB dates to the first half of the seventh century. According to the typology of Maul, the palm cup can be classified as type B1a (low and broad with a smooth surface).[723] This type appears in the second half of the sixth century, but dates predominantly to the end of the sixth century and beginning of the seventh century and can sporadically be found towards the end of the seventh century.[725]

Thus, the palm cup dates, according to Siegmund, Feyeuex, Alénus-Lecerf and Maul, to the same period. It is therefore justifiable to consider Siegmund's criteria for these palm cups as valid chronological indicators and place it in his group Gla 2.1.

Palm cups: low and broad with outward folded rim

Vrijthof: 36 (1623-1).

The main characteristic of this palm cup is the broad outward folded rim which resulted in a rounded cavity or hollow rim. The palm cup from grave 36 is yellow-green, has a height of 5.1 cm and a mouth diameter of 9.9 cm. It was found with a pottery vessel which is Merovingian but is difficult to date more precisely. It can be assumed, regarding the multiple resembling specimens that are known from Merovingian graves, that the cavity in the rim was created on purpose.[725]

The palm cup can be identified as Siegmund's Gla 2.2, Feyeux's type-group 60.0, Koch's typological group VA and Maul's type B2a. Siegmund dates these palm cups to Rhineland phase 9 (640-670) and the Franken AG, who maintained this Rhineland type, date them to their phases 7-8 (610/20-670/80).[726] Koch dates them to 650-700[727], as does Feyeux, although he expands this date to the beginning of the 8th century.[728] Maul's type dates mainly to the JM II (630/40-670/80) but can, although sporadically, also be found in contexts of the JMIII (670/80-720).[729]

Globualr beakers with short necks

Vrijthof: 39 (1574-1); 85 (1422-1); 88 (1390-1); 99 (1852-1); 116 (1564-2); 235 (1750-1); 407 (1522-1).

Globular beakers are well-represented in the graves of the Vrijthof cemetery. It is generally accepted that these beakers developed from squat forms to more elongated beakers with a long cylindrical or conical neck.[730] Seven beakers with a short neck are known from the Vrijthof cemetery. These beakers are characterized by their squat appearance, their globular or sometimes biconical body, their short and straight or slightly outward bent neck, and their concave bottom. All these beakers are made of bluish or greenish coloured glass, with the exception of beaker 1522-1 (grave 407), which is dark brown. One beaker, from grave 88, has a decoration of faint diagonal ribs.

The locations of these beakers in the graves are only known for graves 85, 39, 99, 235 and 407. In these graves the glass vessels were always placed near the feet. In three graves the beaker was found near the right foot together with pottery (in graves 85 and 235) or an unguent glass bottle (in grave 99). The graves 85 and 235 can be identified as those of women (on the basis of the associated beads), for grave 99 this remains indefinite. The beakers from grave 39 and 407 were found near the left foot. In grave 39 the beaker is part of the grave goods assemblage of a man (identified on the basis of a seax).

The globular beakers with short necks can be placed in Siegmunds typological group Gla 3.2, which is defined by the narrow mouth and concave bottom of the vessels.[731] This implies that a variety of shapes can be placed in this group and that decoration is not considered as a variable of importance, although the majority of the specimens that he mentions as examples of this type do show some decoration.[732] Furthermore, Siegmund does not make a distinction between beakers with a long or short neck. The summarily defined criteria for type Gla 3.2, as Siegmund also mentions himself, resulted in a relatively broad typological group. The beakers of this group are dated to Rhineland phase 7 (585-610). The Franken AG maintained this type but mention that it is an inconsistent group and that a date more precise than their phases 4-8 (510/25-670/80) cannot be given.[733] Only a small number of undecorated globular beakers are known from the French Meuse region. Feyeux classified globular beakers as his general type 90 and identified eight sub-types, mainly on the basis of the decoration applied, although various wall/body shapes can be observed in the illustrated examples.[734] The undecorated globular beakers with a short neck can be classified as his sub-type 90.0 (based on the absence of decoration) of which five examples are mentioned.[735] They are dated to the sixth and seventh century. Alénus-Lecerf discussed undecorated globular beakers from the Meuse region in Belgium and dated them to the fifth, sixth and seventh centuries.[736] Legoux, Périn and Vallet did not identify globular beakers, nor did Koch in her detailed study of the glass finds from *Der Runde Berg*. Regarding the mentioned dates, the globular beakers with a short neck of the Vrijthof cemetery cannot be dated more precisely than to the sixth and seventh century.

Globular beakers with long necks

Vrijthof: 21 (1619-1); 105 (1471-1); 116 (1564-1).

Three beakers have the same features as the beakers described above, but have a long cylindrical or conical neck. The beaker from grave 105 has a straight (cylindrical) neck. The shape of the neck of

(705) Siegmund 1998, 164. (706) Siegmund 1998, 164; Pirling 1966, 154-155, grave 5, Taf. 8,3, grave 407, Taf. 34,8, type 239, Typentafel 19. (707) Koch 1987, 206-207, 208-210. (708) Koch 1987, 208-210, type Koch IV H, Abb. 88. (709) Müssemeier *et al.* 2003, 69. (710) Legoux/Périn/Vallet 2004, 20, 49, 55 (type 437). (711) Cabart/Feyeux 1995, 29f., nr. 54, fig. 14; Feyeux 2003, 28, fig.3, T.81, 39, fig. 15; 173, nr. 669, Pl. 61, type 81.3k. (712) Feyeux 2003, 39-40, fig. 15, type 81, 165, 173, type 81.3k. (713) Siegmund 1998, 165-166. (714) Müssemeier *et al.* 2003, 69-70. (715) Koch 1986, 253-257. (716) Maul 2002, 68-79. (717) Feyeux 2003, 21, 28, fig. 3. (718) Feyeux 2003, 21, 37, fig. 13, type 55, 38, fig. 14, type 57, type 60. (719) Siegmund 1998, 166. (720) Feyeux 2003, 37, Fig. 13, T.55, T55.3k. (721) Alénus-Lecerf 1995, 68.

(722) Koch 1987, 255-256. (723) Maul 2002, Band 1, 153, 154-155. (724) Maul 2002, Band 1, 154. (725) See for example the specimens of Maul's type *Tümmler* B2a (20002, Band 2, Tafel 96-110). (726) Siegmund 1998, 166; Müssemeier *et al.* 2003, 69-70. (727) Koch 1987, 253, type VA. (728) Feyeux 2003, 151-158. (729) Maul 2002, 155-159. (730) Alénus-Lecerf 1995, 61-62. (731) Siegmund 1998, 166-167, type Gla 3.2. (732) Siegmund 1998. These examples are: Junkersdorf grave 232; Saarn 15; Sterkrade II grave 7.12. (733) Müssemeier *et al.* 2003, 70. (734) Feyeux 2003, 28, fig. 3, type 90, 40-41, pl. 16. (735) Feyeux 2003, 40, fig. 16, type 90.0, 178-179, pl. 65. (736) Alénus-Lecerf 1995, 63.

the other two beakers falls in between these two forms. The beakers have a pronounced lip, except the specimen from grave 21. The beaker from grave 116 has slightly discernable diagonal ribs on the belly as decoration. For two beakers it was established that they were placed near the left foot (graves 21 and 105). From grave 21 the skeleton is missing, but it seems as if the beaker was found at its original location in the grave (northeast, i.e near the feet), if it is assumed that the body was deposited with the head to the west. No other objects were found in this grave. The beaker from grave 105 was found with a biconical pot near the left foot. The other objects from this grave (seax, fire-steel, etc.), indicate that it was the grave of a man. This coincides with the above (globular beakers with short neck) described image that squat jars were placed near the right foot when buried with a woman, and near the left foot when buried with a man.

Because Siegmund does not make a distinction between globular beakers with a short and a long neck; these beakers can for now be classified as his type Gla 3.2 which dates to Rhineland phase 7 (585-610), although globular beakers similar to the Vrijthof specimens are not known from his research area. An explicit distinction between short and long necks is neither made by Feyeux, who classified all the globular beakers without decoration as one type (type 90.0, see above), which he dates to the sixth and seventh century.[737] The form of one of the illustrated beakers (although is has a decoration of vertical ribs), which is an example for his subtype 90.3l, resembles the specimens from Maastricht (especially the beaker from grave 116).[738] This beaker was found in grave 5 of the cemetery 'Le Trou du Loup' in Remicourt (Prov. of Marne, north-eastern France). It dates to the seventh century.[739]

Because of their longer and cylindrical or conical shaped neck and their more elongated appearance it is assumed that these beakers date later than those with short necks.[740] This seems to be in accordance with the observation that some undecorated beakers with long necks are known from seventh century contexts in the Belgium Meuse area.[741]

Bell beakers (Sturzbecher)[742]

Vrijthof: 126 (1573-1).

The bell beaker from grave 126 is of olive green glass and has a height of 10.9 cm. The rim is slightly thickened. It is decorated with faintly observable diagonal ribs and can be described as a 'low' quality glass because of the high amount of air bubbles within the glass and one glass bulb on the wall. The bottom of the beaker is convex and runs out pointed (has a 'peak'). This bell beaker is found with a knife and a small bronze buckle and strap end, which date to Rhineland phases 8-9 (610-670).

Bell beakers are quite common glass finds in Merovingian graves what makes the limited occurrence of such beakers both in the Vrijthof cemetery remarkable.[743] Three different bottom shapes have been identified for such beakers. Each seems to have a regional distribution of its own.[744] The beakers with rounded convex bottoms are mainly restricted to the Rhineland. Rounded convex bottoms with a peak are mainly known from the Meuse region in France and those with a drop have their main distribution area in the Belgium Meuse region. In the more recent work of Maul, however, only two types of bottoms are identified; those with a rounded convex bottom and those with a bulge (peak and drops are regarded as one type).[745] It can be assumed that the distinction between drops and peaks is not as unambiguous and that they should be regarded as one form. Cabart and Feyeux support this opinion.[746] The bottoms of the specimen in the Vrijthof cemetery testifies to the observation that bottoms with a drop or peak are mainly found in the Meuse valley region and that those with a convex bottom belong to the Rhine valley.

The general shape of bell beakers shows the same chronological development in all the three regions. They develop from short and squat with an s-shaped body to a carinated body and finally to a more cylindrical body.[747] The height of the beakers increases with time.

Siegmund identified four types of bell beakers on the basis of the relative diameter of their belly in order to avoid the subjectivity of Böhners more descriptive criteria concerning the shape of the wall.[748] Siegmund does not consider the shape of the bottom and decoration as chronological relevant criteria. The Vrijthof bell beaker can be classified as Siegmund's type Gla 8.1, which dates to Rhineland phase 4-5 (530-570); the bell beaker dates to an earlier period than the other Merovingian finds from this grave. The Franken AG changed the classification of the bell beakers as proposed by Siegmund. They introduced a less complicated arithmetic method to identify the different forms, what resulted in five bell beaker types.[749] The specimen from the Vrijthof can be identified as type Gla8B, which dates to their phases 4-6 (510/25-610/20), but predominantly to phase 5 (565-580/90). Legoux, Périn and Vallet identified three types of bell beakers (*gobelets campaniforme*) on the basis of the wall and bottom shape (they do not define the peak or drop at the bottom more precisely than *bouton*). The Vrijthof beaker can be classified as type 449, which dates to the second half of their phase MA2 (520/30-560/70) and in MA3 (560/70-600/10).[750] The Vrijthof beaker can be classified as Feyeux's general type 52 (bell beaker with a '*bouton*'); more specifically as sub-type 52.3l on the basis of the decoration.[751] These beakers date to the sixth century (mainly to 530-570).[752] A general consensus seems to exist on the dates given to bell beakers such as the one from the Vrijthof cemetery.

Unguent bottles: spherical and pear shaped with short neck

Vrijthof: 178 (1406-2); 250 (1795-2); 294 (1803-1); 408 (1521-1).

Four 'pear' shaped unguent bottles are identified in the Vrijthof cemetery. All the bottles are of light green or blue coloured glass, have a concave bottom, a cylindrical neck, and a height of approximately 8 to 13 cm. Early medieval bottles develop morphologically through time from specimens with spherical shaped bodies to those with more sagging bodies which are referred to as pear shaped bottles.[753]

Of the bottles with a sagging belly two were with certainty found next to the right foot (graves 178 and 250). Grave 178 is that of a woman, which was established on the basis of the associated beads.[754] The gender of the person in grave 250 cannot be established on the basis of the grave goods (a bronze shoe buckle). The bottle from grave 294 was found near the right side of the pelvis. Due to a disturbance of this grave the feet of this skeleton are missing so it could be possible that the bottle was originally located near the right foot as it was observed with the other bottles. A pottery fragment and a metal fragment are the only associated grave finds, on the basis of which the gender of the deceased cannot be established. The bottle from grave 408 has a slightly thickened rim. No other finds are known from this grave.

The typological distinction between unguent bottles with a spherical body and those with a more sagging body cannot be found in the available classifications, although the chronological development from spherical to sagging is generally acknowledged.[755] Siegmund classifies bottles of different shapes as type Gla 9.[756] Various examples of this type resemble the pear shaped bottles such as described for the Vrijthof cemetery. This type dates to Rhineland phase 3 (485-530), although some specimens can sporadically be found in phases 4 to 5 (530-570). The Franken AG include also cylindrical bottles in this type, because of which this typological group is too broadly defined to be useful.[757] Legoux, Périn and Vallet classified bottles with spherical and pear shaped body's (*panse ovoïde*) as type 440 and date this type to their phases PM-MA1 (440/50-520/30), and sporadically to phases MA2-MA3 (520/30-600/10).[758] Feyeux classified these bottles as type 20.0, and mentioned that this simple shape was also widely dispersed in the late-Roman period.[759] Feyeux suggests that late-Roman specimens can be identified on the basis of their constriction at the base of the neck, which is, compared to early medieval specimens, also more cylindrical.[760]

The unguent bottles from Maastricht are considered to be Merovingian products. This, however, can be interpreted differently in the future. Feyeux dates the early medieval bottles of type 20.0 to the fifth and sixth century. Alénus-Lecerf observed that the flasks from graves in the Belgian Meuse region seem to indicate that the spherical ones date to the fifth century and the pear shaped ones to the sixth century.[761]

Cylindrical bottles

Vrijthof: 66 (1566-1).

One cylindrical bottle with long narrow neck and concave bottom was found in the Vrijthof cemetery. The bottle from grave 66 is green, has a remarkable height of 30.4 cm and is a complete specimen of mediocre quality (air bubbles and asymmetric neck). The bottle is the only known grave good from this disturbed grave. It was found at the south-eastern part of the grave so it can be assumed that the bottle was placed next to the right foot or lower leg.

Siegmund considers all bottles as one typological group (Gla 9), but on closer inspection it appears that cylindrical bottles are not known from the Lower Rhineland and are therefore not part of this group. The bottles Siegmund refers to are mainly the smaller unguent bottles with a relatively narrow and long neck. Feyeux classified cylindrical bottles, which occur quite frequently in the Meuse region of Northern France, as group 10.0 and dates them to 450-550.[762] In the Belgian Meuse region cylindrical bottles are much rarer than in France. Decorated specimens are known from the cemeteries of Haillot, Mezières and Pry.[763] Doppelfeld describes examples of these high cylindrical bottles from the graves excavated in the cathedral of Cologne of which two were found in the grave of a woman (525-550) and one in the grave of a juvenile man (500-525).[764] Koch describes high cylindrical, mainly undecorated bottles, from the middle Rhine area as type Koch I F and dates them to 450-550.[765] Decorated bottles are more frequently found in the Meuse region. Legoux, Périn and Vallet classify two types of cylindrical bottles (the larger and smaller ones; more detailed description are lacking).[766] The specimen from the Vrijthof cemetery is considered to be a larger one and dates to their phases PM-MA1 (440/50-520/30) and more sporadically to phase MA2 (520/30-560/70).

(737) Feyeux 2003, 40, fig. 16, type 90.0, 178-179, Pl. 65. (738) Feyeux 2003, 41, fig. 16, type 90.3l, 186, nr. 736, Pl. 69. (739) Cabart/Feyeux 1995, 54, nr. 111, 174, fig. 111. (740) Alénus-Lecerf 1995, 61-63. (7431) Alénus-Lecerf 1993, 123, nr. 34; 1995, 63, fig. 9.11. (742) In the literature from the German language area a distinction is made between *Sturzbecher and glockenförmige Becher*, while in the literature from the English language area both these forms are referred to as 'bell beakers'. For now the beakers of the Vrijthof and Pandhof will be referred to as bell beakers, although in fact they are *Sturzbecher*. (743) Maul 2002, 45. (744) Maul 2002, 45-46; Koch 1998, 160; Cabart/Feyeux 1995, 58. (745) Maul 2002, 44-45. (746) Cabart/Feyeux 1995, 58. (747) Böhner 1958, 228-231. (748) Siegmund 1998, 170-172. (749) Müssemeier *et al.* 2003, 71-72. (750) Legoux/Périn/Vallet 2004, 21, 50, 55 (type 449). (751) Feyeux 2003, 28, Fig. 3, 35-36, Fig. 11-12. (752) Feyeux 2003, 90. (753) Alénus-Lecerf 1995, 61; Cabart/Feyeux 1995, 14. (754) The majority of the (pear) shaped flasks from the cemetery of Pleidelsheim were found in the graves of young adults and children (Koch 2001, 347-348). (755) See for example Cabart/Feyeux 1995, 14; Alénus-Lecerf 1995, 61. (756) Siegmund 1998, 172. (759) Müssemeier *et al.* 2003, 72. (758) Legoux/Périn/Vallet 2004, 20, 49, 54 (type 440). (759) Feyeux 2003, 27, fig. 3, type 20, 51-52. (760) Feyeux 2003, 51. (761) Alénus-Lecerf 1995, 61. (762) Feyeux 2003, 32, fig. 8, type 10.0, 45. (763) Alénus-Lecerf 1995, 61; Koch 1987, 42-43, Abb. 11. (764) Doppelfeld 1960; Doppelfeld/Weyers 1980, 289-290, T. 22,27-28, 344-346, Abb. 12, T. 41,1. (765) Koch 1987, 39-42, Abb.11, type Koch I F. (766) Legoux/Périn/Vallet 2004, 20, 49, 55 (type 441).

Roman or Merovingian glass?

Two unguentaria from the Vrijthof cemetery are discussed here as a sub-group because they are difficult to assign unambiguously to either the Roman or Merovingian period. In the Roman period various forms of unguentaria were produced.[767] The forms of the two Vrijthof unguentaria are long-lasting forms and their find contexts are Merovingian graves. The poorer quality of the glass, compared to Roman specimens, could also point towards a production of these specimens in the Merovingian period.

Unguentaria: conical body with a long neck

Vrijthof: 69 (1427-1); 99 (1853-1).

The two *unguentaria* are characterized by their long neck, their thickened and horizontally folded rim and their conical body. The flask from context 69 (stray find) is of colourless glass with a greenish tinge. The height of this bottle is 12.1 cm, of which the neck has a length of 8 cm. The base is slightly concave. The bottle from grave 99 is of colourless glass with a bluish tinge. This specimen has a height of 14 cm including a 9.3 cm high neck. The base of this bottle is flat and the conical body is not as rounded as that of the bottle from context 69. The outer edge of the horizontally folded rim is curved inwards.

Similar bottles are known from the late first century onwards and hardly change in shape during the Roman period.[768] Both the bottles can be identified as late variants of Isings' type 82B2, which dates from the first to the third century AD.[769] Two parallels can be found in the cemetery of Krefeld-Gellep, which Pirling classified as type 202/804.[770] These are dated from the first century AD to the first half of the fourth century.[771] The bottle from grave 99 was associated with finds that date to the Merovingian period. These finds are another glass vessel (globular beaker), a bronze key and a bronze plate buckle with strap end. For now these two *unguentaria* are not regarded unambiguously as late-Roman products, but late variants of Isings' type 82B2. If they are Roman in date, the bottle from grave 99 would be an antique in this grave.

The scientific analysis of the glass vessels

Contribution by L. Van Wersch, I. Biron, Fr. Mathis, Gr. Chêne and D. Strivay.

Introduction

As expressed by David Whitehouse, archaeologists use the distribution pattern of find places of particular artifacts to infer movements of people or products. Locally made objects such as glass may also contain clues concerning long distance trade.[772] To be able to understand these clues, we need to use suitable methods. For ceramic it is now also quite common to look at the paste and its characteristics, but quite often the classification of glass rests on morphological criteria and leaves out one important aspect: the material. Its properties, such as colour, were certainly as important as the shape for the consumers' choice and they are also useful for the classification and dating of the object.[773] Moreover, the glass itself can give us clues as to production techniques and the material chosen by the artisans to shape a vessel. The chemical composition of glass can allow us to retrace the provenance of material and objects, on the basis of which exchange networks can be reconstructed.

Methodology

All the glass from the Vrijthof cemetery has been observed with the naked eye and with a binocular microscope in order to register the characteristics of the glass matrix: its colour and its variations, the bubbles (quantity and morphology) and inclusions (impurities, strings and opaque, thin white lines). In the glass matrix, the bubbles are a result of the elimination of gas from the vitreous batch during the melting and their shapes were influenced by the shaping techniques. The inclusions can indicate the purity of the material used. Like the lines and the bubbles, they can give us an idea of the mastery of the process. Marks left by tools have also been observed and are used to infer the shaping techniques.

The chemical analyses were done in collaboration at the CEA-IPNAS, Liège University. The method used was the PIXE-PIGE. This non-invasive technique is particularly suitable for getting the elemental composition of objects without sampling. The set-up and the process have already proved to be efficient for glass analyses and have been fully described in previous publications.[774] Two points or more were measured on each object. The areas on the glass to be analyzed were chosen according to the conservation state of the glass (vessels). If possible, we favored fresh breaks. All the selected zones were cleaned with ethanol before the analyses. We obtained the chemical composition of 23 glass vessels and of one decoration element consisting of white opaque glass. The results are expressed in % of oxides (table 10.12).

Results of the archaeological observations

Classification

The conservation state of most of the glass vessels selected for the analyses is quite good. The analysis of the glass matrix enabled a classification of the objects in four different groups. These are created on the basis of the colour of the glass, its purity (bubbles, inclusions and thin opaque white lines included in the glass matrix) and the thickness of the walls. The shapes are also taken into consideration for this classification, as are the assigned date ranges as discussed in the section of M. Kars above.

(767) Isings 1957, 22-27, 40-43, 97-100. (768) Isings 1957, 97-99. (769) Isings 1957, 99. (770) Pirling/Siepen 2000, 127-128, Grab 5226A, t 79,13, type 804, Typentafel 9; Pirling 1966, 104, Grab 879, type 202, Typentafel 16. (771) Pirling 1966, 104 (type 202). (772) Whitehouse 2003, 301. (773) See Foy *et al.* 2003. (774) Van Wersch et al. 2014, Mathis *et al.* 2010.

Table 10.12
Composition of the glass in % of oxides.

	color of glass	shape	Na_2O	MgO	Al_2O_3	SiO_2	P_2O_5	SO_3	Cl	K_2O	CaO	TiO_2	MnO	Fe_2O_3
1566	Blue	bottle	14,694	1,196	3,386	67,632	0,175	0,394	0,717	1,696	7,939	0,148	0,890	1,337
1750	Blue	globular beaker	15,076	1,836	2,195	68,957	0,325	0,342	1,045	1,567	7,456	0,162	0,101	0,893
1390	Blue	globular beaker	13,533	0,966	2,973	71,757	ND	0,161	0,851	1,118	7,487	0,128	0,249	0,771
1564	Blue	globular beaker	14,707	0,794	3,118	68,904	ND	0,325	1,102	1,434	8,445	0,143	0,288	0,851
1471	Blue	globular beaker	12,911	1,057	3,195	70,736	0,141	0,207	0,802	0,730	9,133	0,096	0,172	0,706
1619	Blue	globular beaker	15,096	0,863	3,299	70,470	0,045	0,198	0,766	0,526	8,843	0,069	0,024	0,441
1838	Blue	dish with rib *	16,122	0,983	3,373	67,456	0,216	0,464	0,835	1,279	7,622	0,168	0,809	1,606
1392	Blue	Palm cup	13,392	0,867	3,422	70,527	0,095	0,540	0,676	1,109	8,183	0,111	0,452	0,828
1564	Blue	globular beaker	14,808	0,965	3,822	68,388	ND	0,411	0,790	1,574	8,033	0,157	0,448	0,994
1852	Blue	globular beaker	14,685	0,996	3,836	70,195	0,291	0,538	0,751	1,803	7,316	0,135	0,065	0,736
1422	Blue	globular beaker	14,826	0,511	5,546	64,780	0,728	1,256	1,020	2,074	8,206	0,155	0,627	1,227
1853	blue	roman bottle	14,330	0,646	2,773	72,260	0,206	0,212	0,948	0,849	7,232	0,079	0,398	0,499
1510	blue	handel	16,118	0,708	2,879	70,417	0,085	0,127	0,917	0,843	6,775	0,077	0,561	0,669
1723	blue	roman dish	16,168	0,664	3,554	69,409	0,352	0,197	1,115	0,905	7,992	0,077	0,472	0,591
1522	brown	globular beaker	13,265	1,352	2,528	71,048	0,244	0,321	0,801	1,817	8,369	0,145	0,249	0,923
1521	colorless	bottle	13,275	1,120	2,850	63,497	ND	3,295	1,076	1,540	9,021	0,240	2,036	2,117
1803	colorless	bottle	17,138	1,219	2,974	66,474	0,216	0,366	0,723	0,922	8,545	0,164	1,703	1,132
1795	colorless	bottle	17,031	1,515	3,671	63,725	0,304	0,383	0,825	1,139	7,056	0,191	1,506	3,101
1849	blue	pipe*	16,403	1,094	3,790	67,652	0,212	0,272	0,784	1,609	7,701	0,152	0,325	0,907
1732	colorless	dish	13,961	0,669	2,880	68,195	0,197	0,536	1,187	1,171	8,889	0,216	1,542	1,287
1533	colorless	beaker	15,880	0,718	2,351	68,607	0,406	0,516	0,968	1,240	7,297	0,161	1,582	1,131
1574	colorless	globular beaker	16,156	1,028	2,965	68,960	ND	0,176	0,777	1,036	7,677	0,115	0,343	0,814
1427	colorless	roman bottle	11,098	0,566	2,465	75,177	ND	0,411	1,224	0,834	6,736	0,147	0,646	0,807
1623	green	Palm cup	15,145	1,391	2,851	67,523	ND	0,240	0,704	1,520	7,734	0,153	1,086	1,375
1732 email	opaque white	enamel	12,876	0,540	4,387	62,501	0,806	0,514	1,012	1,152	7,733	0,193	1,092	1,418

	CoO	NiO	CuO	ZnO	Rb_2O	SrO	ZrO_2	Ag_2O	SnO_2	Sb_2O_5	BaO	PbO
1566	ND	0,0035	0,0100	0,0065	0,0036	0,0842	0,0145	0,0193	ND	0,0511	ND	0,0175
1750	ND	0,0013	0,0018	0,0034	ND	0,0740	0,0194	0,0257	ND	ND	0,1335	ND
1390	ND	ND	0,1119	0,0109	ND	0,0656	0,0102	0,0225	0,0300	0,0531	ND	0,0137
1564	ND	0,0024	0,3454	0,0458	0,0029	0,0767	ND	0,0585	ND	ND	ND	0,0339
1471	0,0029	ND	0,0310	0,0064	0,0025	0,0767	ND	0,0188	ND	ND	0,0352	0,0151
1619	0,0019	ND	0,0026	0,0024	ND	0,0718	ND	0,0295	ND	ND	ND	0,0038
1838	ND	0,0024	0,0149	0,0069	ND	0,0934	0,0200	0,0277	ND	ND	ND	0,0222
1392	0,0069	0,0020	0,0092	0,0060	ND	0,0692	0,0130	0,0251	ND	0,0529	ND	0,0148
1564	0,0071	0,0017	0,0226	0,0062	0,0032	0,0826	ND	0,0304	ND	ND	ND	0,0528
1852	0,0029	ND	0,0022	0,0052	ND	0,0678	ND	0,0661	0,0284	ND	ND	0,0038
1422	ND	0,0023	0,0189	0,0107	0,0038	0,0900	0,0138	0,0410	ND	0,0710	0,0364	0,0146
1853	ND	ND	0,0028	0,0030	ND	0,0590	0,0111	0,0412	ND	0,1372	ND	0,0219
1510	ND	0,0019	0,0171	0,0047	ND	0,0645	0,0108	0,0360	ND	0,2419	ND	0,0697
1723	ND	0,0013	0,0082	0,0064	0,0020	0,0601	ND	0,0429	ND	ND	ND	0,0033
1522	ND	ND	0,0045	0,0045	0,0021	0,0792	0,0185	0,0172	ND	ND	ND	0,0036
1521	0,0096	0,0056	0,0527	0,0177	0,0037	0,1298	0,0238	0,0383	ND	0,1167	ND	0,0477
1803	ND	0,0013	0,0065	0,0065	ND	0,1069	ND	0,0517	ND	ND	ND	0,0039
1795	0,0114	0,0025	0,0177	0,0086	0,0031	0,1002	0,0141	0,0434	ND	ND	ND	0,0272
1849	ND	0,0016	0,0100	0,0065	0,0040	0,0816	0,0106	0,0230	ND	0,0614	ND	0,0125
1732	0,0082	0,0025	0,0380	0,0117	ND	0,1025	0,0157	0,0359	0,0703	0,1360	0,0946	0,0925
1533	ND	0,0025	0,0384	0,0137	0,0035	0,0976	0,0152	0,0322	0,0331	0,0906	ND	0,0764
1574	0,0042	0,0009	0,1585	0,0141	0,0019	0,0733	0,0094	0,0178	ND	0,1769	ND	0,1351
1427	ND	0,0022	0,0168	0,0064	ND	0,0636	0,0107	0,0569	ND	0,6064	ND	0,0756
1623	0,0069	0,0029	0,0155	0,0065	0,0024	0,0974	0,0143	0,0499	ND	0,0432	ND	0,0176
1732 email	ND	0,0025	0,0472	0,0249	ND	0,0880	0,0103	0,0330	5,4758	0,0937	ND	1,3653

Group 1: Blue-green Roman glass

The glass is light blue-green and pure. The number of bubbles, inclusions or lines is very low. The vessels were blown or molded. The walls of the blown vessels are very thin (around 1mm).

This group contains the bottles 1853 and 1427. They may be identified as type Isings 82b2/AR 136, which is usually dated from the second half of the first century to the third quarter of the third century[775]. Found in Merovingian graves, they were certainly reused. However, they may also be late variants of the Isings type and not unambiguous Roman specimens. A fragment of the ribbed cup 1723 (type Isings 3b/AR 2), and a fragment of the handle 1510 (type Isings 52/55/AR 162), can both be identified as Roman. The first is dated from 50 AD to the fourth century and the second from the first to the second century.[776]

Group 2: Blue-green Merovingian glass

The blue-green Merovingian glass has nearly the same colour as the previous group but, due to its thicker walls (around 2mm), it appears to be of a deeper colour. This glass also contains many more bubbles, inclusions and lines. The group of blue-green glass includes globular beakers with long necks (1619; 1471; 1564), globular beakers with short necks (1852; 1750; 1422; 1390; 1564), a bottle (1566), a palm cup (1392), a dish with ribs (1838) and a pipe (1849)[777]. The beakers, both with short and long necks, are dated from 510/20 to 670/80. The bottle can be situated between 440/50 and 560/70, the dish is dated to the sixth century and, finally, the palm cup belongs to the phase between 585 and 610.[778]

Group 3: Colourless glass

Colourless glass is always slightly greenish or yellowish, but it was not coloured by intention. The colour is a result of the impurities coming from the sand. The vessel walls are quite thin (between 1 and 2 mm). The glass matrix contains some bubbles and inclusions, more numerous than in the Roman blue-green glass, but below the concentrations observed in the blue-green Merovingian glass.

In this group, we find bottles (1406; 1795; 1803; 1521), a bell beaker (1573), a dish (1732) and a globular beaker with a short neck (1574). The bottles are situated between 400 and 610. The bell beaker is dated between 565-580/90 and the dish between 400-460/80. Finally, the globular beaker is situated in the phase between 510/20 and 670/80.[779]

Group 4: Olive green and amber brown glass

The glass matrix of these objects is quite dark, and as a consequence less transparent than the other groups. The colour of the amber brown beaker is not homogeneous. There are also fewer bubbles, lines and inclusions than in the blue-green Merovingian glass, but the thickness is comparable (around 2mm). The two coloured glass vessels are a green palm cup (1623) dated between 610/20-670/80 and an amber brown globular beaker with short neck (1522) dated between 510/20 and 670/80.[780]

Shaping process

The wall thickness and bubbles, as well as the vessel shapes, make it possible to conclude that the Merovingian glass vessels were shaped by blowing. On the bottom of some containers the mark of the pipe or the cane used for the shaping of the opening can still be observed. Only one cup has imprinted ribs on the sides and imprinted points on the bottom. A colourless cup is decorated with a line of enamel. This decoration technique disappears after the last quarter of the 6th century.[781] Otherwise, the shaping and decoration techniques are quite simple.

If the thickness of colourless vessels walls is quite common for the period (about 1.5mm), we observe that the blue-green and coloured vessels are slightly thicker. These shapes are also not perfectly symmetrical. In the same way, the number of bubbles and impurities in the blue-green glass reflects the image of a low mastery of the fusion process. The material revealed by the chemical analyses will perhaps help us to have a better understanding of this production.

Results of the PIXE-PIGE analysis

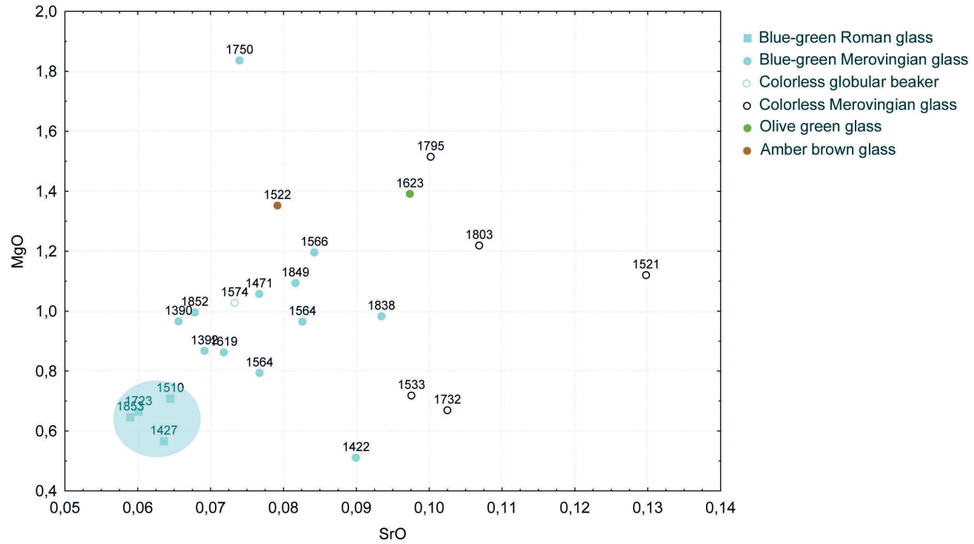
From the analyses, it can first be deduced that all the glass is soda glass – the main part is obtained from a mix of sand and natron (table 10.12). The content of sodium varies between 17 % and 13 %, and the contents of potassium and of magnesium are low. This type of glass was the most common in northwestern Europe during Antiquity.[782]

Based on the macroscopic observations, as mentioned above, the analyzed glass vessels from the Vrijthof are divided into four major groups. These groups, differentiated on the basis of morphological and macroscopic observations, can also be distinguished on the basis of their chemical composition. These chemical analyses provide information on the sand and soda sources, as well as on the decolourizing elements used, but also on the recycling of glass through the impurities brought by the raw materials and thus also on the provenance of the raw materials.

Group 1: Roman glass

The blue-green roman glass is quite homogeneous (both in shapes and in chemical compositions). It belongs to the typical Roman natron glass with a level of sodium between 11,10 % and 16,17 %. Potassium and magnesium are low (respectively between 0,83 % and 0,91 % and 0,57 % and 0,71 %). The sand used appears rather homogenous with low variation of aluminum (2,46 % – 3,55 %), calcium (6,74 % - 7,99 %), iron (0,50 % - 0,81 %), and higher variation of titanium (0,14 % – 0,79%). However, in this small set of vessels, we cannot see a clear correlation between them. Bottle 1427 can be differentiated from the others. It is slightly coloured and contained much more antimony (0.61 %) than the other samples. Exceeding 0,2%, this was probably added on purpose to discolour the glass.[783]

Fig. 10.52
Concentrations in strontium and magnesium.



The blue-green Roman vessels from the Vrijthof cemetery can be differentiated from the later ones by their composition. On the whole, they contain less magnesium and strontium (fig.10.52). In most of them, aluminum is also present in smaller amounts as are iron and titanium. This shows that different sand sources had been used for these two glass productions.

The composition of the blue-green Roman glass vessels is quite comparable to other known vessels of this period. It can be compared to the results published by Caroline Jackson, Bruce Velde et Geneviève Sennequier and Anna De Francesco *et al.* (fig.10.53).[784] The provenance of this type of glass has been widely discussed. It is actually accepted that besides the Levant and Egypte, primary glass was also produced elsewhere as written by Pliny the Elder.[785] No clear location seems to have arisen yet from the few Vrijthof samples, so no hypotheses can be proposed for the provenance of the raw materials used.

Group 2: Merovingian blue-green glass

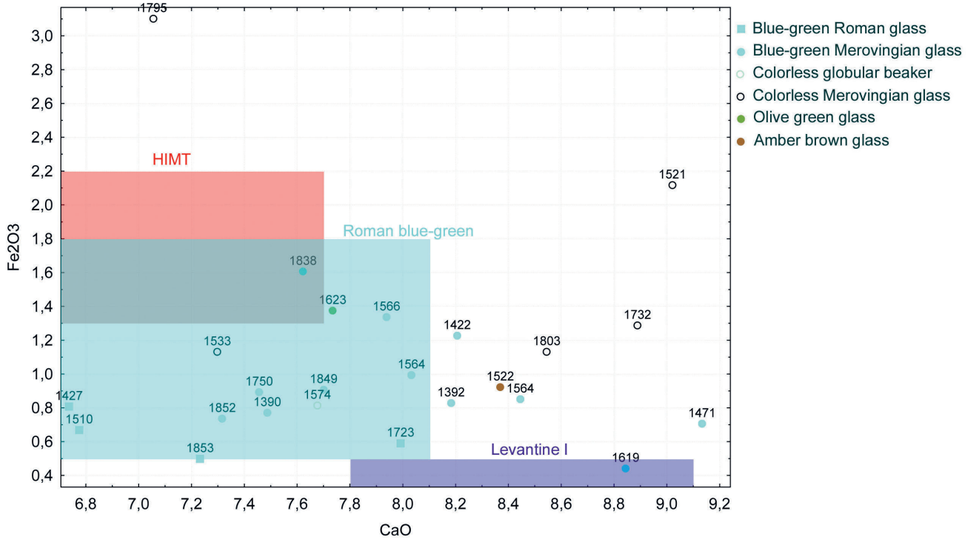
In most of the blue-green Merovingian glass from the late Merovingian period, natron can still be identified as the flux (sodium between 16.40 % and 13.39 %). However, in three of them, the sources of sodium cannot be exclusively natron. In the beaker 1750 the potassium (1.57 %), magnesium (1.84 %) and phosphorus (0.33 %) are higher than in usual natron glass and are typical of plant ash glass. In the beakers 1422 and 1852, potassium (2.07 % and 1.80 %) and phosphorus (0.72 % and 0.29 %) are also relevant to plant ash but magnesium stays quite low (< 1 %). The origin of the soda is for these two glass vessels more difficult to identify, but could maybe come from a mixture of natron and plant ash.

The higher level of these elements has already been observed in other natron glass. As suggested by Caroline Jackson *et al.*, this could be due to contamination by ash or to the incomplete melting of the material.[786] For instance in late Anglo-Saxon samples, Ian Freestone recorded a high level of potassium correlating strongly and positively with magnesium, potassium and phosphorus, which indicates the addition of plant ash to the glass.[787] Not all the blue-green glass samples from the Vrijthof show a clear increase of potassium, so we cannot deduce intentional and regular addition of ash.

It is commonly accepted that, during the late Roman period, natron and sand were fused in primary workshops situated in the Mediterranean region. This raw glass was then exported in order to be shaped in secondary workshops.[788] For the Merovingian period, the provenance of the material has also been discussed. With the fall of the Roman Empire, the supply of raw glass could have been more difficult than during the Roman period. To shape new

(775) Isings 1957; Rütti 1991 (776) Isings 1957; Rütti 1991 (777) Not in the discussed in the above section on the typo-chronology of the glass vessels. (778) See the section on the typo-chronology of the glass vessels in this volume. (779) See the section on the typo-chronology of the glass vessels in this volume. (780) See the section on the typo-chronology of the glass vessels in this volume. (781) Feyeux 2003, 178. (782) Henderson 1985. (783) Jackson 2005. (784) Jackson 1997 and Velde/Sennequier 1985; Francesco et al. 2010. (785) See Degryse/Schneider 2008; Degryse 2014. (786) Jackson *et al.* 2003, p. 352. See also Motteau/Velde 2013. (787) Freestone *et al.* 2008, 38-39. (788) Freestone *et al.* 2000 and 2002; Freestone 2003; Foy *et al.*, 2000; Foy *et al.* 2003.

Fig. 10.53
Concentrations in calcium and iron in comparison with the known groups in northwestern Europe available for recycling. Concentrations are those published by De Fransesco et al. 2010, Jackson 1997, Velde & Sennequier 1985 for the blue-green Roman glass; by Freestone et al. 2002 and Foster & Jackson 2009 for the Levantine I and HIMT.



glass vessels, craftsmen had three main options: recycle existing glass, continue with importing material as their predecessors did, or find a new type of glass that did not involve imports. They could also mix these materials.

Looking at the sand components used for the blue-green glass vessels, two main groups appear (fig. 10.54). The first contains big bottle 1566 and blue-green globular beakers 1619, 1471, 1392, 1838, 1422. These are made from the same sand. The other group consists of globular beakers 1750, 1390, 1564, 1564b, 1852 and pipe 1849. At least two different types of sand were used to make this group of blue-green Merovingian glass.

If we consider recycling and the material available, two main groups of late Roman glass are found in the northwest; the HIMT and the Levantine I.[789] In the north of Gaul, the Roman blue-green glass was present in large quantities in the villas as well as in the Roman cemeteries, and this glass may have been recycled. The chemical elements from the sand in the Merovingian blue-green glass do not match with late antique glass, or at least with the most common groups. Most of the blue-green Merovingian glass is closer to the Roman blue-green glass while some others are very different (fig. 10.53).

Looking more carefully at the trace elements that could indicate recycling such as those used for the glass colouration[790], we notice that in most of the samples they are low (fig. 10.55 and table 10.13). Lead is always under the value of 0.1%, which is indicative for recycling[791], as is cobalt, which shows a very low value (max. 0.0071%). In the blue-green globular beakers 1390 and 1564, the values of copper and zinc are higher than in the other blue-green samples and could perhaps indicate the use of recycled coloured glass. For the other vessels, especially the three beakers with a probable input of ash, there is no clear evidence of recycling.

Antimony and manganese, used for the discolouration, can also be indicative for the use of recycled glass[792], but in the blue-green Merovingian glass from the Vrijthof their concentration is low. In blue-green Roman glass, not only that from the Vrijthof, but also those analyzed by other authors[793], the value of antimony is situated between 0.1% and 0.5%. In the blue-green Merovingian glass it stays under 0.1%, which excludes the possibility of the use of recycled blue-green Roman glass. Manganese is not present in high levels; the maximum is 0.8%. This value also excludes the recycling of HIMT glass, as was done with most of the glass that was decolourized with manganese and in which the concentration is above 1%[794].

The lack of discolouring elements explains the blue-green colouration due to the iron from the sand. For this production, Merovingian craftsmen did not decolourize the glass anymore,

(789) Foy *et al.*, 2003; Foster/Jackson 2009. (790) Freestone *et al.* 2008, 37. (791) Foster/Jackson, 2009, 192. (792) Foster/Jackson, 2009, 192. (793) Jackson 1997 and Velde/Sennequier 1985; Francesco *et al.* 2010. (794) Jackson 2005, 772.

Fig. 10.54
Concentrations of iron and titanium.

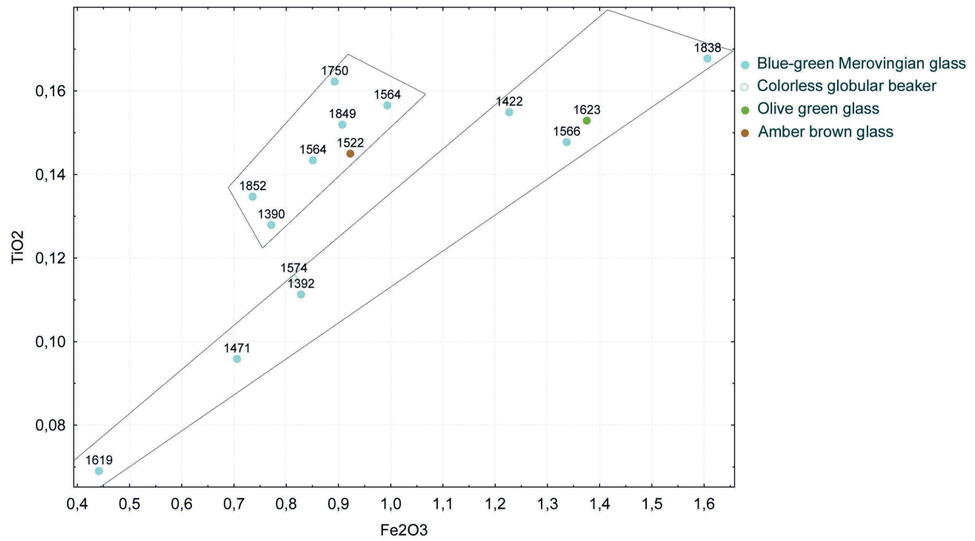


Fig. 10.55
Concentrations of elements indicating recycling in blue-green Merovingian glass. Concentrations are those published in Freestone et al. 2008 for Anglo-Saxon glass and the Roman ones are those of the Vrijthof.

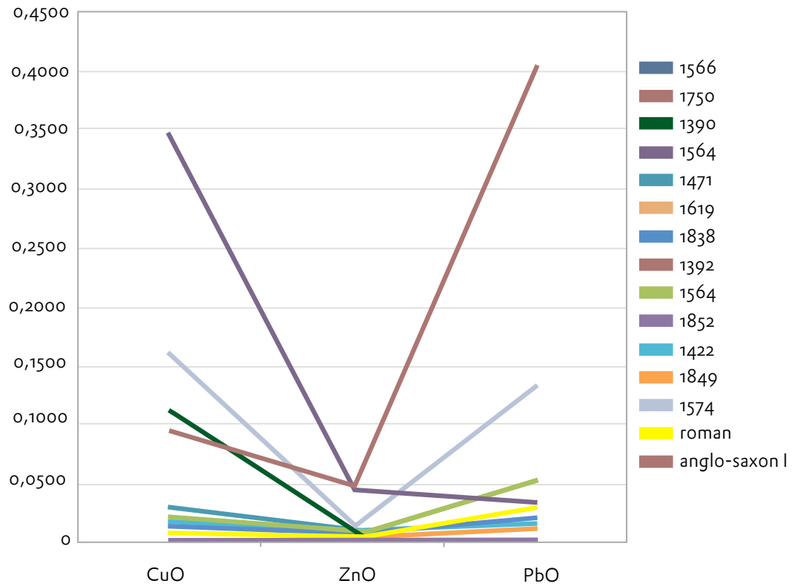


Table 10.13
Concentrations of elements indicating recycling in blue-green Merovingian glass. Concentrations are those published in Freestone et al. 2008 for Anglo-Saxon glass and the Roman ones are those of the Vrijthof.

	CuO	ZnO	PbO
1566	0,0100	0,0065	0,0175
1750	0,0018	0,0034	
1390	0,1119	0,0109	0,0137
1564	0,3454	0,0458	0,0339
1471	0,0310	0,0064	0,0151
1619	0,0026	0,0024	0,0038
1838	0,0149	0,0069	0,0222
1392	0,0092	0,0060	0,0148
1564	0,0226	0,0062	0,0528
1852	0,0022	0,0052	0,0038
1422	0,0189	0,0107	0,0146
1849	0,0100	0,0065	0,0125
1574	0,1585	0,0141	0,1351
roman	0,0094	0,0047	0,0317
Anglo-Saxon l	0,0925	0,0474	0,4032

Fig. 10.56
Concentrations in iron and manganese.

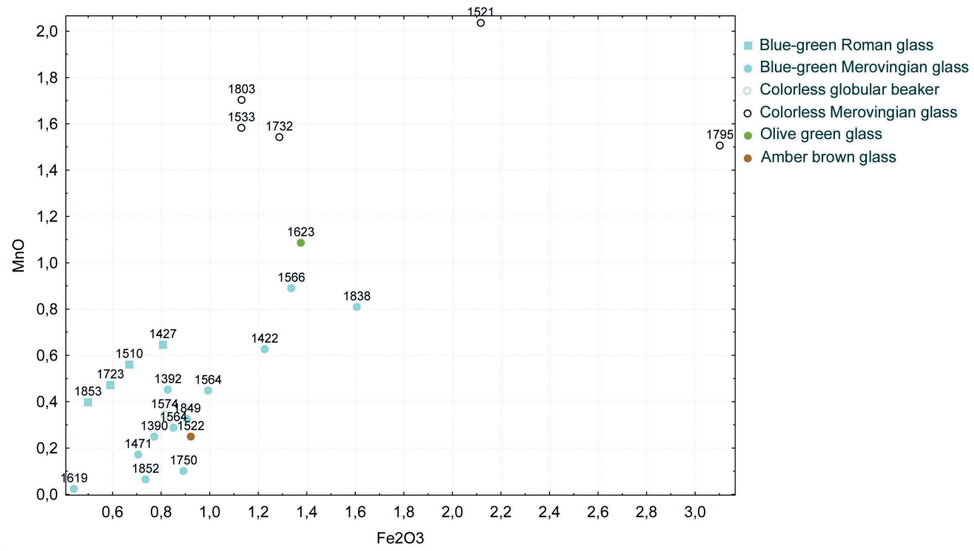


Fig. 10.57
Concentrations of elements indicating recycling in colorless Merovingian glass. Concentrations are those published in Freestone et al. 2008 for Anglo-Saxon glass.

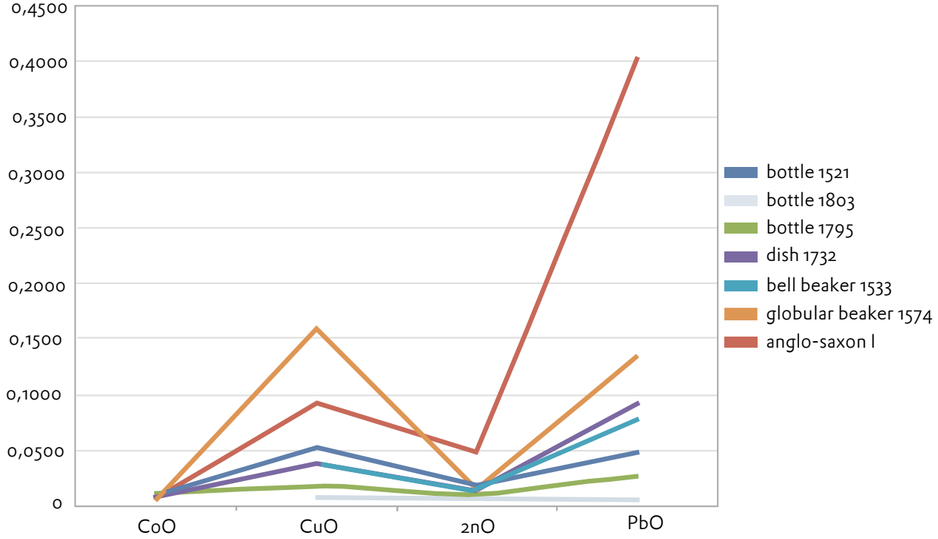


Table 10.14
Concentrations of elements indicating recycling in colorless Merovingian glass. Concentrations are those published in Freestone et al. 2008 for Anglo-Saxon glass.

	CoO	CuO	ZnO	PbO
bottle 1521	0,0096	0,0527	0,0177	0,0477
bottle 1803		0,0065	0,0065	0,0039
bottle 1795	0,0114	0,0177	0,0086	0,0272
dish 1732	0,0082	0,0380	0,0117	0,0925
bell beaker 1533		0,0384	0,0137	0,0764
globular beaker 1574	0,0042	0,1585	0,0141	0,1351
anglo-saxon I	0,006385714	0,092571429	0,047428571	0,403285714

either preferring a blue-green colour, or perhaps because they could no longer be supplied with manganese.

Group 3: Merovingian colourless glass

This group covers a long period of time, ranging from 400 to 670/80.[795] This explains that this group is the most heterogeneous glass group from the Vrijthof cemetery. Though, the colourless glass is made from sands and natron with a level of sodium between 13.28 % and 17.03 % and a la level of potassium and magnesium of max. 1.52 %.

Among the six colourless samples, one is totally different. It is a globular beaker which is clearly closer to blue-green glass vessel 1574. Its colourless aspect is due to the thickness of the wall, but its composition also matches with the blue-green Merovingian group (fig.10.53). Due to its iron and titanium content, it can be linked to the first group of blue-green Merovingian glass (fig.10.54). This particular beaker shows clear traces of recycling: the level of copper is high (0.16 %) as is the level of lead (0.14 %). It also has more antimony (0.18 %) (fig.10.54). Manganese in this vessel remains low, as it is in the blue-green glass vessels (fig.10.52). Chemical analyses allow us to reattribute this beaker to another group of glass despite its colour. Its shape also matches most of those from the blue-green Merovingian group.

As for the blue-green Merovingian beakers, the provenance of the colourless glass can be observed by looking at the components of the sand. Compared with the Roman glass, the chemical composition of colourless glass is quite heterogeneous, especially when taking into account the content of iron, calcium or other elements from the sand (fig.10.53). Of the five other colourless pieces (apart from the globular beaker), two are quite high in iron: bottle 1521 (2.12 %) and bottle 1795 (3.10 %). The other samples, bottle 1803, bell beaker 1573 and cup 1732 do not have as much iron. These colourless vessels with low iron have the same amount of iron as the blue-green glass vessels but they are discoloured by the addition of manganese (fig.10.56).

In the Antiquity, colourless glass was the most valuable. In order to correct the effect of iron, which is naturally present in sand, craftsmen added antimony or manganese. As demonstrated by Caroline Jackson, antimony was no longer used after the IVth century. It was by then replaced by manganese. From that period on, the average concentration of manganese added by craftsmen to decolourize the glass was about 1 %.[796] In all the colourless samples, antimony is very low but the amount of manganese is high and close in all the samples, between 1.5 % and 2 %. It also has no correlation with iron. All the colourless glass from the Vrijthof was decolourized by the intentional addition of manganese, with levels above 1,5 %. Manganese also allows us to distinguish this group from the two previous ones.

When comparing the composition of the colourless vessels from the Vrijthof with the groups of glass of the late Antiquity and early Middle Ages (fig. 10.53),[797] we see that, for the elements contained in the sand such as iron and calcium, they do not match with the HIMT[798] group and neither with the Levantine I group.[799] They are also quite different from Anglo-Saxon glass dated to the same period[800], even if this group is closer to the two samples (1573 and 1803). The three others (1795, 1732 and 1521) are totally different.

The careful examination of the trace elements in the colourless glass vessels shows that the values are too low to be indicative for systematic recycling (fig. 10.57 and table 10.14). For Anglo-Saxon glass, Ian Freestone concludes that recycling was not systematic.[801] Comparing our data to those published by Ian Freestone *et al.*, we deduce the same for most of the colourless glass. Some contain enough copper to account for minor colourations: cup 1732, bottle 1521 and beaker 1573. In bottle 1521, the antimony is also as high as in cup 1732. But at the same time, the glass from bottles 1803 and 1795 is quite clean and does not seem to contain elements due to recycling. These may have been made from 'fresh' raw glass.

Finally, the white line of enamel that decorates cup 1732 has a different composition. This soda glass contains a lot of lead and tin (table 10.12). To make it white and opaque, cassiterite might have been added to the glass batch, as has already been noted for Merovingian glass and beads.[802] Thus its composition fits perfectly with the period and confirms the date of the glass.

Group 4: Merovingian amber-brown and olive green glass

The olive green cup 1623 and the amber brown globular beaker 1522 are contemporary. Like the globular beakers, they are dated to the end of the Merovingian period[803].

Besides the identical shapes, the amber brown glass vessel matches with the group of blue-green Merovingian vessels, as well as with the colourless globular beaker. The olive green cup 1623 is also close to the first group of Merovingian blue-green glass in

(795) See the section on the typo-chronology of the glass vessels in this volume. (796) Jackson 2005, 772. (797) Foster/Jackson 2009, 189. (798) Freestone et al. 2005, Foy *et al.* 2003; Aerts et al. 2003; Silvestri et al. 2005; Foster/Jackson 2009. (799) Freestone *et al.* 2000; Foy et al. 2003. (800) Freestone *et al.* 2008, 37. (801) Freestone *et al.* 2008, 37. (802) Cession-Loupe *et al.* 2007, 275 and Heck/Hoffman 2000. 349. (803) See the section on the typo-chronology of the glass vessels in this volume.

titanium and iron contents (fig.10.54). The amber brown pot also contains a higher value of potassium and magnesium, as observed for some of the Merovingian blue-green glass vessels, and can be placed in the second group with similar iron and titanium contents.

The chemical composition of these two glasses is not different from the other blue-green and colourless samples. The olive green glass is probably coloured by iron (Fe2+), because the amount of copper which is usually used to colour green glass (Cu2+)[804] is not significantly higher than in the other samples. The amber brown glass can have been produced by the addition of manganese[805] (same remark than for copper content), or more probably by the charge transfer process between S^{2-} and Fe^{3+}.[806]

Merovingian glass: Provenance

The Merovingian blue-green vessels appear to be quite homogeneous with regard to the glass and the shapes, but have rather heterogeneous chemical compositions. It is not out of the question to see in that group the production of one secondary workshop. To these we could add a colourless globular beaker and the coloured vessels. For this glass production, the Merovingian craftsmen could have used different types of material. Two of the beakers include recycled glass and three others have a higher level of potassium attesting the possible addition of plant ash. Even so, nothing excludes the possibility that these came from the same secondary workshop.

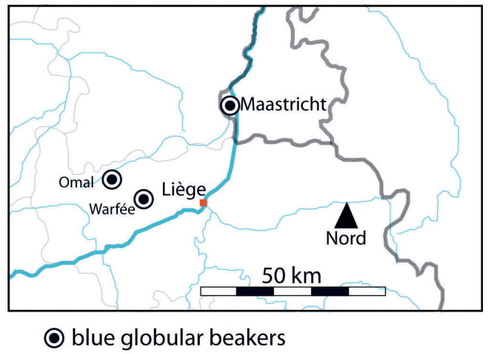
For the late Merovingian period, the collection of blue glass from the Vrijthof is one of the most important in the region. Maastricht was an urban center at this time and, looking at all the traces left by the Merovingian artisans[807], it is tempting to see a hypothetical glass workshop producing vessels in this area. It may have exported its products on a local scale, as proven by the blue-green globular beakers found in cemeteries from the Jeker region (fig.10.58). However, more archaeological explorations and analyses on late blue-green Merovingian glass could bring us a better comprehension of 'possible glass production in Maastricht.

Covering a long period of time, the colourless glass is quite heterogeneous in shapes and chemical composition. The glass aspect is also more variable. The sand used is not homogeneous and some vessels show evidence of recycling. Thus the raw glass could have various origins or be a mix of glass of various origins. Some could contain fresh" imported raw glass, such as bottle 1803. The colourless vessels from the Vrijthof certainly came from different secondary workshops.

Conclusion

The glass collection from the Vrijthof cemetery is one of the most important in the region. It covers quite a long period of time and shows considerable variety in shapes and glass colours. Most of them can be dated thanks to the context or by typological comparison. For a better understanding of that craft in Maastricht and its region during the Merovingian period, it is meaningful to study and analyze this collection.

Fig. 10.58
Repartition of the globular blue beaker in the Jeker region.



The four groups created according to the glass appearance can also be distinguished by their chemical compositions: Roman blue-green glass, Merovingian blue-green, colourless and coloured glass. The blue-green roman glass is represented by fragments and reused vessels. Their glass is pure and the walls are thin. The glass composition is very homogeneous and different from the Merovingian glass containing less strontium and magnesium.

The composition of all Merovingian glass is very heterogeneous in good agreement with the very large scale of their dates, especially with regard to the colourless glass. Their matrix is not pure and is full of bubbles, inclusions and lines. The walls are thicker than those of the Roman glass vessels. They are soda-lime silicates using natron and different sorts of sand, except one and maybe two more blue-green glasses using plant ash or a mixture of natron and plant ash. The majority of these Merovingian glasses do not seem to come from a recycling process: they have very different compositions than the two main groups of glass found in Northwestern countries (HIMT and Levantine I). And moreover, they contain very low levels of impurities like antimony, cobalt and copper – except for a few of them. The shapes of the colourless glass vessels are mainly small bottles. They have been discoloured by addition of manganese, which is higher in content than in the other glass vessels. The most recent shapes, mainly globular beakers, are made of blue-green glass. At the end of the Merovingian period, glass was apparently no longer discoloured. The coloured vessels can be bound to the blue-green Merovingian group, for the shapes as for the compositions.

Regarding provenance, our analysis has shown that some fresh glass still seems to reach northwestern Europe during the Merovingian period, at least for the production of some blue-green and colourless bottles. To study the origin of the fabrication of Merovingian glass – possibly in Maastricht ? – more analyses should be done both on the glass found in Maastricht and on late Merovingian blue-green glass discovered in the region. The comparison between Roman blue-green and Merovingian glass should also be pursued for other sites in order to gain more information on the production of glass during the late Merovingian period, especially concerning the recycling/import question.

The textiles from the cemetery of Maastricht-Vrijthof

Contribution by Chr. Brandenburgh

Introduction

The Vrijthof cemetery has yielded several fragments of textiles. These are the remains of the garments in which the dead were buried and of other textiles in the graves such as the covers of mattresses or pillows, shrouds or pieces of cloth wrapped around objects deposited in the graves. Of all the excavated graves, 6 contained one or more pieces of textile. This resulted in a total of 12 fragments of textile (table 10.15). The textiles were mineralized and imbedded in the corrosion on the metal objects in the graves.

Due to the small size of the textile dataset it is not possible to ascertain any developments in textiles over time within the cemetery. The graves in which the textiles were found were either 'female' graves or graves of which gender or sex could not be distinguished. Consequently it is not possible to compare the graves of men and women in this cemetery. It is difficult, if not impossible, to reconstruct the garments of the deceased.[808] However, most textiles can be assigned to the sixth and/or seventh century, making it a useful body of textiles that can be compared to other cemetery textiles from this same period.

The dataset

The cemetery of Maastricht-Vrijthof has yielded 12 fragments of textile. In one case there were two fragments of the same fabric present within one grave. These identical fabrics have been grouped together resulting in a total of 11 individual textiles. Most of the graves contained one or two different textiles. Some textiles were very badly preserved making it impossible to analyse the technical details of the fabrics. These textiles are listed in table 10.15 but have not been included in the graphs presented in this chapter. This also applies to one textile that is recorded as a stray find and could not be dated to a narrow period.

Most of the textiles were preserved in the corrosion on the metal objects in the graves. The textiles that were not in contact with metal decayed in the years after the burial. Because of this the fragments of textile remaining are often very small, measuring between 0.5x0.5 and 2x4 cm.

Many objects had already undergone restoration in the years following excavation, which undoubtedly has led to the removal of textiles. However, there was still a considerable amount of (often indeterminate) fragments of iron where limited restoration had been conducted. Preservation of the textiles on these objects was in many cases rather poor.

Methods

The analysis of the textiles comprised two phases:

1. A technical analysis and description of the textile finds was carried out to present an overview of the range of textiles used in the cemetery. The cemetery textiles have been analysed using a stereo-microscope (magnification 6-40x). The technical analysis of the textiles comprised an identification of weave and yarn and an assessment of the quality of the textile. Fibre identification has been conducted using a metallographic microscope (magnification 200x or 500x). Fibres were identified to the level of either wool or plant fibres.[809]

2. Spatial and chronological analysis of the finds is a useful analysis for larger datasets making it possible to distinguish trends over time and differences between groups within the cemetery on basis of textiles. As mentioned before, the amount of textiles found in the cemetery of Maastricht-Vrijthof is insufficient to support any conclusions of this nature on the scale of the cemetery itself, but an analysis and comparison of these textiles with other finds from the same region and period may prove possible.

The analysis of weave is conducted to provide a detailed and local chronology of the different textiles used in the cemetery/region. Any changes or differences in the texture of the fabrics through time and between men and women can be discerned on the basis of this analysis of weave. Quality of textiles may indicate wealth or social status. An assessment of the quality or fineness of the fabrics, based on thread thickness and thread count of the weaves brings to light changes in quality through time and differences between types of fabrics or between men/women.

Also recorded are the position of the textile on the metal object and the position of the object in the grave. It may be possible to distinguish certain groups of textiles that can be associated with specific objects in the graves, even though the objects in the graves are in many cases not in their original position any more.

(804) Gratuze, 1997. (805) Brill 2006, 136. (806) Biron/Chopinet 2013. (807) Dijkman 1999. (808) The possibilities and constraints of textile analysis on cemetery finds have been elaborated in detail in Brandenburgh 2012. However, the dataset of textiles from the cemetery of Maastricht-Vrijthof is a too limited vestige of the textiles initially present in the graves to enable any conclusions on the textiles in the graves and its function as garments or grave furnishing, as well as the cultural significance embedded in these textiles. Nevertheless the cemetery provides a well dated body of textiles that can be compared to textiles from other regions. This will in the long term provide a detailed overview of the types of textiles in use throughout the area, which may lead to a better understanding in production and (long distance) exchange of textiles. (809) Fibres were not further identified into species.

Table 10.15
Details of the preserved textile remains on Vrijthof objects.

Findnumber	Feature	Feature type	Date:	Gender/Age	Fibre	Weave	Thread Count	Spin	Pattern
1687-3.TX1	0	stray find	?		Wool?	2/2 diamond twill	10x10	z/s	diamond twill, pattern repeat not visible
1419-1.TX1	85	inhumation	D-G (510/25-640/50)	F	indet	tabby	25x13	z/z	
1483-1.TX1	95	inhumation	F-H (580/90-670/80)	F	wool?	twill ?/?	?x?	z/s	
1483-1.TX2	95	inhumation	F-H (580/90-670/80)	F	wool?	tabby	17-18x17-18	z/z	
1434-20.TX1	100	inhumation	E-H (565-670/80)	?	Linnen?	Tabby	13-14x12-13	z/z	
1435.TX1	100	inhumation	E-H (565-670/80)	?	wool?	tabby	12x10-11	z/s	
1473-1.TX1	105	inhumation	G-H (610/20-670/80)	?		Tabby	18-20x18-20	s/s	
1473-1.TX2	105	inhumation	G-H (610/20-670/80)	?		2/? Twill	?x?	z/s	
1628-4.TX1	110	inhumation	E-G (565-640/50)	F		Tabby	15x12-13	z/z	
1614-1.TX1	115	inhumation	D-E (510/20-580/90)	F			ca. 10x10	z/z?	
1614.TX2	115	inhumation	D-E (510/20-580/90)	F		Tabby	8x10	z/z&s	spinpattern in one system: 2s - 6z - 2s.

Findnumber	Comments	Quality weave	Quality spinning	Color	Measurements (cm)
1687-3.TX1	Fabric was very worn down. Stretched and a bit open.		regular		
1419-1.TX1	Weave was fastened by pin of fibula. Very fine and regular, dense fabric.	fine, regular, dense	regular	reddish brown	0.4x0.8
1483-1.TX1	Poor preservation, only small part is positive cast, rest is negative cast.	dense	regular		1x1
1483-1.TX2	2 layers of one fabric, folded double	dense	regular		2x1.5 & 1x0.5
1434-20.TX1	Large fragment of textile, fine weave, irregularly spun	fine	irregular		3x2.5
1435.TX1	Large fragment of textile but very much worn down during restauration.	dense	regular		3x2.5
1473-1.TX1	Very thin and dense weave on side/front of buckle	fine	regular		
1473-1.TX2	TX on back side of plate buckle. Only negative cast remained.				
1628-4.TX1	Bronze ring with small fragment of tx on one side	dense	regular		0.5x0.5
1614-1.TX1	Badly preserved textile, negative cast. Twist and weave could not be ascertained.	open			1x1
1614.TX2	2 fragments of one object (fresh break). Textile was wrapped or folded around both sides of object.	open	irregular		2x4.5 & 0.5x4

Findnumber	Twist X	Twist Y	Threadthickness X (mm)	Threadthickness Y (mm)	N fragments
1687-3.TX1	medium	low	0.5	0.75	1
1419-1.TX1	medium	low-medium	0.2-0.3	0.3	1
1483-1.TX1	medium	low	0.5	0.5	1
1483-1.TX2	low-medium	low-medium	0.5	0.5	1
1434-20.TX1	medium	medium	0.2-0.75	0.3-0.75	1
1435.TX1	medium	low	0.75	0.75	1
1473-1.TX1	low	low	0.2-0.3	0.2-0.3	1
1473-1.TX2	medium	low	0.2	0.3-0.4	1
1628-4.TX1	medium	medium	0.5	0.5	1
1614-1.TX1			0.2-0.4	0.2-0.4	2
1614.TX2	medium	low-medium	0.5-0.75	0.3-0.75	1

The textiles from Maastricht-Vrijthof

In the early middle ages many techniques were used to process raw fibres into yarns, ropes, pieces of cloth or garments.[810] In the cemetery of Vrijthof only woven fabrics have been found. The techniques to produce these will be shortly elaborated, followed by a description of the fabrics present in the cemetery.

Early medieval textiles were made from fibres from plants or animals such as flax, wool and – in small quantities – silk. Fabrics, in which fleeces from goat, beaver or rabbit were used, have been known in this period as well although these are much rarer and are not observed in Vrijthof. Textile production was a long and elaborate process in which fibres were spun into yarns and yarns were woven into pieces of fabric. To spin yarns from fibres one needs a spindle and a distaff. Depending on the direction the spindle rotates, the threads are twisted either clockwise or anticlockwise resulting in z- or s-spun thread (fig. 10.59). In order to make a thicker or stronger yarn, string or rope two or more threads are plied together. The process of weaving large pieces of cloth was

Fig. 10.59
z- or s-spun thread.

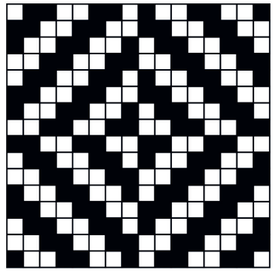


Fig. 10.60
Identified Vrijthof fabrics.

generally conducted on a warp-weighted loom. This type of loom would have stood slightly at an angle against the wall of a building. The vertical threads of the fabric, the warp, were hung onto the upper crossbeam of the loom and put under tension by attaching loom weights. Another type of loom, know from the countries surrounding the Netherlands, is the two-beam vertical loom.

The appearance of a fabric is determined by the way the horizontal weft threads were woven into the vertical warp threads. During the early middle ages several types of weaves were in use but in the cemetery of Vrijthof only fabrics woven in tabby and twill, among which one fragment of 2/2 broken diamond twill, were observed (fig. 10.60).

Tabby weaves

In a tabby weave the weft threads regularly pass over and under each warp thread. In Maastricht-Vrjithof 7 fabrics are woven in this way of which two were made out of wool and one out of plant fibres.[811] Four of these tabbies were woven out of z-spun yarns in both warp and weft. One fabric was woven in z- and s-spun yarns and one was made out of s-spun yarns only. One of the tabbies was woven in a spin-pattern.[812] These patterns are created using both z- and s-twisted threads in the warp. The different direction of the twist of the yarns gives a very subtle but clear striped pattern to the fabric. The fabric is woven in warp-pattern ...2s-6z-2s... and is a rather open weave with 8x10 threads/cm.

Twills

In twills the weft thread passes over two and under one or two warp threads creating a diagonal woven pattern. 2/2 broken diamond twills are woven in more or less the same technique, but result in a diamond shaped pattern. Only three fabrics form Vrijthof were woven in twill pattern. One of these was a diamond twill (documented as a stray find), the others were decayed to the extent that weave identification was no longer possible.[813]

Quality of the fabrics throughout time

A common way of estimating the quality of a fabric is by establishing the number of threads per centimetre in both warp and weft. As visible in table 10.15 there are some differences in quality of the textiles from Maastricht-Vrijthof, with a few fabrics in the lower quality groups and some considerably finer textiles as well. This distribution differs from textiles excavated in settlements in the Netherlands. In settlements the majority of textiles had thread counts below 12 threads/cm.[814] In cemeteries such as Vrijthof, Posterholt[815] and Bergeijk[816] the fine and coarse groups are more evenly represented.

In the cemeteries of Maastricht graves have been grouped into several phases. It is not possible to analyze the textiles strictly according to this chronology since many graves (and with that most textiles) could not be ascribed to a single phase but to a longer period of several phases. When grouping the textiles roughly into three phase (6th century 6th/7th century and 7th century) fabrics seem to become finer over time. However, the dataset of Vrijthof is too small to support any conclusions about the development of the textiles throughout time.

Summary

The 11 textiles found in Maastricht-Vrijthof are a very uniform body of textiles with only a few basic fabric types and no special or fine weaves. Due to the small dataset, it is not possible to attempt a reconstruction of the garments of the persons buried in the cemetery or an analysis of changes over time within the burial ground. However, when considering these textiles as a building block in a larger dataset of cemetery textiles, they may provide information on the use and development of textiles and clothing in a burial-context in this region.

(810) For an overview see Walton Rogers 2007, chapter 2. (811) Positive fibre identification of the other four tabbies was not possible due to damage of the fibres. (812) Find number 1614.TX2, unfortunately positive fibre identification was not possible for this fabric. (813) These fabrics is indicated as 2/? Twill in table 10.15. (814) Brandenburgh 2010. (815) Brandenburgh 2013. (816) Brandenburgh 2012.

11 The topo-chronological development of Merovingian cemetery 4 on the Vrijthof Square

Introduction

Merovingian cemetery 4 consists of both a vertical and horizontal distribution of graves, which is an unusual feature for Merovingian cemeteries which are not related to a cult place. The majority of these cemeteries consist of just one layer of graves, and their topo-chronological development is analysed on the basis of the horizontal distribution of dated graves over the cemetery plan. Additional chronological information from the stratigraphic relations between graves can only sporadically be retrieved from these cemeteries. The presence of multiple layers of graves in Vrijthof cemetery 4 seems to offer a situation that provides abundant additional information with regard to the reconstruction of the chronological development of the cemetery. Graves without grave goods can be dated on the basis of their stratigraphic relation to dated graves and it may also be possible to verify the sequence of dated graves, established on the basis of the typo-chronological analysis of their grave finds, with their actual stratigraphic relations.

Cemetery 4 was excavated in three trenches: 4, 5 and 6 (fig. 6.2). The excavation strategy in each of these trenches differed considerably (see chapters 3 and 6 for detailed discussions of the excavation history and conservation of the cemetery), which raises doubts about the consistency of the information of various excavated sections. Trench 5 is excavated in more detail than trench 6, although within this trench some differences with regard to the conservation of the upper layers varies between the three excavation sections A, B and C (see chapter 6, fig. 6.5). Trench 5 produced the highest density of graves. Unfortunately, an exit road for trucks of the construction workers made it impossible to explore the section between trenches 5 and 6. A considerable percentage of the Merovingian cemetery was destroyed through the removal of the soil beneath the exit road before it was excavated, but also because it is suspected that the top layers in the northern sections of trenches 5 and 6 were removed, either by the excavators or by levelling activities already in ancient times. Unfortunately, the excavation strategy did not adjust to the fact that the cemetery was located on a slope. These conditions affect the reconstruction of the topo-chronological development of the cemetery. Moreover the reconstruction involved some difficulties due to the presence of both a vertical and horizontal distribution of graves, the burial strategies of the burying community and the theoretical backgrounds of the pre-burial circulation of grave goods.

Trench 5 was excavated in 4 levels, trench 6 in two, and the few Merovingian graves from trench 4 were also excavated at two levels. A new level was created after a new series of graves were observed and recorded for the first time. The stratigraphic relation of a considerable number of graves is obvious (see the Harris matrix (fig. 11.1)[1] and the catalogue of graves). For other graves this relation was not so obvious or not present. The relative and absolute chronological position of the graves in the created sequence of burial phases depends on the typo-chronological analysis of their grave good inventories. A number of empty graves could be dated on the basis of their stratigraphic relation to these dated graves. Empty graves without a stratigraphic relation with other graves are difficult to place in the burial phases and the reconstructed topographical development of cemetery 4. A number of other graves, although associated with grave goods, were difficult to date more precisely than to the entire Merovingian period. ^{14}C analyses of skeletal remains are the only options for their dating, but these data are available only for a small number of graves (fig. 11.1). Apart from the absence of datable grave goods and stratigraphic relations for a number of graves, other problems occur with regard to the topo-chronological (horizontal and vertical) analysis of the Vrijthof cemetery. These are related to several methodological aspects referred to in the following topo-chronological discussion of the Vrijthof cemetery.

The Vrijthof burial phases of the Merovingian period

Before discussing the horizontal and vertical distribution of the burial phases some practical problems have to be solved. The Merovingian graves of the Servatius complex, which were excavated in cemetery 4 (Vrijthof) and 1 (Servatius) are dated according to the Maastricht phases that were constructed during the early stages of the Servatius project (table 11.1). The finds from the Maastricht graves were dated on the basis of a number of typo-chronological studies (see chapter 10) on the basis of which complete assemblages (graves) were assigned to Maastricht phases (table 11.1). These Maastricht phases are based on the chronological scheme of the Franken AG.[2] This choice was made for a number of reasons during the early stages of the analysis of the Maastricht cemeteries. A comprehensive typo-chronological scheme of Merovingian burials from the Middle Meuse area was not available and the typo-chronological scheme of the Franken AG is all-inclusive and one of the most recent ones in early medieval burial archaeology. It is less refined than other schemes available such as the scheme of Siegmund (which raises a number of methodological problems with regard to dating methods, see chapter 9) and their research area is relatively close to Maastricht. The scale of refinement of the Maastricht phases enables the comparison of all the graves from Maastricht on a rather detailed chronological scale, but appeared unworkable with regard to the reconstruction of significant burial phases. The majority of the graves could not be confined to one single Maastricht phase: a large number of the graves dated to two or more phases. Moreover, significant chronological groups of graves with bounded dates (which did not show an overlap with other burial phases) were impossible to create on the basis of the Maastricht phases, and a comprehensible reconstruction of the chronological development of the cemetery appeared impossible to establish on the basis of these phases.

The Vrijthof burial phases, which consist of five chronological groups (I, II, IIIa, IIIb, IV) are introduced as a solution for this problem of the Maastricht phases (table 11.1). A considerable number of the Vrijthof graves could now be placed in one of these groups, and a considerable number of the remaining graves could be assigned to a combination of two Vrijthof burial phases. A small number of graves with grave goods could not be dated more precisely than to the entire Merovingian period; the finds from these graves are in general difficult to date and include objects such as knives, fire steels, common combs and so on. A number of graves without finds could be dated on the basis of their stratigraphic relation with graves that were dated on the basis of their grave goods. The majority of these graves could be dated to one or two Vrijthof burial phases, for the remaining set of graves only a *terminus post quem* relation to certain burial phases could be established: these were of little use for the reconstruction of the topo-chronological development of the cemetery since no hard end dates could be established and they are in general not included in the analysis. In the end a series of graves remains that could not be assigned to one of the burial phases and that had no grave goods (fig. 11.10).

The graves and their position in the horizontal and vertical layout of the cemetery will be discussed per Vrijthof burial phase. This results in preliminary conclusions for each burial phase with regard to the topo-chronologcial development of the cemetery. As such the topographical development of the cemetery is discussed per contemporary 'layer', and not per excavation level. Graves that cover more than two Vrijthof burial phases do not provide significant information concerning the topo-chronological development of the cemetery since they comprise a time span of more than 100 years; these graves are not included in the following analysis.

At the location of cemetery 4 an upper layer of younger graves was present that we assigned to cemetery 5. It dates to late Merovingian and Carolingian times.[3] Not all graves of the upper

Table 11.1
The chronological burial phases of the cemeteries Bergeijk, Posterholt and Vrijthof Maastricht in comparison to the chronological scheme of the Franken AG.

Franken AG 2003		Bergeijk 2012		Posterholt 2013		Maastricht 2017			
						Maastricht phases*		Vrijthof burial phases 2016*	
Phase	Dates	Phase	Dates	Phase	Dates	Phase	Dates	Phase	Dates
						A	200-400		
1-2	400-460/80					B	400-460/80	I	400-510/20
3	460/80-510/20					C	460/80-510/20		
4	510/20-565			PH I	510/20-	D	510/20-565	II	510/20-580/90
5	565-580/90	BE I	565-640/50		580/90	E	565-580/90		
6	580/90-610/20			PH II	580/90-	F	580/90-610/20	III a	580/90-640/50
7	610/20-640/50				640/50	G	610/20-640/50	III b	610/20-670/80
8	640/50-670/80	BE II	640/50-670/80	PH III	640/50-670/80	H	640/50-670/80		
9	670/80-710	BE III	670/80- c.750	PH IV	670/80-c. 750	I	670/80-725	IV	670/80-c. 750
10	710->725					J	>725		

* Maastricht phases: constructed for the analysis of the grave goods assemblages from the Maastricht cemeteries Vrijthof (cemetery 4) and Servatius (the graves excavated in the church (1981-1989) and the Pandhof (1953-1954)). These grave dates are included in the catalogue of the Vrijthof (cemetery 4) graves.
** Vrijthof burial phases 2014: created specifically for Vrijthof cemetery 4. Somewhat broader burial phases are defined; they include 2 or 3 Maastricht phases to which the Maastricht graves were initially dated. These broader burial phases are defined for a better understanding of the chronological structure of the cemetery; the original Maastricht phases are included in the catalogue of graves. The Servatius burial phases (Pandhof and Church excavations) will be published in an upcoming volume.

(1) Only for the graves excavated in trench 5. (2) Müssemeier *et al.* 2003. (3) See chapter 12.

layer, however, belonged to this cemetery. A number of these graves contained grave goods. For that reason they could be dated to burial phases of the Merovingian period. These are graves 75, 79, 86, 87, 88, 92. It is of course possible that the grave goods in these graves had a prolonged circulation life. However, these graves are clustered in the northern part of section A (fig. 6.5) and they form a group of graves that probably were below a younger layer of (empty) graves that was destroyed. As a result, these graves became visible as part of the top layer, of which the first skeletons were encountered in the middle and south of section A. This destruction was probably a result of the excavation strategy which produced horizontal excavation layers, starting from the section where the first skeletons were encountered (in the middle of section A). This strategy might have resulted in the removal of the upper layer of graves in the northern part of section A, which lies somewhat higher on the slope. The destruction of this top, however, can also be a result of late medieval levelling activities. The graves of the top layer of burials that were assigned to cemetery 5 are not indicated on the plans of cemetery 4 in this chapter.

Vrijthof burial phase I (400-510/20)

The first burial phase in cemetery 4 could be identified on the basis of only a few graves (table 11.2 and fig. 11.2). The graves 64, 264, 291 and 309 were dated on the basis of the typo-chronological analysis of their inventories, grave 265 was dated to this first burial phase on the basis of its stratigraphic relation with grave 264.

The five graves of the first burial phase (400-510/20) are dispersed unevenly over the cemetery; they do not form a clearly bordered group or significant clusters of graves. The single grave of this burial phase in trench 5 lies more or less in the middle of the trench, towards the western border of the cemetery. Of the four graves from the eastern part of the cemetery (trench 6) two are located in the northern section. One grave can be found in the middle of this trench, and one in the south-western section of the trench, and thus at nearly the lowest point of the cemetery. They were dug in at a deeper level than the graves from trench 5, but this is a result of the location of the cemetery on a slope. The largest difference between the highest grave from trench 5 and the lowest grave from trench 6 of this burial group is 50 cm. There is only one empty grave beneath this horizon of graves, and this grave (265) can thus be dated on the basis of its stratigraphic relation to burial phase I; it dates not after 510/20. Not all the five graves are, however, unambiguous examples of this burial phase.

Table 11.2
Vrijthof burial group I (400-510/20).

Context	Trench	Level	Maastricht phases					Vrijthof burial phase
309	6	1	Grave	B	B	400	460/480	I (400-510/20)
291	6	2	Grave	B	C	400	510/520	I (400-510/20)
64	4/5	4	Grave	C	C	460/80	510/520	I (400-510/20)
264	6	2	Grave	C	C	460/80	510/520	I (400-510/20)
265*	6		Grave	-	≤ C	-	≤ 510/520	I (400-510/20)

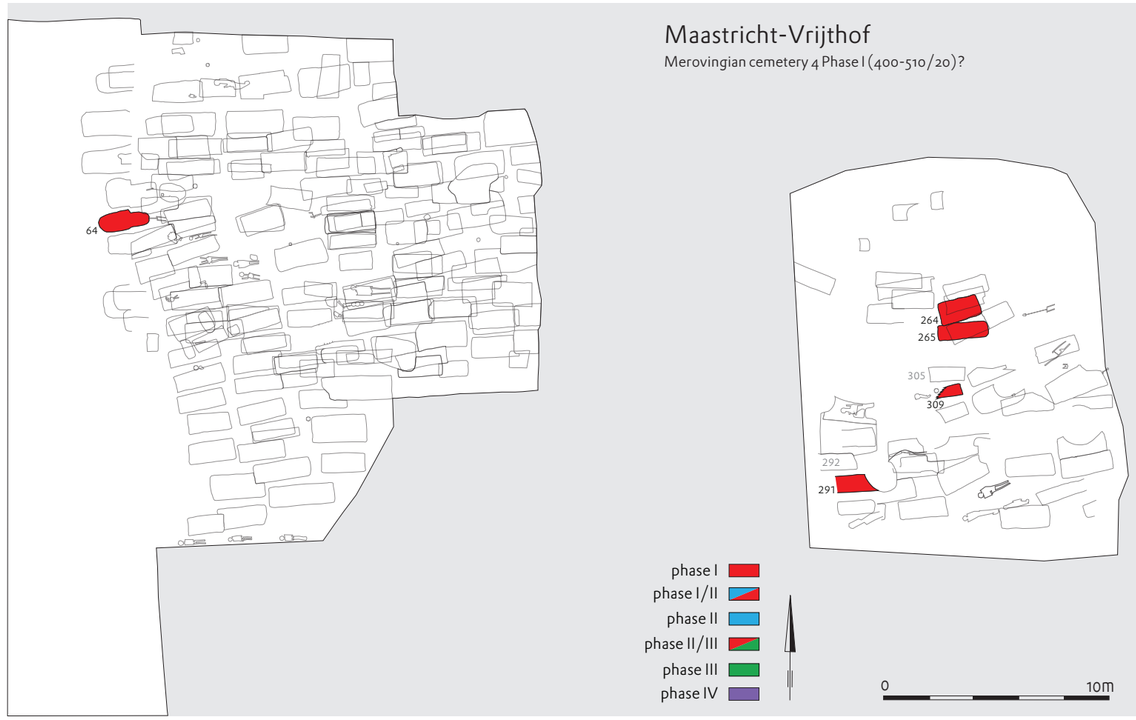
* Grave without (datable grave) goods and dated on the basis of its stratigraphical relation to a grave dated on the basis of grave goods.

Grave 309 is, according to the dating of its contents, the earliest grave of the cemetery. It is dated on the basis of a glass vessel, which is the only find (apart from some pottery shards) from this grave. The glass vessel can very well be an early Merovingian antique in a younger grave. However, together with graves 305 and 304, which date to phases I+II and lie just north of grave 309, a 'cluster' of graves is formed. It also seems as if grave 309 is situated in a row from north to south with graves 264, 265 and 305, which are all graves that are dated to either phase I or phases I+II.

The date range of grave 264 is based on the find of a glass spindle whorl and, again, this might be an object with prolonged circulation (a Merovingian antique). The associated knife cannot clarify this possibility of prolonged circulation. This indicates that gave 265, which was dated on the basis of its stratigraphic relation to grave 264, might also be somewhat younger than burial phase I. The dating of grave 291 is also rather uncertain: it is based on a bowl of Samian Ware, which dates to 400-500. This is the only find from this grave, and the pot may have been a reused antique or may have been in circulation for some time. It is rather peculiar that this grave lies next to a much younger grave (grave 292, which dates to burial phase IIIb), if one assumes that a cemetery gradually develops from a single core in the course of time. Grave 291 and 292 are both situated in trench 6, and thus in the lower part of the cemetery. The depth of grave 291 is 47.45 m +NAP, the depth of 292 is 47.76 m +NAP. This difference in depth might be related to the chronological phases of the graves. Although grave 291 is not on top of 292, this difference in depth (31 cm) can express the wish of the burying community to protect the older graves by digging more recent graves unto a higher level (the exact positions of the graves dug a few generations before were probably not known). The difference of 31 cm between the bottoms of the graves would just be enough to avoid disturbances of older graves.

The single grave of burial phase I in trench 5, grave 64, is dated on the basis of a string of beads, which clearly dates to an early phase, but might, again, have been in circulation for some time before its deposition. This conclusion is not unlikely since this grave is located close to the western border of the cemetery where younger graves are predominant. However, a number of graves that are dated to burial phases I+II cluster around grave 64. Combined with burial phases II and II+IIIA (which cover an extended period, of which it however can be expected that they include at least some graves that date in phase II and early in phase IIIa), it appears that a relatively old cluster in the north-western section of the cemetery becomes prominent after the first burial activities (figs. 11.3-5). The north-western cluster around grave 64 might be a relative old section of the cemetery; that is the section from the northwest to approximately the middle of the cemetery in the west, and expanding to the north-eastern part of trench 5, especially during burial phase II.

Fig. 11.2
Vrijthof burial group I (400-510/20).



The significance of the date ranges of the graves of burial phase I in trench 6 are rather ambiguous. Some graves which date to burial phases II, I+II or II+IIIa (see the sections below), indicate that the intensity of early burial activities was higher in the north-western part of the cemetery, but that during this stage graves were also created at some distance from this cluster to the south, more north and to the east. The section between trenches 5 and 6, which is not excavated, possibly contained also some burials of these eldest phases. For now it seems as if the cemetery has an old phase in the north-western section of the cemetery which was used intensively, but that contemporary graves were also created at some distance from this cluster. The more 'isolated' burials, contemporary but at some distance from the described cluster, can point towards a random choice of burial locations, but also to the creation of plots for certain (family?) groups. A more detailed discussion of the next burial phases will shed some light on the complicated topo-chronological distribution pattern of the graves.

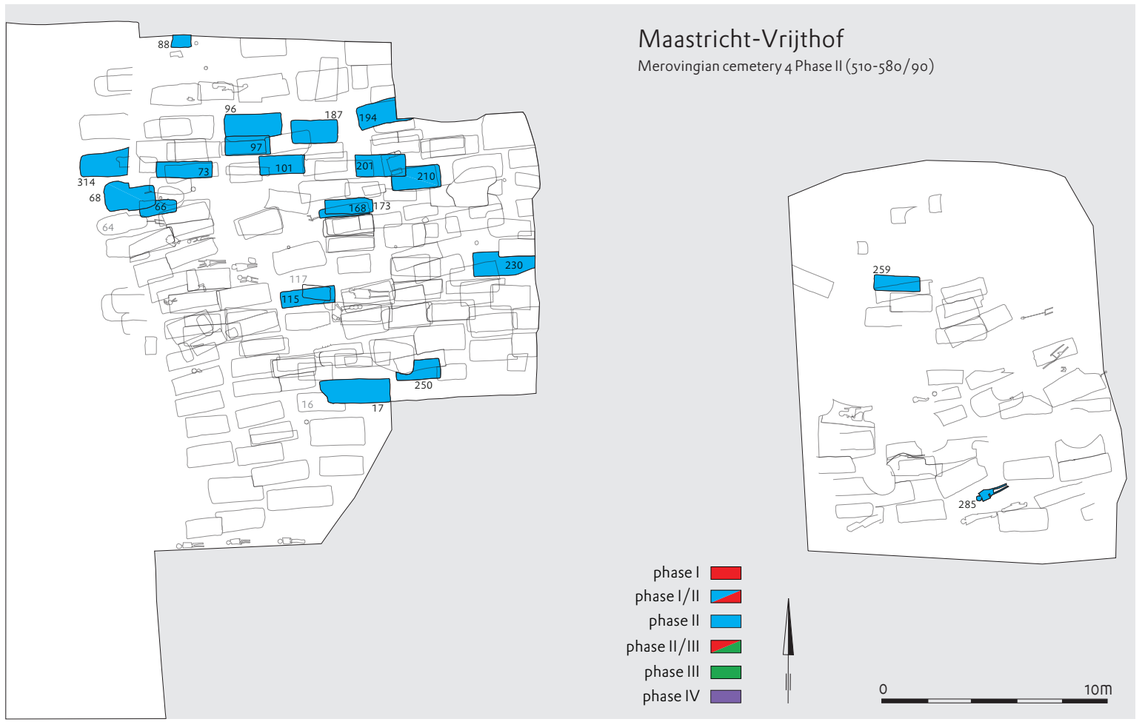
Vrijthof burial phase II (510-580/90)

This burial phase consists of twenty graves[4], which is, considering the number of documented graves of the Vrijthof cemetery, not a large number (table 11.3 and fig. 11.3). A number of graves are stratigraphically related. Some of these graves were empty and could be ascribed a *terminus ante quem* of 580/90, and some of the already dated graves could be assigned narrower date ranges on the basis of these stratigraphic relations. The empty graves, however, cannot be dated more precisely than to burial phases I+II, a group that will be discussed hereafter. Some of the graves of burial phases I+II were probably contemporary with burial phase II, and their distribution over the cemetery will be incorporated in the first conclusions with regard to the topo-chronological development of the cemetery.

A considerable number of graves from burial phase II were found in the northern part of the cemetery (trench 5). The most northern one is possible inhumation grave 88. The finds associated with this context date relatively early in the Merovingian

(4) Grave 104 is eventually added to this phase: see the final section in this chapter on the specific features of the Merovingian cemetery where the arguments for its assignment to burial phase II are discussed.

Fig. 11.3
Vrijthof burial group II (510-580/90).



period, and although their association with context 88 is uncertain, their presence indicates early burial activities in this section of the cemetery.

A west-east (or east-west) orientated row of graves can be observed to the south of possible inhumation grave 88. These are the graves 314, 73, 101, and 201. It shows (in the following sections) that this row also incorporates several other graves from composite phases I+II, II+IIIa and II+IIIa/b, and they may thus be more or less contemporary with the graves from phase II.

Another cluster can be found to the north of this 'row' of graves: it consists of graves 96, 97, 187 and 194. A fairly clear concentration of graves can be observed in the northern part of trench 5 when the graves from burial phase I+II are included in the overview (fig.11.12). Grave 173 is on top of 168; they also belong to this northern concentration. They are dated to the same phase, and their stratigraphic relation is in line with their typo-chronological dating. It might even be that grave 173 was deliberately placed on top of grave 168 after only a short period of time had elapsed; perhaps the deceased were related to one another, a relationship which was underlined with their burials. The same might apply to graves 96 and 97; they date to the same burial phase, and grave 96 is placed on top of 97.

The other graves from burial phase II which are identified in trench 5 do not show an obvious relation to the clusters of graves of this burial phase: graves 250 and 17 were found towards the southern border of the cemetery, and graves 230 and 115 just a little to the north of these two graves. Grave 115 lies on top of grave 117, which has no finds but can be dated to burial phases I+II on the basis of this stratigraphic relation. The southern location of grave 17 as a grave from burial phase II can be explained with the grave find on the basis of which it is dated: a disc brooch, which might be a reused antique in this grave (also underlined with its reversed chronological relation with grave 16, see the sections below); it may thus not belong to burial phase II.

(5) Grave 210: below context 201 (D-E (510/20-580/90)), 203, 211 and 213. (6) -59: below context 60, 62, 65, 66 (B-D (400-565)), 67 and 71 (relation uncertain, not in Harris matrix) - 71: below context 66 (B-D (400-565)), 67, 69 (I-J (670/80->725)), and 72; above context 59 (uncertain association not in Harris matrix). - 183: below context 101 (D (510/20-565)), 185, 186 and 184. - 184: above context 183; below context 101 (D (510/20-565)), and 186. - 234: below context 236 and 235 (cutting grave) (C-D (460/80-565)).

Table 11.3
Vrijthof burial group II (510-580/90).

Context	Trench	Level	Type	Maastricht phases				Vrijthof burial phase
101	5	2/3	Grave	D	D	510/20	565	II (510-580/90)
17	5	4	Possible grave	D	E	510/20	580/90	II (510-580/90)
88	5	1/2	Possible grave	D	E	510/20	580/90	II (510-580/90)
96	5	1/2/3	Grave	D	E	510/20	580/90	II (510-580/90)
115	5	3/4	Grave	D	E	510/20	580/90	II (510-580/90)
168	5	3	Grave	D	E	510/20	580/90	II (510-580/90)
173	5	2	Grave	D	E	510/20	580/90	II (510-580/90)
187	5	2/3/4	Grave	D	E	510/20	580/90	II (510-580/90)
201	5	2/3	Grave	D	E	510/20	580/90	II (510-580/90)
230	5	4	Grave	D	E	510/20	580/90	II (510-580/90)
250	5	4	Grave	D	E	510/20	580/90	II (510-580/90)
259	6	2	Grave	D	E	510/20	580/90	II (510-580/90)
314	4	7/7a/7b	Grave	D	E	510/20	580/90	II (510-580/90)
73	5	3/4	Grave	E	E	565	580/90	II (510-580/90)
97	5	3	Grave	E	E	565	580/90	II (510-580/90)
194	5	1/2/3	Grave	E	E	565	580/90	II (510-580/90)
285	6	2	Articulated HR	E	E	565	580/90	II (510-580/90)
68**	5/4	4/7+7b	Grave	D	F	510/20	610/20	II (510-580/90)
66**	5	3	Grave	B	D	400	565	II (510-580/90)
210**	5	2/3/4	Grave	D	H	510/20	670/80	II (510-580/90)

** Grave initially dated to another burial phase on the basis of grave finds, but dated to Vrijthof burial phase II on the basis of its stratigraphical relation.

Grave 210 was dated on the basis of its grave inventory to phases II- IIIa/b; this date range can possibly be narrowed down because of its stratigraphic relation: grave 210 is below 201 (phase II), and can thus be dated more precisely to phase II.[5] Grave 210 can be found in the north-western section in trench 5, and forms part of the oldest section of the cemetery.

The same applies to grave 66 and 68. Grave 66 (400-565) is located just north-east of grave 64, which is dated to burial phase I, and cuts the north-eastern corner of this grave 64. This is in accordance with the typo-chronological dating of the grave goods. However, grave 66 lies also above grave 68, which dates to burial phases II-IIIa (510/20-640/50). This indicates that grave 68 may be dated to a more restricted date range: to phase 510/20-565 (burial phase II). But it also indicates that grave 66 dates to a narrower phase (because it is above 68), namely 510/20-565, and thus also to burial phase II instead of both I+II according to its inventory of grave goods.

Only two graves of burial phase II were identified in trench 6, one is located in the northern section (259), the other in the southern section of the trench (285). Of burial phases I+II, three graves and one articulated skeleton were found in the middle section of trench 6.

It seems, taking also the graves of group I into consideration, that the frequency of burial activities during the earliest stages is higher in the north-eastern part of the cemetery (in trench 5) than in other parts of the cemetery, although these other parts were in use during burial phase II as well. If the excavation strategy and ancient levelling resulted in the removal of the top layer of especially the highest (northern) part of the (slope) cemetery (and thus the youngest graves) this would only influence the picture of the distribution pattern of the youngest graves, and not that of burial groups I and II. The surviving distribution of the burials from these phases reveals a more or less representative distribution of the earliest burial activities on the Vrijthof square, which can be refined further with the incorporation of the graves dated to burial phases I + II.

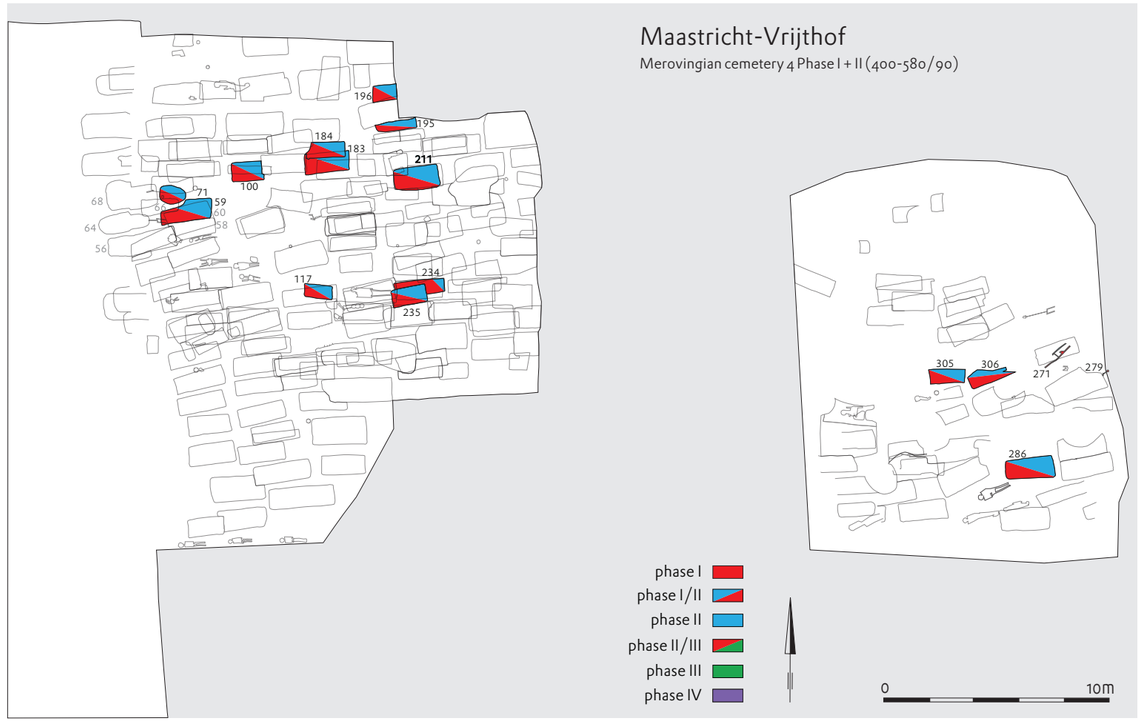
Burial phases I + II (400-580/90)

Sixteen graves cannot be dated more precisely than to burial phases I and II (fig. 11.4 and table 11.4). Eleven graves are assigned to this group on the basis of their stratigraphic relation with graves dated on the basis of their inventory, and the date range of one grave was narrowed down to this phase on the basis of its stratigraphic relation. The graves cannot be dated with certainty to the first or second burial phase, but they do not date after 580/90.

Five graves dated to burial phases I + II are to be found in trench 6 (271, 279, 286, 305 and 306). With these graves the earliest burial phases of the cemetery (I and II), at the lower point of the slope, consists now of 11 burials. A meaningful pattern or clustering in either the northern or southern part cannot be observed with regard to these earliest graves in this section of the cemetery.

In trench 5, the graves of this burial phase seem to be located in de middle and northern part of the cemetery. One grave was dated on the basis of finds, the other graves are empty but dated on the

Fig. 11.4
Vrijthof burial groups I+II (400-580/90).



basis of their stratigraphic relation to the graves dated to burial phases I, II and I-II.

Five graves (59, 71, 183, 184, 234)[6] are below graves of which the date ranges end around 565. Four graves (117, 195, 196, and 211)[7] are below graves of which the date ranges end around 580/90. Grave 211 is also above grave 210 dated to 510/20-580/90 (670/80) (see burial phase II), so it might date more precisely to 510/20-580/90. Grave 60 is above context 58 (H (640/50-670/80)) and 59 (no date), but below context 56, (E-F (565-610/20)), 61 and 62 of the younger horizon of graves, and 66 (B-D (400-565), but assigned to burial phase IIIb on the basis of these stratigraphic relations (see below). Considering the date of grave 58 compared to 56 and 66, this is in fact not possible. Grave 56 and 66 might thus have finds deposited after prolonged circulation: grave 60 probably dates around 650, and belongs thus not to phase I+II (but probably to IIIb).[8] Graves 213 and 233[9] are above graves which date ranges starts at 510; the graves cannot be dated more precisely as younger than 510; they are not indicated on the burial phases maps (see also table 11.10).

Two of the graves of burial phase I+II (183 and 211) can be related to the west-east orientated row of graves mentioned in the discussion of burial phase II. Grave 66 (400-565) is located just northeast of grave 64 which is dated to burial phase I, and cuts the north-eastern corner of this grave 64. This is in accordance with the typo-chronological dating of the graves. However, grave 66 lies also above grave 68, which dates to burial phases II-IIIa (510/20-640/50). This indicates that grave 68 should be dated to a more restricted date range: to phase 510/20-565 (burial phase II). But it also seems to indicate that grave 66 dates to a narrower phase (because it is above 68), namely 510/20-565, and thus also to burial phase II instead of both I+II according to its inventory of grave goods.

(7) -117: below context 115 (D-E (510/20-580/90)), 137 and 151. - 195: below context 194 (E (565-580/90)). - 196: below context 194 (E (565-580/90)). - 211: above context 210 (D-H (510/20-670/80)) and 213; below context 201 (D-E (510/20-580/90)) and 203. (8) This means that grave 66 is assigned incorrectly to burial phase II and must date to a later phase. For now, however, this is not changed since grave 58 might also be dated incorrectly. The possibility of prolonged circulation blurs the chronological phasing of the graves on the basis of objects. (9) -213: below context 179 and 211; above context 210 D-H (510/20-670/80) - 233: above context 230 (uncertain) D-E

Table 11.4
Vrijthof burial groups I+II (400-580/90).

Context	Trench	Level	Type	Maastricht Phases				Vrijthof Burial Phases
235	5	4	Grave	C	D	460/80	565	I + II (400-580/90)
286	6	2	Grave	C	D	460/80	565	I + II (400-580/90)
306	6	2	Grave	C	D	460/80	565	I + II (400-580/90)
271	6	1	Articulated HR	C	E	460/80	580/90	I + II (400-580/90)
279	6	2	Find	C	E	460/80	580/90	I + II (400-580/90)
305	6	2	Grave	C	E	460/80	580/90	I + II (400-580/90)
100**	5	2/3	Grave	E	H	565	670/80	I + II (400-580/90)
183*	5	3	Grave	-	≤E	-	≤565	I + II (400-580/90)
234*	5		Grave	-	≤E	-	≤565	I + II (400-580/90)
184*			Grave	-	≤E	-	≤565	I + II (400-580/90)
59*			Grave	-	≤E	-	≤565	I + II (400-580/90)
71*			Grave	-	≤E	-	≤565	I + II (400-580/90)
211*	5		Grave	-	≤E	-	≤580/90	I + II (400-580/90)
117*			Grave	-	≤E	-	≤580/90	I + II (400-580/90)
196*			Grave	-	≤E	-	≤580/90	I + II (400-580/90)
195*			Pit	-	≤E	-	≤580/90	I + II (400-580/90)
233*			Grave	≥E	-	≥510/20	-	≥ 510/20
213*			Grave	≥E	-	≥510/20	-	≥ 510/20)

* Grave without (datable grave) goods and dated on the basis of its stratigraphical relation to a grave dated on the basis of grave goods.
** Grave initially dated to another burial phase on the basis of grave finds, but dated to Vrijthof burial phases I+II on the basis of its stratigraphical relation.

The same applies to graves 100 and 16, which are dated on the basis of their inventory to phases II+IIIab (grave 100) and phase IIIb (grave 16). Grave 16 (dated to 610/20-670/80) is beneath 17, which dates to phase II. This reversed stratigraphy is discussed below in the section on burial phase IIIb, for now the date range of grave 16 is not adjusted. Grave 100 is below 101, 102 and 103. Grave 101 dates to burial phase II, so the date range of grave 100 can be narrowed down to burial phase I+II.[10] Graves 117, 233, 234 and 235 are situated just a little to the south of the 'northern cluster' in trench 5.

So, incorporating the graves, which could not be dated more precise than to the two earliest burial phases into the distribution pattern of the graves of singular phases I and II, reveals a pattern of a northern concentration of burial activities (fig. 11.12). The southern (but not the southernmost section in trench 5) and eastern part of the cemetery were also in use, although not as intensively as the northern section.

The following sections deal with the burials of the end of the sixth and seventh century. A considerable number of graves, however, could not be dated precisely and their date range starts in burial phase II. These graves can contribute, although their chronological significance is less meaningful, to the general pattern of a chronological development from the north to the south. The graves can in fact be early, and part of burial phase II, or later and part of phases IIIa/b. This has to be kept in mind in order to discover or understand the final discussion of the chronological development of the cemetery. But first, the graves from burial phases IIIa and IIIb are discussed separately.

Vrijthof burial phase IIIa (580/90-640/50)

The burials which are dated to the burial phases just after burial phases I and II, till 670/80 were difficult to place in clear cut burial phases. Creating one large phase of a century, however, would not do justice to the diversity of the graves and contributes little to the analysis of the chronological development of the cemetery. Assigning the graves to burial phases as narrow as the Maastricht phases, to which they were originally dated, is unworkable: the majority of the graves are dated to two or more of these phases, and making narrow burial phases in which the date ranges of the majority of the graves do not overlap with other phases is impossible. It was therefore decided to create two groups within this group of graves, which however, do overlap. This solution makes it possible to discern the earliest graves of the end of the sixth/first half seventh century from the graves that cover the beginning of the seventh till the third quarter of the seventh century. Only three graves could be assigned to phase IIIa unambiguously, but a considerable number of graves can be assigned to burial phases II+IIIa (which would otherwise be labelled as graves

(510/20-580/90); below context 227, 239 and 237 (uncertain, not in Harris matrix). (10) It is decided to adjust the initial date ranges of graves to the date ranges of dated graves above them when they narrow the date rages of the lowest grave. In case of 'reversed date ranges' it is decided to maintain the initial date ranges, since these incompatible date ranges can be explained with the prolonged circulation of objects.

Fig. 11.5
Vrijthof burial group IIIa (580/90-640/50).

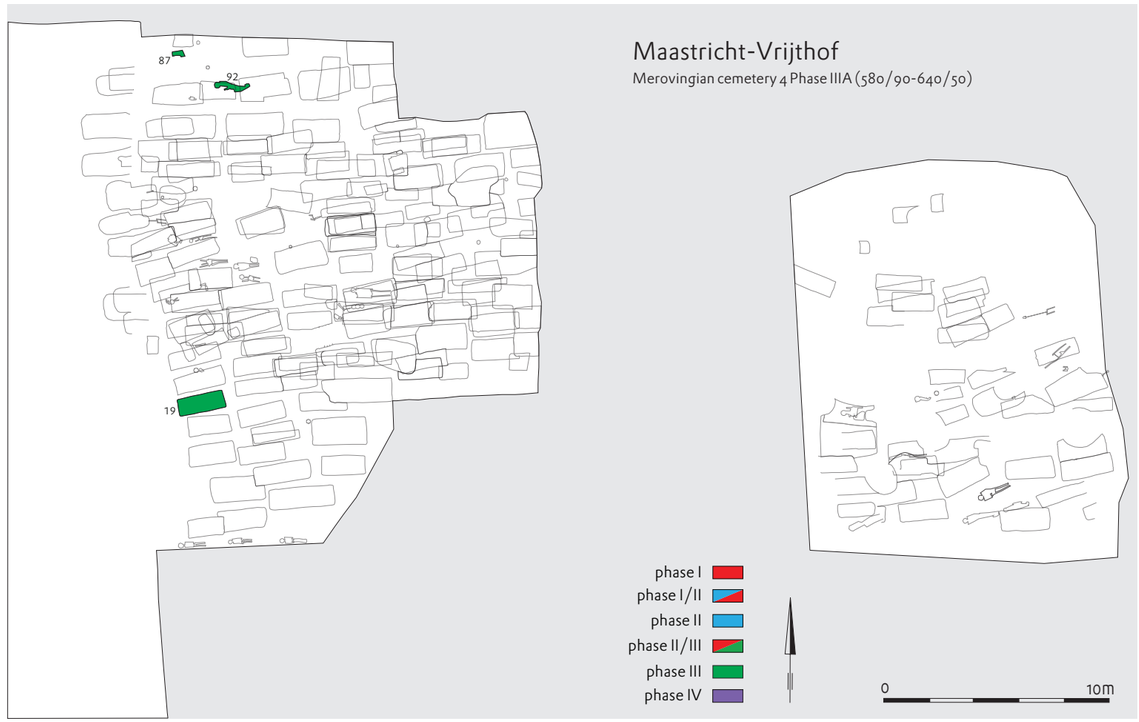


Table 11.5
Vrijthof burial group IIIa (580/90-640/50).

Context	Trench	Level	Type	Maastricht phases				Vrijthof burial phase
19	5	4	Grave	F	G	580/90	640/50	IIIa (580/90-640/50)
87	5	1	Grave	F	G	580/90	640/50	IIIa (580/90-640/50)
92	5	1?/2	Grave	G	G	610/20	640/50	IIIa (580/90-640/50)

of burial phases II+III). Burial phase IIIb is characterized by its iron belt fittings with silver/copper alloy inlays of which striking examples were found in the Vrijthof cemetery. The three graves which are clearly of an earlier date are identified as graves of burial phase IIIa (fig. 11.5 and table 11.5).

Grave 19 is dated on the basis of two pottery vessels, grave 87 on the basis of a glass vessel. The date of the ribbed beaker (pottery) from grave 87 is not certain but probably dates to 600-700[11]: this indicates that grave 87 could also belong to phase IIIb. Grave 92 is dated on the basis of the characteristic '*Bülach*' belt fittings, of which it is supposed that their chronological position is conclusive. Altogether, phase IIIa is poorly represented in the Vrijthof cemetery. Together with the graves which can only be dated to phases II+IIIa, a more extended group is created that represents the sixth and first half of the seventh century.

The three graves of phase IIIa are situated along the western border of the cemetery. Graves 87 and 92 are located to the north along this western border, grave 19 in the southern part of the cemetery. Grave 19 is an intact grave, and is somewhat 'isolated'; that is not below or above another grave, but it is, nonetheless, located in a neat row of graves. Grave 87 lies below pit 89, and is rather disturbed. The finds from the pit date to Maastricht phase D-F (510/20-610), but it is very uncertain whether this date is indicative for the pit, and whether this relation is relevant for the dating of grave 87.

Although based on just a limited number of graves, it seems as if burial activity takes place both in the northern part and southern part of the cemetery in trench 5 during this phase, but that this activity tends to concentrate towards the western border of the cemetery. This is a preliminary conclusion, which has to be tested with the distribution pattern of the graves assigned to burial phases II+IIIa.

Vrijthof burial phases II+IIIa (510/20-640/50)

Thirty-two contexts/graves (among which one pit and a robber trench) cannot be dated more precisely than to burial phases II and IIIa (fig. 11.6 and table 11.6). They cover a time span of a century or more, and thus do not contribute significantly to the understanding of the chronological development of the cemetery. However, the graves do not date after 640/50. Within this burial phase, a group of graves dating after 565 is noticeably present, and these might be the most significant indicators of this group II+IIIa and for the conclusions about the chronological development of the cemetery. Next to the graves dated on the basis of their contents, a number of graves could be ascribed to these phases on the basis of their relation to other, dated graves. It may be more straightforward to assign them to burial phases I - IIIa, but it is chosen not to do this. The earliest phase (I) is poorly represented in the complete corpus of grave goods from this cemetery (see the section above). It can be assumed that burial phase I is hardly present in the cemetery, and thus that the empty graves were not part of this first burial phase. Ascribing this group of empty graves to burial phase I - IIIa would also blur the development pattern (if present) considerably. However, it must be kept in mind that there is a possibility, although small, that these empty graves date to an earlier phase than II-IIIa. Moreover, two graves (76 and 95) could be dated to a narrower phase on the basis of their stratigraphic relations. One grave (68) was placed in another phase (II) on the basis of its stratigraphic relation.

Two contexts, with dated objects, that belong to the earliest stages of this group can be found in trench 5 (context 89 and the earlier mentioned grave 68) and one in trench 6 (grave 258). Context 89 is a large rectangular pit, but it is unlikely that the finds from this pit were originally associated with this context.[12] The earliest grave in this group from trench 5 is grave 68. It forms part with a cluster of graves which date to burial phases I and II and which underlines the early date of grave 68. Its date range, however, could be narrowed down to burial phase II on the basis of its stratigraphic relation, although with constraints: the older grave on top (grave 66: 400-565) was dated on the basis of only a glass bottle, which can be an object with a prolonged circulation.[13] However, graves that date to burial phases II+IIIa also form a cluster which can be found in association with earlier clusters in the north-western section of the cemetery (figs. 12.6 and 12.11). This may indicate that the graves in this section, which date to phases II + IIIa, are early graves in the date range of burial phases II + IIIa. Some of the graves of this north-western section were partly excavated in trench 4. These graves thus form a cluster along the western border of the cemetery, at more or less the highest point of the cemetery. This cluster can be associated with a cluster of graves dated to phase II (fig. 12.3) and together form three west-east (or east-west) orientated rows of graves in trench 5. One of these rows was already observed in the distribution pattern of the graves of burial phase II.[14]

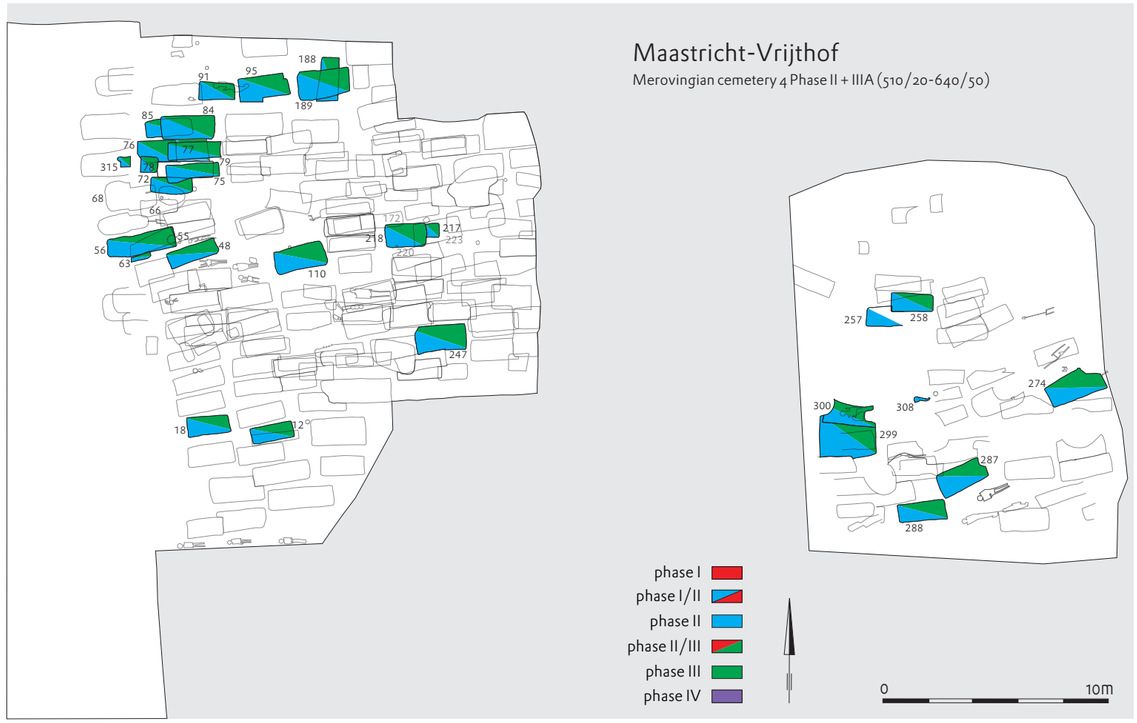
Grave 258 is located in the northern part of trench 6, and the other graves assigned to burial phases II+IIIa are located in the middle and southern part of this trench. Considering the graves of group I and II, the distribution of the graves of burial phases I, II and IIIa in trench 6 seems rather random; no clear pattern can be identified or it might be that burial activities were more intensive, although only slightly, in the northern part of trench 6 during the earliest phases. Grave 300 has an extended grave inventory, and was dated to 565-640/50. Grave 299 was cut by grave 300, and must thus be older or of the same date range. A late Roman bowl was found in this grave, dated to 340-400. This grave, however, does not necessarily define the earliest phase of the cemetery since there are no indications that the cemetery started before 400. Also, the reuse of antique vessels is a quite common phenomenon in Merovingian graves in Maastricht. It would be very speculative to assign this grave to the earliest phase of the cemetery only on the basis of one find which might be an 'antique'. The grave is therefore dated on the basis of its stratigraphic relation to grave 300 and thus not later than 640/50, but only to phase II-IIIa and not earlier.

Two graves (18 and 12) are located in the south-western part of the cemetery. Grave 18 has no stratigraphic relation with another grave, grave 12 lies beneath sarcophagus 407 (the relation is however uncertain: see the catalogue of graves), which is dated to burial phase II-IIIa/b: their stratigraphic relation is thus in accordance with their typo-chronological dates, but their date range is that broad that not much can be concluded about the validation of the typo-chronological analysis of the finds compared to their stratigraphic relations.

Grave 189 is a large grave above the Roman foundation trench 80 which has a north-south orientation. The other graves in trench 5 are 110 and 218. Grave 110 is located in the middle of the trench/cemetery, and has no stratigraphic relation with another grave, although it is situated close to graves 105 and 104, which seem to form the centre of the empty space in the middle of the cemetery. This identified 'empty space' and graves 105 and 104 are discussed in a section below. Grave 218 is located to the east of grave 110. It is in a stratigraphic sense associated with graves 217 (it is above this grave) and 172, 175, 220 and 223 (it is below these graves/finds, the relation with grave 223 is uncertain). Grave 217 is dated to phases II-IIIa/b on the basis of its grave finds, and its date range can thus be narrowed down to phases II-IIIa on the basis of its stratigraphic relation to grave 218 (although with reservations regarding the possibility of prolonged circulation of objects). Of the graves above grave 218, 175 belongs to the horizon of young

(11) See Bergeijk for a discussion of ribbed beakers. They date to the seventh century (Theuws/Van Haperen 2012, 103-104). (12) This conclusion is based on its stratigraphic position. See chapter 5. (13) Grave 68 (D-F (510/20-610)): below context 66 B-D (400-565)), 67, 70 and 72. (14) Such topographical elements will be discussed in a later section.

Fig. 11.6
Vrijthof burial groups II+IIIa (510/20-640/50).



graves, which is thus in accordance with the dating of grave 218. Grave 223 is dated to burial phases II-IIIa/b, and, if the identified stratigraphic relation is correct, this would also be in accordance with the dating of grave 218 (there is some discussion about this relation; see the catalogue of graves). Find 220 is a ceramic pot, a stray find (or as such indicated on the field drawing), which went missing and could not be classified and dated. Grave 247 is located in the south-eastern part of trench 5, and has a stratigraphic relation with grave 249 (247 is below this grave 249). Grave 249 has no finds, but is above grave 250, which dates to 510/20-580/90: grave 249 can be dated after 510/20 on the basis of this stratigraphic relation.

Six graves (63, 72, 76, 77, 188 and 257) can be dated before 610/20 on the basis of their relation to other, dated graves.[15] Grave 76 (initially dated to 460/80-670/80) and 77 (without datable finds) are below grave 79, and can thus be dated to burial phases II+IIIa. Three graves (91, 217 and 299) were without finds, but dated before 640/50 on the basis of their stratigraphic relation.[16] Grave 95 was dated on the basis of its grave inventory to phases II- IIIa/b; this date range can possibly be narrowed down: grave 95 is beneath grave 92, which dates to phase IIIa.[17] Grave 95 can thus be dated more precise to phase II-IIIa. Grave 95 is located in the northern section of trench 5, and this corresponds with the earlier made remark that the earliest graves of the cemetery tend to cluster in the northern part of the cemetery.

The stratigraphic relations between graves 55, 54, 56 and 58 are problematic.[18] Grave 55 is below pit 54 (not dated) and grave 56. Grave 56 dates to 565-610/20 (burial phase II + IIIa). But grave 55 is also above grave 58, which dates to 640/50-670/80. The finds from grave 56 were probably deposited with the deceased after they had been in circulation for some time. For now grave 56 is maintained as a grave of burial phases II+IIIa because its finds assemblage was dated as such, but this is probably incorrect. Grave 55 is dated after 640/50, but it cannot be certain to which phase it actually belonged; it is for now considered to be a grave of phase IIIb (see also the section on phase IIIb).

(15) -257: below context 258 (D-F (510/20-610/20)). - 63: below context 51 (not in Harris matrix), 55 and 56 (E-F (565-610/20)). - 72: above context 68 (D-F (510/20-610)) and 71; below context 70 (670/80->725) and 75 (E-F (565-610)). - 76 (C-H (460/80-670/80)): below context 78 (E-G (565-640/50)), 77 and 79 (E-F (565-610)). - 77: below context 79 (E-F (565-610)); above context 76. - 188: below context 189 (E-F (565-610)). (16) - 217: below context 218 (E-G (565 -640/50)) (cutting grave), and 223 (F-H (580/90-670/80)). - 91: below context 86 (G-H (610/20-670/80)) and 92 (G (610/20-640/50)). - 299: below context 302, 292 (H-J (640/50-670/80)) (cutting grave), and 300 (cutting grave) (E-G (565-640/50)). (17) Grave 95: above context 81 and 83 (not in Harris matrix); below context 92 (G (610/20-640/50)). (18) -55: below context 54 and 56 (E-F (565-610/20)); above context 58 (H (640/50-670/80)) and 63.

Together with the graves that could be assigned to either burial phase II or burial phase IIIa, it can carefully be suggested that the earlier graves of II+IIIa (compared to burial phase IIIb and II-IIIa/b), are predominantly concentrated in the north-western part of trench 5. This cluster is situated somewhat more to the north than the earliest cluster of graves of burial phases I and I+II. Although this part of the cemetery is more frequently chosen as a burial location, other sections of the cemetery were also in use during this period.

Vrijthof burial phase IIIb (610/20-670/80)

Burial phase IIIb consists of sixteen graves, and in this group the majority of the characteristic iron belt fittings with silver and copper alloy inlays are present (fig. 11.7 and table 11.7). The majority of the graves from this group date from 610/20 to 670/80. Only a few (graves 15, 58 and 292) date to a shorter time span (640/50-670/80), and are the youngest graves of this burial phase. The graves 55 and 60 are dated after 640/50 on the basis of their stratigraphic relations; they are placed in this burial group since they are above grave 58 (640/50-670/80, but 14C: 550-650 (95.4%)). They are also below 56 (565-610/20), but the finds from this grave may have been in circulation for some time; it remains uncertain to which phase the graves 55 and 60 actually belonged, but they are for now depicted on the cemetery plan representing the distribution of the graves of burial phases IIIb; it has to be kept in mind that these two graves may also date somewhat later, but burial phase IV is poorly represented in the cemetery.

The majority of the graves can be found in trench 5, three graves are located in trench 6 (284, 297 and 292). The seaxes, seax fittings and belt fittings from these graves place them in burial phase IIIb. Similar finds are widely known and discussed, and controversies about their date ranges are hardly existent. They are located towards the southern border of the cemetery, and this could be an indication that the burial activities tended to move from the northern to the southern section of the cemetery in the course of time.

Grave 16 in trench 5 shows an inconsistent stratigraphic relation with grave 17, which dates to an older phase (II) according to the typo-chronological analysis, but lies above grave 16. The finds from these graves are common and well-dated finds in Merovingian graves and their typo-chronological dates are according to the generally accepted standards. So something else might have occurred here. A very plausible explanation is that the find from grave 17, a garnet disc brooch, is a Merovingian antique in this grave. This implies that the minimum prolongation of the circulation period of the brooch could have been 30-40 years, but a longer circulation period can also be presumed.

Grave 58 shows a complicated stratigraphic relation with grave 56. Grave 58 (640/50-670/80) lies beneath 56, which dates to burial phase II+IIIa (565-610/20). So it can be suggested that grave 58 dates around the beginning of burial phase IIIb (however, its Maastricht date is 640/50-670) and that grave 56 dates towards the end of burial phase IIIa: they might be more or less contemporary. Another option is that Merovingian antiques/heirlooms were deposited in grave 56 (see also the comments on graves 55, 54, 56 and 58 in the section on Vrijthof burial phases II+IIIa (510/20-

Table 11.6
Vrijthof burial groups II+IIIa (510/20-640/50).

Context	Trench	Level	Type	Maastricht phases				Vrijthof burial phases
89	5	1/2/3/4	Pit	D	F	510/20	610/20	II+IIIa (510/20-640/50)
258	6	2	Grave	D	F	510/20	610/20	II+IIIa (510/20-640/50)
12	5	4	Grave	D	G	510/20	640/50	II+IIIa (510/20-640/50)
18	5	4	Grave	D	G	510/20	640/50	II+IIIa (510/20-640/50)
85	5	½	Grave	D	G	510/20	640/50	II+IIIa (510/20-640/50)
56	5/4	4/7	Grave	E	F	565	610/20	II+IIIa (510/20-640/50)
75	5	½	Grave	E	F	565	610/20	II+IIIa (510/20-640/50)
79	5	½	Grave	E	F	565	610/20	II+IIIa (510/20-640/50)
189	5	1/2/3	Grave	E	F	565	610/20	II+IIIa (510/20-640/50)
247	5	¾	Grave	E	F	565	610/20	II+IIIa (510/20-640/50)
274	6	2	Grave	E	F	565	610/20	II+IIIa (510/20-640/50)
48	5	¾	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
78	5/4	2+3/7	Possible grave	E	G	565	640/50	II+IIIa (510/20-640/50)
84	5	1/2/3/4	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
110	5	¾	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
218	5	¾	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
287	6	2	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
288	6	2	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
300	6	2	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
308	6	1	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
315	4	7/7a	Grave	E	G	565	640/50	II+IIIa (510/20-640/50)
76**	5		Grave	C	H	460/80	670/80	II+IIIa (510/20-640/50)
95**	5	1/2/3	Grave	F	H	580/90	670/80	II+IIIa (510/20-640/50)
77*	5		Grave	-	≤F	-	≤610/20	II+IIIa (510/20-640/50)
72*	5		Grave	-	≤F	-	≤610/20	II+IIIa (510/20-640/50)
63*	5		Grave	-	≤F	-	≤610/20	II+IIIa (510/20-640/50)
257*	6		Grave	-	≤F	-	≤610/20	II+IIIa (510/20-640/50)
188*	5		Grave	-	≤F	-	≤610/20	II+IIIa (510/20-640/50)
91*	5		Grave	-	≤G	-	≤640/50	II+IIIa (510/20-640/50)
80*	5		Robber trench	-	≤G	-	≤640/50	II+IIIa (510/20-640/50)
299*	6		Grave	-	≤G	-	≤640/50	II+IIIa (510/20-640/50)
217*	5		Grave	-	≤G	-	≤640/50	II+IIIa (510/20-640/50)

* Grave without (datable grave) goods and dated on the basis of its stratigraphical relation to a grave dated on the basis of grave goods.
** Grave initially dated to another burial phase on the basis of grave finds, but dated to Vrijthof burial phases II+IIIa on the basis of its stratigraphical relation.

Fig. 11.7
Vrijthof burial group IIIb (610/20-670/80).

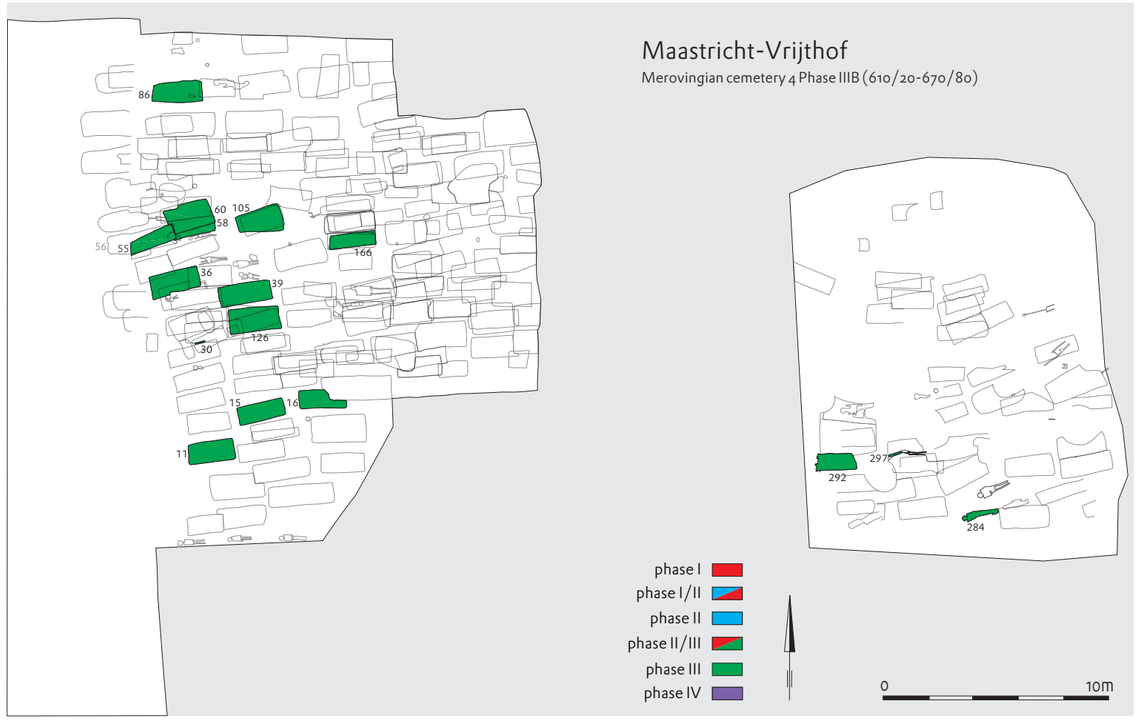
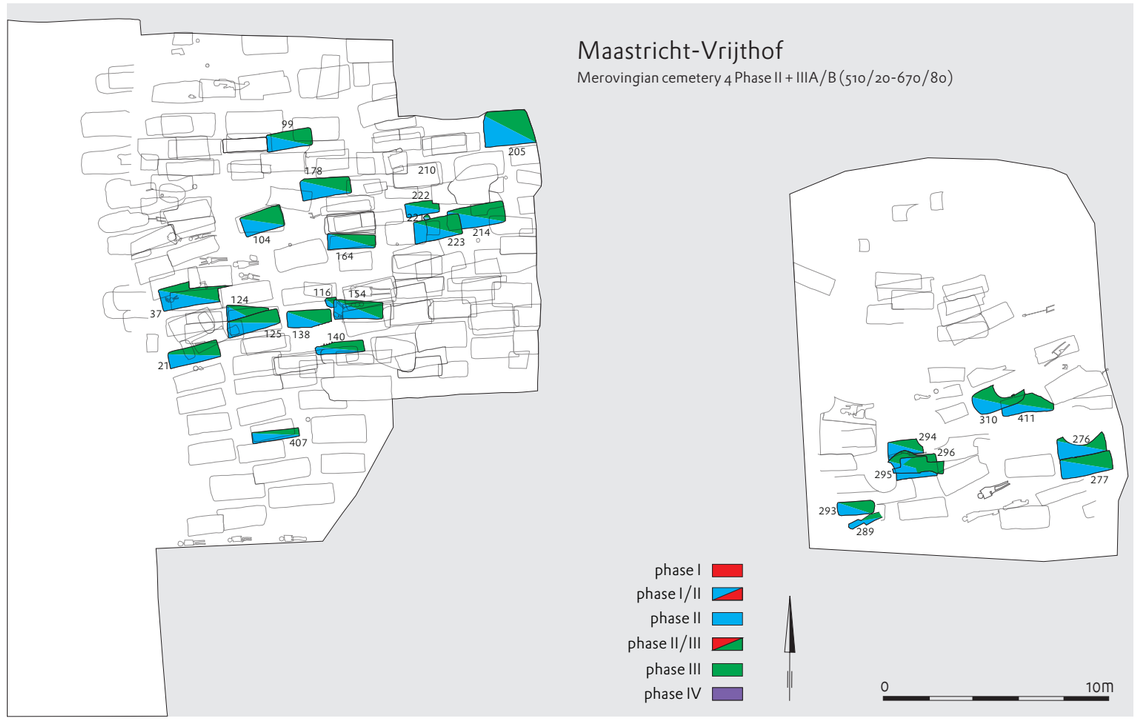


Table 11.7
Vrijthof burial group IIIb (610/20-670/80).

Context	Trench	Level		Maastricht phases				Vrijthof burial phase
11	5	4	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
16	5	4	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
30	5	4	Find	G	H	610/20	670/80	IIIb (610/20-670/80)
36	5	4	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
39	5	3/4	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
86	5	1/2	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
105	5	1/2/3	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
126	5	3	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
166	5	3	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
284	6	2	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
297	6	1	Grave	G	H	610/20	670/80	IIIb (610/20-670/80)
15	5	4	Grave	H	H	640/50	670/80	IIIb (610/20-670/80)
292	6		Grave	H	H	640/50	670/80	IIIb (610/20-670/80)
58	5		Grave	H	H	640/50	670/80	IIIb (610/20-670/80)
55 *	5		Grave	≥H	-	≥640/50	-	≥640/50
60*	5		Grave	≥H	-	≥640/50	-	≥640/50

* Grave without (datable grave) goods and dated on the basis of its stratigraphical relation to a grave dated on the basis of grave goods.

Fig. 11.8
Vrijthof burial groups II+IIIa/b (510/20-670/80).



640/50). For now grave 58 is maintained as a grave of burial phase IIIb since the goods from grave 56 may have been in circulation for some time before deposition.

The two graves which could be the youngest (15 and 58) in trench 5 of burial group IIIb, are situated in the western section of the cemetery, although still at some distance from the most western border. In general, in trench 5, the graves of burial phase IIIb seem to form rows from the north to the south in the western section of the cemetery (graves 105, 58, 36, 39, 126, 11, 15, 16). The majority of the graves of burial phase IIIb are located more to the south than the majority of graves of burial phases II+IIIa.

Altogether, nearly all the parts of the cemetery seem to be in use during all the phases discussed up to now. However, the earliest graves of burial phases I and II seem to cluster in the mid-western and north-western sections, and the younger graves of burial phase IIIb seem to move towards the southern section of the cemetery. It remains to be seen whether the graves which could not be dated more precisely than to burial phases II+IIIa/b confirm this picture.

Burial Group II+IIIa/b (510/20-670/80)

The graves that could not be dated more precisely than to burial phases II and IIIa/b, form a group of 26 graves (fig. 11.8 and table 11.8). These are graves that are less indicative for the analysis of the chronological development of the cemetery (a considerable number comprise a date range of more than a century), but they certainly do not date after 670/80. Six graves were assigned to this burial group on the basis of their stratigraphic relation to other graves and two graves (125 and 152) were dated more precisely on the basis of their stratigraphic relations. The stratigraphic relation could not be established with certainty for the graves 37 and 289 (see the description of the graves in the catalogue), but are for now incorporated in the analysis. As it was mentioned before, a case can be made for assigning the graves that are only dated on the basis of their stratigraphic relation to other graves to the more extended date range I-IIIa/b, but the possibility that these graves actually belonged to burial phase I is thought to be rather small (see the discussion above).

The graves from this broad burial group form three clusters in trench 5. The two clusters in the northern part of the cemetery (one cluster to the east and one to the west) seem to be form a coherent part with the graves of burial phase II, and these graves, which could not be dated more precisely than to burial phase II+IIIa/b might be the eldest ones within these combined

Table 11.8
Vrijthof burial groups II+IIIa/b (510/20-670/80).

Context	Trench	Layer		Maastricht phases				Vrijthof burial phases
21	5	3/4	Grave	D	H	510/20	670/80	II+IIIa/b (510/20-670/80)
124	5	4	Grave	D	H	510/20	670/80	II+IIIa/b (510/20-670/80)
178	5	2/3	Grave	D	H	510/20	670/80	II+IIIa/b (510/20-670/80)
214	5	3/4	Grave	D	H	510/20	670/80	II+IIIa/b (510/20-670/80)
407	5		Grave	D	H	510/20	670/80	II+IIIa/b (510/20-670/80)
140	5	3	Grave	E	H	565	670/80	II+IIIa/b (510/20-670/80)
222	5	2	Grave	E	H	565	670/80	II+IIIa/b (510/20-670/80)
277	6	2	Grave	E	H	565	670/80	II+IIIa/b (510/20-670/80)
293	6	1	Grave	E	H	565	670/80	II+IIIa/b (510/20-670/80)
310	6	1/2	Grave	E	H	565	670/80	II+IIIa/b (510/20-670/80)
99	5	2	Grave	F	H	580/90	670/80	II+IIIa/b (510/20-670/80)
116	5	3	Possible grave	F	H	580/90	670/80	II+IIIa/b (510/20-670/80)
138	5	3	Grave	F	H	580/90	670/80	II+IIIa/b (510/20-670/80)
154	5	3	Disarticulate remains	F	H	580/90	670/80	II+IIIa/b (510/20-670/80)
205	5	2	Grave	F	H	580/90	670/80	II+IIIa/b (510/20-670/80)
223	5	2	Grave	F	H	580/90	670/80	II+IIIa/b (510/20-670/80)
152 **	5		Grave	F	J	580/90	>725	II+IIIa/b (510/20-670/80)
125**	5		Grave	H	I	640/50	>725	II+IIIa/b (510/20-670/80)
104*	5	4	Grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
164*	5	4	Grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
276*	6		Grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
411*	6		Possible grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
295*	6		Grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
37 *	5		Grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
289*	6		Grave	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
221*	5		Pit	-	H	-	≤670/80	II+IIIa/b (510/20-670/80)
296*	6		Grave	≥B	-	≥400	-	≥400

* Grave without (datable grave) goods and dated on the basis of its stratigraphical relation to a grave dated on the basis of grave goods.

burial phases, and form, together with the graves of burial phase II, the oldest part of the cemetery in trench 5. This is suggested because the cluster of graves from burial phase II-IIIa/b in the southern part seems to form a coherent group with the graves that were more or less unambiguously assigned to burial phase IIIb; some of these burials seem to concentrate in the south-western part of trench 5. This observation might indicate that the cemetery, at least from the onset of burial phase II, gradually develops from the north to the south. A number of graves could be dated on the basis of their stratigraphic relation to the graves of group IIIb. Two graves (95 and 210) were dated on the basis of their grave inventory to phases II- IIIa/b; this date range can possibly be narrowed down because of their stratigraphic relation to other graves. Grave 95 is below grave 92, which dates to phase IIIa.[19] Grave 95 can thus be dated more precisely to phase II-IIIa. Grave 95 is located in the northern section of trench 5, where the earliest graves of the cemetery tend to cluster. Grave 210 is below 201 (phase II), and can thus be dated more precisely to phase II.[20] Grave 210 can be found in the north-western section of trench 5, and forms part of the earlier section of the cemetery.

Grave 152 has a wide date range. A number of contexts/graves are positioned above this grave.[21] Grave 116 and 154 are dated to an earlier phase on the basis of their finds (580/90-670/80), which is not impossible in view of the wide date range assigned to grave 152. This, however, implicates that grave 152 is not part of the youngest horizon of Merovingian graves with finds, but that its date should be narrowed down to 580/90-670/80 (burial phase II+IIIa/b); grave 152 belongs to the cluster of graves of phase IIIb and II+IIIa/b in the mid-western section of the cemetery in trench 5.

Grave 125 also has a wide date range.[22] It can be dated more precisely to phase 540/590-670/80 on the basis of its stratigraphic relation with grave 126 (which dates to burial phase IIIb). This grave also belongs to a number of three stacked graves (124, 125, 126), which specifics will be discussed in the chapter 13.

Two graves of this phase require specific attention: graves 104 and 105. Grave 105 is assigned to burial phase IIIb and grave 104 underneath it (without finds) to burial phase II-IIIa/b on the basis of this stratigraphic relation, or earlier on the basis of ^{14}C analysis[23] (see also the section below on the specific features of the cemetery). They are two nearly perfectly superimposed burials, with a similar orientation, and they seem to form a focal point in a more or less empty space within the section of the cemetery which is densely occupied (fig. 11.15). The empty space, graves 104 and 105, and the piles of graves (two or more superimposed graves at more or less the same spot), that surround this 'empty space', will be discussed in more detail later on.

The other graves from trench 5 that were dated on the basis of their stratigraphic relations are graves 37 and 164. The relation between grave 37 with other graves is uncertain, but it is for now assigned to burial phases II+IIIa/b.[24] Grave 164 is below a number of graves, on the basis of which is it dated to burial phases II+IIIa/b.[25]

Eight graves (276, 277, 310, 411, 293, 294, 295 and 289) of burial phase II+IIIa/b are identified in trench 6. They are situated in the southern part of trench 6, but this pattern cannot be indicated as significant because of the broad date ranges of the graves. Grave 276 is a grave without finds, which could be dated in relation to grave 277. Grave 276 is for now dated to the same phases as 277, but it might, of course, also be of an earlier date (phase I), but this seems rather unlikely. Grave 411 is below grave 310 (II+IIIa/b (510/20-670/80)), and 295 is below context 296, 297 (G-H (610/20-670/80), 298 and 463 (a younger pit), and above context 294 (B-F (400-610)) and 42 (relation uncertain): grave 295 can thus be dated to burial phase II-IIIa/b (since phase I is unlikely).

Grave 296 is above grave 295, which provides a *terminus post quem* of 400 (since this grave itself is above 294). Grave 296 might thus also date to II-IIIab, since phase I is unlikely as is its assignment to burial phase IV; it is for now depited on the distribution map of graves of burial phases II-IIIa/b. Grave 289 is below 293 (E-H (565-670/80)), and is thus also dated to burial phase II-IIIa/b.

The first conclusion with regard to the graves of burial phases II-IIIa/b, although they consist of graves with quite extended date ranges, is that they underline the assumptions made about the chronological development of the cemetery on the basis of the discussions of the foregoing burial phases: the burial activities were predominant in the northern section of the cemetery during the first phases, and the intensity of these activities shifts to the southern section of the cemetery over the course of time, although the northern sections did not get out of use.

Burial group IV (670/80-750)

The date range of one stray find (context 70) falls completely within the date range of burial phase IV. The other three graves have a date range which starts earlier than the beginning of burial phase IV but end in the beginning of the eighth century (fig. 11.9 and table 11.9). Their assignment to this last burial phase, or in other words the expansion of their date range to c. 750, will be discussed in the following. The number of three relatively young graves is low considering the high number of burials in the Vrijthof cemetery. This raises the question whether the youngest Merovingian burial phase with grave goods, as presented in the typo-chronological schemes of Siegmund and the Franken AG, is really present in this cemetery, and, as a consequence, whether there is a chronological connection between the youngest layer of graves (the late Merovingian and Carolingian cemetery, see chapter 12) and the Merovingian cemetery. Can a case be made for continuity between the two, or is the young layer of graves without finds 'another' cemetery without any relation with the Merovingian cemetery?

Grave 313 lies somewhat 'isolated' in the northern part of trench 5, along the western border of the cemetery. However, the date of this grave ranges from 610/20 to 750 and it can thus also belong to burial phases IIIa/b. The grave is dated on the basis of a number of beads and a comb, two categories of objects which are less indicative for chronological conclusions than other categories of finds. This grave is therefore not unambiguously representing the youngest Merovingian burial phase with grave finds. Its position in the proximity of graves that date either to burial phases I+II or II+IIIa underlines its uncertain identification as a grave of burial phase IV.

Grave 208 is dated on the basis of a large strap end for which no type identification is available. It is known that large strap ends date to the later Merovingian period. The other finds are beads, which, however, are missing from the collection. It is possible to identify this grave as one of the youngest of the Merovingian cemetery. The grave is located in the proximity of a cluster in the north-eastern section of trench 5 of which the graves date to burial phases II-IIIb. This observation can underline the recent date of the grave.

The one grave from trench 6 associated with burial phase IV is situated in the southern part of the trench, and thus the south-eastern and lowest part of the cemetery. Grave 278 contains finds of which only the seax and an associated mount have a date range that extends into the earliest phase. The other finds do not date after 670/80. It can be questioned whether the assigned date range on the basis of the seax is sufficient to place this grave in burial phase IV; burial phase IIIb seems more likely.

(19) Grave 95: above context 81 and 83 (not in Harris matrix); below context 92 (G (610/20-640/50)). (20) Grave 210: below context 201 (D-E (510/20-580/90)), 203, 211 and 213. (21) Grave 152: below context 116 (F-H (580/90-670/80)), 137, 148, 149, 153, 154 (F-H (580/90-670/80)), 155, 157, 158 and 159. (22) Grave 125 (H-I (640/50-725)): below context 26, 32 and 126 G-H (610/20-670/80); above context 124 D-H (510/20-670/80). (23) 420-600 (95.4%), see also the catalogue of graves and finds.

(24) Grave 37 : above context 35 and 36 G-H (610/20-670/80) ; below context 33 (1 sigma: 710-750 (12.3%) 760-870 (55.9%); 2 sigma: 680-750 (25.5%) 760-890 (69.9%)), 40, 41, 45, 47; below context 39 (G-H (610/20-670/80)). (25) Grave 164: below context 166 (G-H (610/20-670/80)), 169, 170 and 175.

Fig. 11.9
Vrijthof burial group IV (670/80-750).

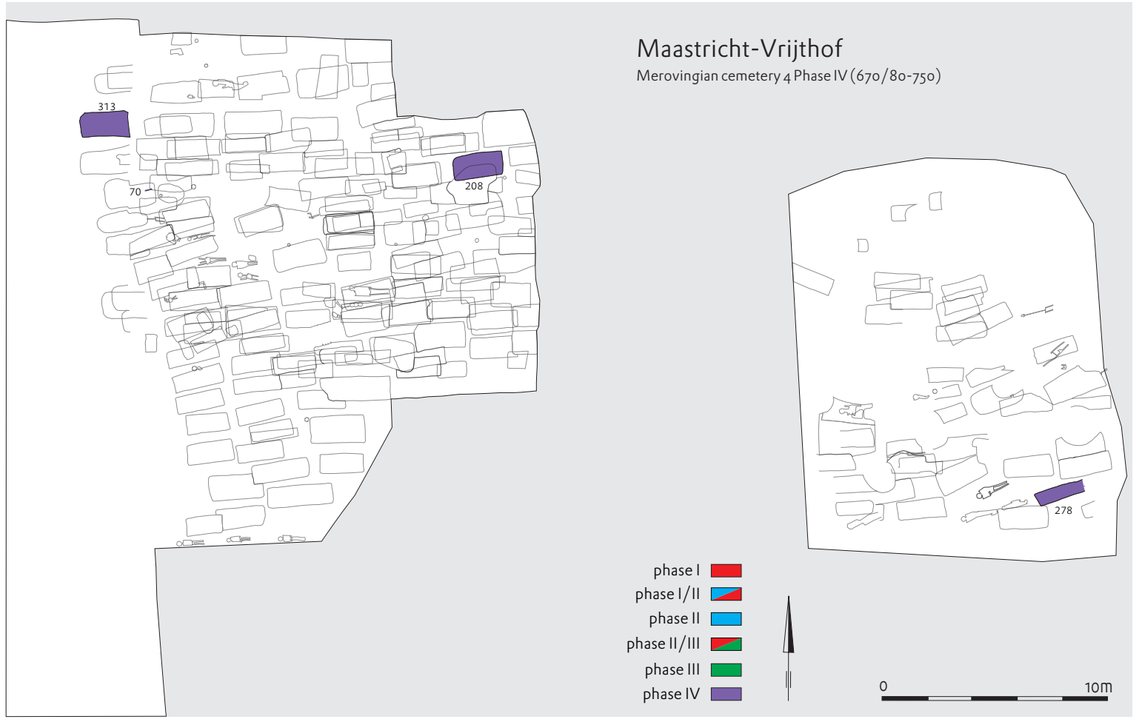


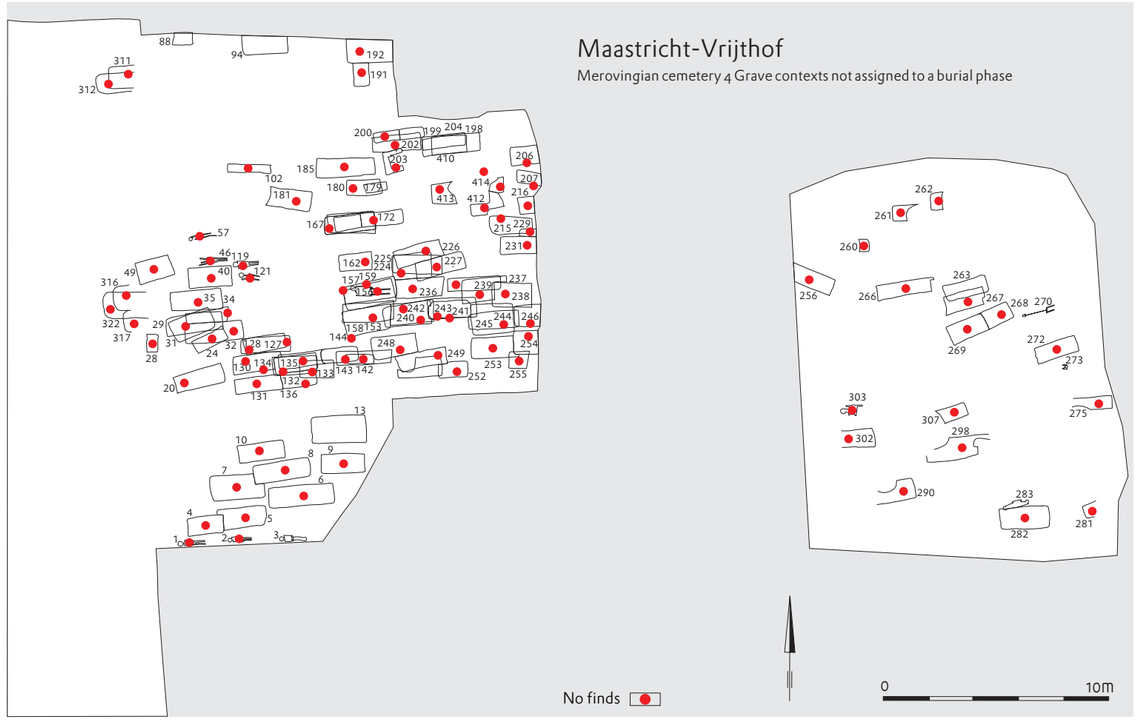
Table 11.9
Vrijthof burial group IV (670/80-750).

Context	Trench	Level		Maastricht phases				Vrijthof burial phase
70	5		Find	I	J	670/80	>725	IV (670/80-750)
313	4		Grave	G	I	610/20	725	IV (670/80-750)
278	6	2	Grave	H	J	640/50	>725	IV (670/80-750)
208	5		Grave	H	I	640/50	725	IV (670/80-750)

Summarizing, none of the discussed graves which were at first assigned to burial phase IV can be unambiguously identified as graves of this burial phase; earlier phases seem to be more plausible for them. So in the end it has to be concluded that the youngest Merovingian burial phase with grave goods is not, or very scarcely present in this cemetery. Younger and higher lying horizons of graves are always the most vulnerable with regard to misjudgements in excavation strategies and levelling and building activities in the course of time. Do these factors explain the scarce presence of this young Merovingian burial phase in the cemetery? Below the layer of young graves (without finds, in the middle of trench 5) no burials of the youngest Merovingian burial phase *with grave finds* were discovered. The southern part of section A in trench 5 seems to be the least affected by rigorous removal of top layers, and here also the graves from phase IV are absent. Graves of phase IV could have been present on top of the older graves in the northern section of trench 5. Possibly they were destroyed by the excavators or levelling activities in medieval or modern times. Considering the location of graves 313 and 208 in the northern half of the cemetery this is possible. These graves were not on top of older graves and thus probably dug in somewhat deeper than contemporary graves placed on top of older burials, and thus not destroyed. However, no other traces what so ever (stray finds) of this youngest Merovingian burial phase are discovered. Should we conclude that this phase was not or only scarcely present in the cemetery? There is one possibility that the later phases were present but are hidden in the series of graves that cannot be assigned to one of the burial phases discussed up till now (see section below).

A number of graves and stray finds were on the basis of their finds dated to extended periods, and a number of graves were dated after a certain phase on the basis of their stratigraphic relations; the end dates of these graves are however not known and it is therefore difficult to assign them to restricted burial phases (table 11.10). This was the case for graves 98, 213 and 233; reliable statements about the burial phase to which they may have belonged could not be made. However, these statements were made

Fig. 11.10
Chronological indifferent graves.



for two other graves (55 and 60) of which the possible date ranges started later and for which, as a consequence, conclusions about their possible burial phase were more reliable (see the section on phase IIIb above). The graves listed in table 11.10 do not contribute to the understanding of the topo-chronological development of the Vrijthof cemetery. Before discussing the comprehensive topo-chronological development of the cemetery, a number of problems encountered with the interpretation of the distribution of the identified burial phases over the cemetery are discussed.

Table 11.10
Chronological indifferent graves.

Grave	Trench		Maastricht phases			
294	6	Grave	B	F	400	610/620
408	5	Find	B	F	400	610/620
13	5	Grave	C	F	460/80	610/620
283	6	Grave	C	G	460/80	640/650
76	5	Grave	C	H	460/80	670/680
98*	5	Grave	≥C	-	>565	-
233*		Grave	≥E	-	≥510/20	-
213*		Grave	≥E	-	≥510/20	-

Graves not assigned to a burial phase

Many graves could not be assigned to one of the burial phases for various reasons. The vast majority of these graves did not contain grave goods (fig. 11.10).[26] These graves however must belong to one of the burial phases discussed above. A large number of these graves were found in a central and western area of trench 5. This is also the central zone of the cemetery. There is also a concentration of these graves in the south-eastern part of trench 5, whereas the majority of the graves assigned to one or more of the burial phases were found in the north-western and northern part of the trench (and cemetery). Moreover many graves that could not be assigned to a burial phase encircle an empty area in which graves 104, 110 and 105 were located (see below). It must be said that quite a number of graves are so-called 'possible graves' that is graves of which only an outline of a pit is known. Not all 'possible graves' might actually have been a grave.

(26) In figure 11.10 the contexts qualified as 'disarticulate human remains', 'find', 'pit', and 'stone' were removed so that a better image of the distribution of graves not assigned to a burial phase was obtained.

Because the majority of these graves have no grave goods we have to include in our reconstruction of the chronological development of the cemetery a series of graves without grave goods in the central and south-eastern parts of trench 5 that were contemporary with the dated graves with grave goods. Graves without graves goods also played a role in the 'construction' of the arrangement of graves around graves 104, 110 and 105. The idea that the cemetery developed to some extent from north to south may still be correct but at a certain point in time the central part of the cemetery (and the south-eastern part of trench 5) must have been in use together with the northern part. In the early phases of the cemetery this area was already in use although seemingly not very intensive yet. Can we elaborate on the use of this area with the graves that cannot be assigned to a burial phase and that were for the larger part without grave goods?

Two lines of reasoning are possible. The first is departing from the idea that graves that cannot be dated and had no grave goods were evenly distributed over the various burial phases. In that case the south-eastern part of trench 5 was already in use in the early phases of the cemetery. The second is that the majority of graves with no grave goods belonged to the younger phases of the cemetery. It is a well-known fact that the rite of deposition of grave goods in Merovingian cemeteries gradually disappeared in the course of the seventh century.[27] If the majority of the graves without grave goods dated to phases IIIA/B and IV it would explain why there were relatively few graves that could be assigned to these phases. Moreover, the graves that could be assigned to these phases were mainly located in the western part of the cemetery; that is outside the main distribution area of the graves that could not be dated.

Although we cannot decide definitely which of the two lines of reasoning has more credibility it is the second line that fits all data best. It would explain the paucity of younger graves in the cemetery and it reinforces the idea that in trench 5 there was an older core of graves in the northwest and that the burial ground developed from there in a southern (and slightly more northern) direction. The fact that most graves in the southernmost part of the cemetery are also without grave goods supports this viewpoint.[28] On the other hand it was already observed that the first graves in the south-eastern part of trench 5 already dated to burial phase II. In trench 6 a more random development of the cemetery is more likely because the graves that could not be dated were spread more evenly over the area of the cemetery.

Conclusion: The chronological development of the Vrijthof cemetery 4

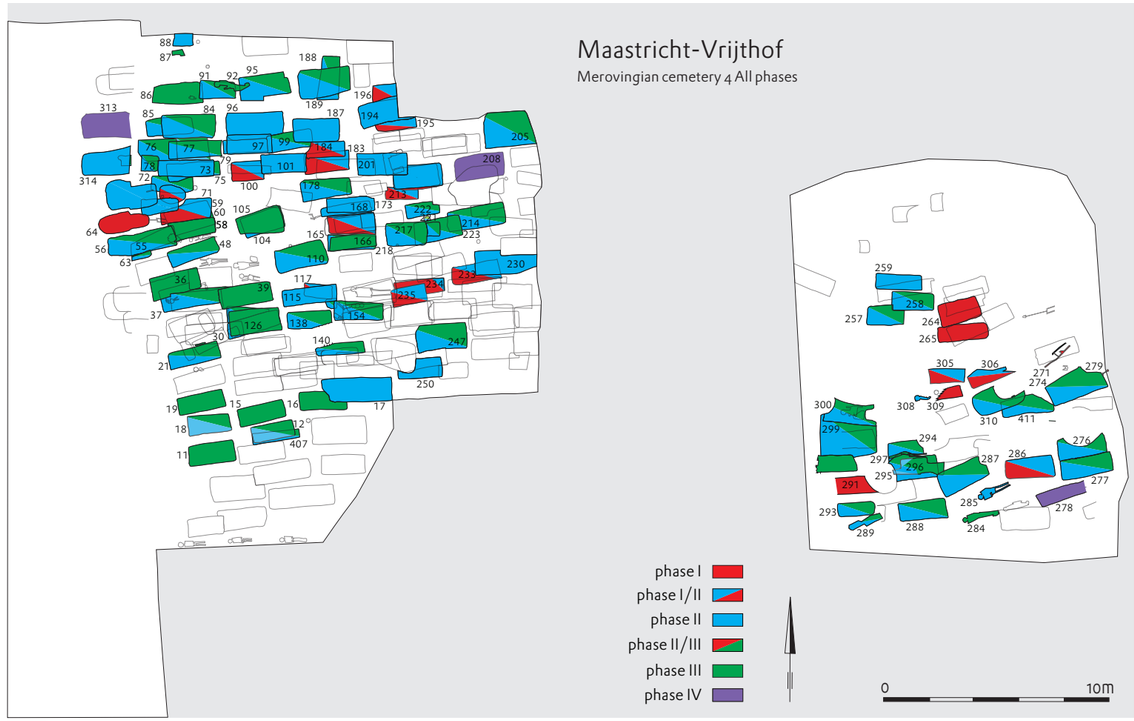
Cemeteries can develop from one nucleated first burial phase or from a number of burial groups (for example family plots) dispersed over the cemetery, they can develop in subsequent rows, and they can develop randomly, without underlying structuring principles that influenced the choices of the survivors. Moreover, burial strategies and choices that structure the development of the cemetery can change in the course of time.

The vertical layers of graves which characterize Vrijthof cemetery 4 are an uncommon feature of Merovingian cemeteries and they complicate the interpretation of the chronological development of the cemetery. The interpretative problems which are specific for this burial site (see especially chapter 6 for an extended discussion of excavation choices and the conservation of the cemetery) were briefly introduced after which they were integrated in the comprehensive overview of the chronological development of the cemetery.

The main problem is that the top layers of the Merovingian cemetery were dug away in the northern part of the cemetery (fig. 6.5: northern part of section A in trench 5), which might have affected the chronological lay out of the cemetery plan: the highest point of the cemetery on the slope, where the soil is extracted, can reveal older graves in the upper excavation layers because the highest graves (youngest?) graves are not visible anymore in this section (fig. 6.9). This pattern can incorrectly be interpreted as the oldest phase of the cemetery without having younger graves on top of it as it is observed in the central section of the cemetery. In the final conclusions about the chronological development of the entire cemetery we have to consider whether this distortion is actually present.

Moreover, the typo-chronological dates of the graves with finds do not provide clear cut information on the basis of which the chronological development of the cemetery can be reconstructed since grave goods can be in circulation for some time before their deposition. In fact the date ranges of the objects or object assemblages are plotted on the cemetery plan, not the actual dates of the graves. Explanations were already given for the graves which date to a younger phase than the graves above them: the dating of the grave goods might be incorrect, but it is more likely that older objects were in circulation some time before being deposited with the dead. The graves 16 and 17 form a good example. The upper, but 'older', grave 17 contained a garnet disc brooch and beads, and was consequently dated on the basis of the brooch. It seems plausible that this object was in circulation for some time before its deposition. Its date range could not be compared to the other finds from the grave (the bead), since these were difficult to classify and date. This example of graves 16 and 17 elucidates that the availability of vertical layers can define the relative positions between graves which were difficult to identify on the basis of the typo-chronological analysis, but that it cannot with certainty

Fig. 11.11
All the Vrijthof burial groups.



define, correct or reduce the proposed absolute date ranges of the graves or object-types because more detailed information about the circulation periods of the object types is not available. The prolonged circulation of objects can result in date ranges of graves that cover earlier phases than the dead were actually interred. The examples of an obvious reversed stratigraphy as for the example of graves 16 and 17 can in fact be evidence for prolonged circulation. On the other hand, the occurrence of prolonged circulation is not dismissed with the observation that the date ranges of graves correspond with their stratigraphic relations, as the majority of the Vrijthof graves do. These graves show a considerable overlap in date ranges, which actually disguise the prolonged circulation of objects. The graves involved were constructed early or late within these established date ranges, and prolonged circulation over two or more generations might have occurred but cannot be verified.

Both the disturbance of the top layers of the Merovingian cemetery and the possibility of prolonged circulation are considered in the following final conclusions about the chronological development of the Vrijthof cemetery.

For burial phases I and IV the least information is available; not many graves could be ascribed to these phases, and for the few graves present in each phase the chronological information was not unambiguous (fig. 11.11, 11.2 and 11.9). No convincing statements can be made about the distribution of the burials of burial phase I and thus about the beginning of the cemetery during this period. Is the low number of graves from burial phase I a result of the excavation strategy or the late medieval levelling of the terrain? The oldest graves below or in the proximity of the younger graves that did survive the destruction of the higher lying parts (the northern part of section A) must still have been visible if they were present in these higher sections. Moreover, the destruction of the upper layer did not result in the destruction of graves at the base of the slope. Another option for the meagre presence of graves of the earliest burial phase might be that the oldest graves were destroyed with the construction of younger graves. But still, traces of these older graves must have survived if this was the case. It can be assumed that a number of old graves were present in the unexcavated section between trenches 5 and 6, but it seems unlike-

(27) Effros 2002. (28) Again it must be said that some graves were dug away by the building contractor in that part of the trench (sector B). However the remaining lower lying graves have no grave goods.

Fig. 11.12
Burial groups I and II and I+II.

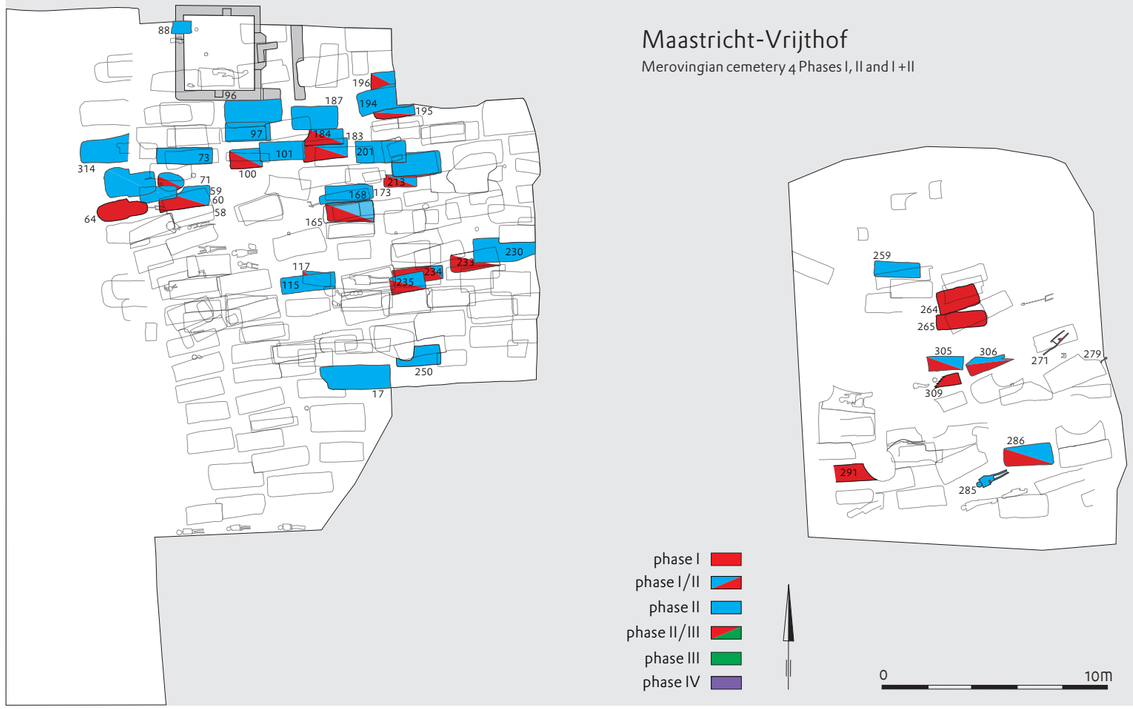
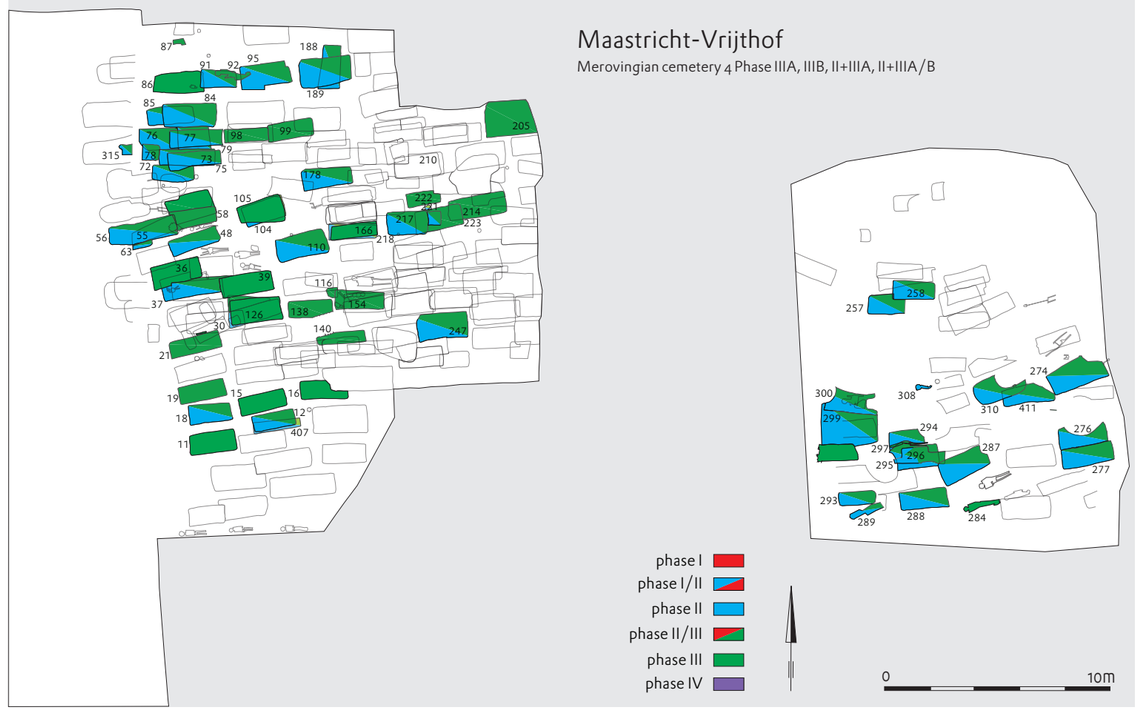


Fig. 11.13
Burial groups IIIa and IIIb and II+IIIab.



ly that they were present here in abundance in view of the distribution of the earliest graves of the cemetery. It is plausible to suggest that burial phase I was underrepresented in the Vrijthof cemetery. Moreover, it is on the basis of the present evidence also difficult to establish when in the period covered by phase I (400-510/20) the first burials were created. Most graves of phase I only contained one grave good. Dating single find graves is hazardous since the grave goods might have been subject to prolonged circulation or even be 'antiques'. Theoretically these graves might date to the latest part of phase I or can even be younger. In that case there is also a better connection to the rising number of graves from phase II.

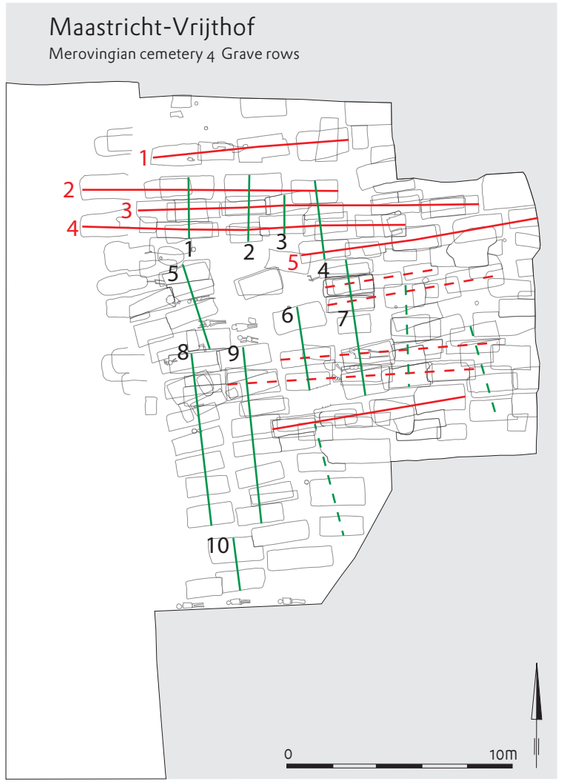
The last burial phase (IV) was underrepresented too. The two graves (208 and 313), which are younger graves, are located in the northern part of the cemetery which is expected to be disturbed by the first stages of the excavation. They might indicate that contemporary, and thus young graves on top of the older graves in this section of the cemetery, were destroyed. However, young Merovingian graves in the other sections of the cemetery are also scarce. On the basis of the number of graves that can be assigned to a burial phase it should be concluded that phase IV was not convincingly present in the cemetery, or maybe that the few graves of this phase that were initially present in the northern part of the cemetery were destroyed. However, a large part of the graves without grave goods in the south-eastern part of trench 5 might date to phases IIIB and IV. In that case the cemetery was used intensively until the later part or even the end of the seventh century.

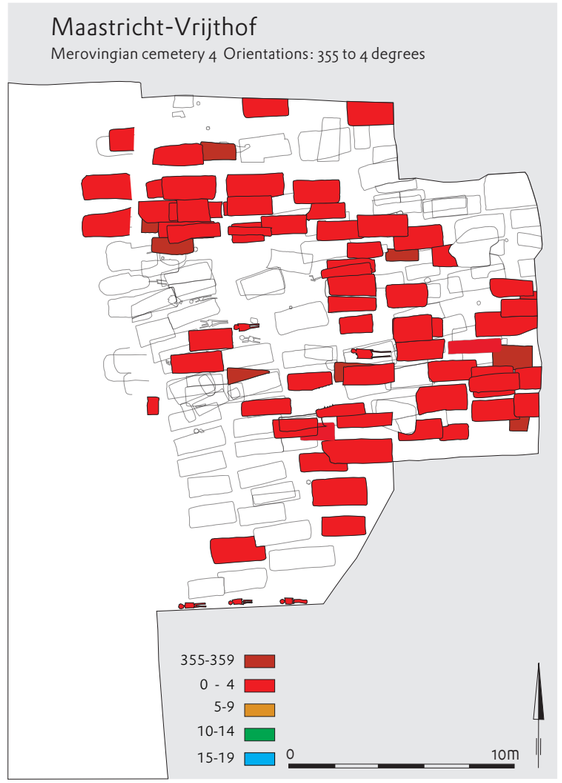
Burial phases I and II and I/II are more informative for the reconstruction of the first regular burial activities (fig 11.12). The graves of burial phase I+II could not be dated more precisely on the basis of their finds or were dated on the basis of their stratigraphic relation to a grave that was dated to burial phase II and as such forms a *terminus ante quem*. It must be kept in mind that some of the graves of burial phases I+II can in fact be relatively early graves within this date range, although it seems plausible to suggest that the burial ground did not come into use before c. 500. Considering the graves of phases II and I+II together it appears that the most intensive burial activities were concentrated in the northern half of trench 5, although not in the most northern section of the cemetery near the Roman road. It might be possible that the ruin of the stone-built Roman cellar formed a topographic anchor point in the landscape and that the first burials were created next to it. Later burials were created at the location of the cellar itself. It is not uncommon in the region that Merovingian cemeteries were located at the place of Roman remains in the landscape.[29] The distribution in trench 6, the eastern section of the cemetery, reveals no clear patterning of the graves. A clear nucleus of earliest burial activities cannot be observed, but several clusters of early graves in especially the northern half of the cemetery can. The most north-western cluster, consisting of predominantly graves of phases I and II, is an obvious example. Graves of burial phases II and I+II can also be found in the other sections of the cemetery. The clusters can indicate familial ties, or might represent other sorts of relations.

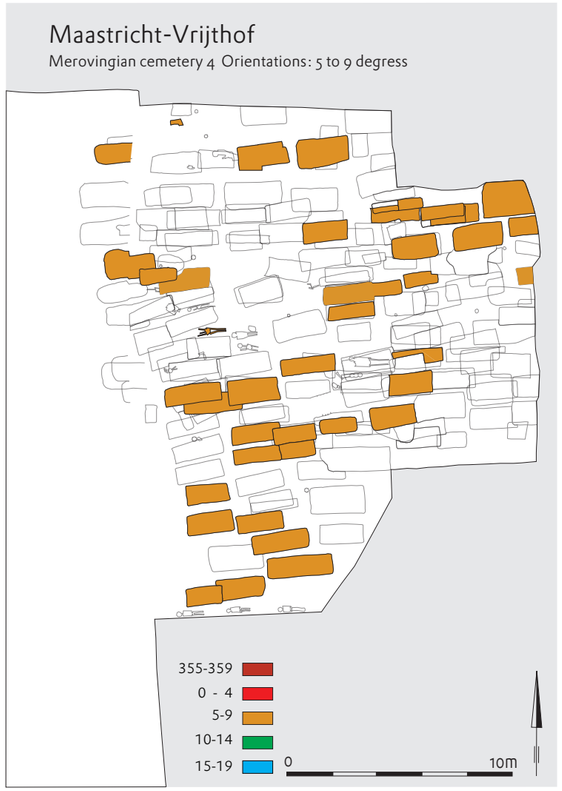
The next phases, IIIa (580/90-640/50) and IIIb (610/20-670/80), cover the end of the sixth and the seventh century (fig. 11.13). It was argued that the graves at first assigned to phase IV (670/80-750), are in fact better examples of the seventh century. During the end of the sixth and the entire seventh century the cemetery was used intensely and became a densely occupied burial ground. A group of graves dated to burial phases II+IIIa/b are also incorporated in the analysis of the distribution pattern produced in the course of the seventh century. These are the graves that could not be dated more precisely or were dated on the basis of their stratigraphic relation to burial phases IIIa or IIIb.

Burial phase IIIa is poorly represented in the cemetery. The few graves of this phase are situated in the western section of the cemetery, two in the north and one towards the southern border. In combination with the graves that date to phases II + IIIa, a relatively large cluster of graves appears in the north-western section of the cemetery, in the proximity, although somewhat more to the north, of the cluster of graves that were identified as the outcome of the earliest burial activities (phase I + II). Because the graves of this cluster do date to both the phases II+IIIa, it can be suggested that the eldest cluster in the north-western section of the cemetery expanded in the course of the late sixth and the seventh cemetery. However, as it was already mentioned, contemporary clusters of graves, although smaller, are identified in all the other sections of the cemetery. The incorporation of phase IIIb and II+IIIb in this distribution pattern shows that the intensity of the burial activities shifted in the course of the seventh century to the eastern and southern section of the cemetery although other sections of the cemetery remained in use. Again, when the majority of the empty graves that cannot be assigned to a burial phase belong to phases IIIb and IV this hypo-

(29) De Haas/Theuws 2013, 172-175 especially the map in fig. 12.1 (contribution M. de Haas)







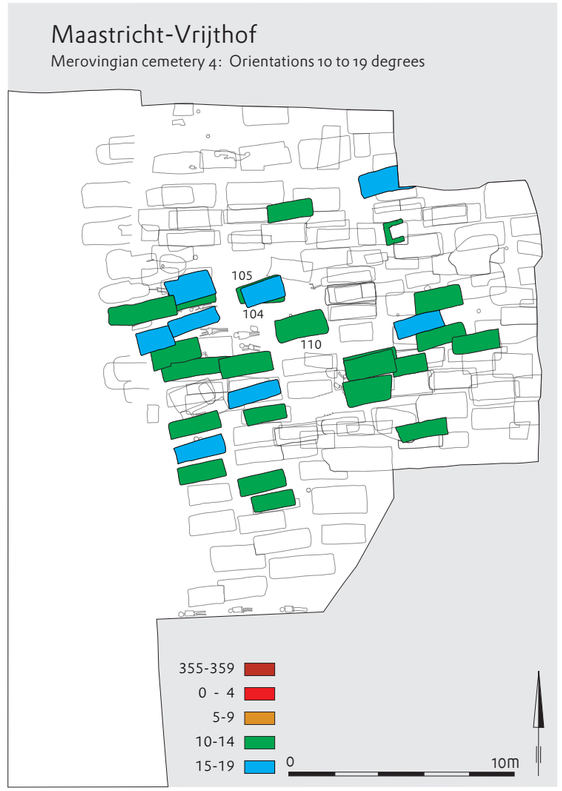


Fig. 11.14
Rows of graves and the orientations of the graves.

thesis of the topo-chronological development of the cemetery is reinforced.

Summarizing, the burial ground, as we know it now was already defined during the earliest burial activities on the slope. It is possible that this happened in the late fifth century but it is more likely that the first burials took place in the early decennia of the sixth century and that the earliest single-object-graves rather contained 'old' grave goods. The largest clusters of the first intensive burial activities can be found in the north-western and northern section of the cemetery. Thereafter, the intensity of the burial activities expanded to the eastern and southern sections, although the north-western section remained in use. In spite of the excavation strategy and levelling of the slope and the partial destruction of the cemetery we consider the observed distribution pattern to be representative of the early medieval burial activities on the Vrijthof Square. Younger graves were also observed in the northern section of the cemetery, and these younger burial phases were thus not destroyed, except maybe the graves of burial phase IV. The oldest burial cluster expanded to the north in the course of the seventh century, as it did to the east and the south. Older graves of the first burial phases are less prominent in the lower parts of the cemetery which were not disturbed: this distribution pattern of graves is thus representative of the development of the cemetery. The top layer of young graves without finds (late Merovingian or Carolingian, see chapter 13) was probably disturbed in the northern section of the cemetery. This top layer expanded more to the north than visible on the cemetery plan.

The remarks on the possibility of prolonged and varying circulation of objects served to illustrate that the chronological distribution pattern reveals a general image of the chronological development of the cemetery, but that on a micro scale individual graves can be dated to later burial phases, especially when they are placed in typo-chronological schemes consisting of short burial phases. The reconstruction of the topo-chronological development allows elaborating on two other topographical aspects of the cemetery that can be observed in trench 5. They are the organization of graves in rows and the position of graves 104, 110 and 105 in an open area in the central part of the cemetery.

Specific topographical characteristics of cemetery 4

It was observed that in the early phases of the cemetery graves were laid out in west-east/east-west orientated rows.[30] At least four of such rows can be identified in the northern part of the cemetery (fig. 11.14 top left). The majority of the graves in these rows belong to the earlier phases of the cemetery although in phases III and IV graves were still created there. These seem to respect the lay out in the west-east orientated rows that must have been conceptualized much earlier. The rows of graves were laid out next to each other without much intermediate space. Only between rows 1 and 2 there is some space, which may have been a path. Row 1, however, seems to be somewhat younger than rows 2, 3 and 4. It is also possible to indicate a few short north-south orientated rows of graves which suggest that the northern part of the cemetery was organized along some kind of grid.

North-south orientated rows, especially rows 8 and 9, dominate the organization of the south-western part of the cemetery although some very short west-east orientated rows of only two graves can be identified there too. The organization of graves in rows in the eastern part of trench 5 is less clear although it is possible to identify west-east and north-south orientated rows here also. The graves being part of these rows, however, have variable orientations, which is significant as we shall see below. This makes the identification of the rows les certain.

One would expect that the rows were created by digging one grave next to the previous one, but this may not have been a rule. Individual places might have been left open for future interments (maybe for relatives). Unfortunately, the chronological ordering of individual graves is not detailed enough to establish the chronological order of burial in the rows. One wonders whether the persons in these rows who were buried next to one another were related in life one way or another, or whether they were buried in the order of dying within a specific burial community. In 'normal' Merovingian cemeteries of the countryside the dead were usually buried in a 2D space. In those cases where excellent data concerning biological sex, age at death and chronology are available, analyses of the relations between the dead in rows can be carried out.[31] At the Vrijthof cemetery the dead were buried in a 3D space because next to rows many piles of graves were created. In Chapter 13 an attempt is made to analyse the relations between persons in the piles. This is more promising because stratigraphic relations clarify the order of burial in a pile. The dataset of the Vrijthof cemetery is not good enough to carry out the ideal analysis of the relations between persons in rows and piles.

The identified rows seem to point to another important feature: a slight difference in orientation between the rows in the north ern part of the cemetery and those in the south-western part. In order to check this observation the orientations of all graves were analysed. The majority of the grave orientations are between 355 to 19 degrees whereby east is 0 degrees (table 11.11). Some graves have another orientation such as south-north, but these are possible graves of which the information consists of no more than an outline of a pit, which means that they might not be graves at all.

(30) On the principles of analyzing the rows in a cemetery see Theuws/Van Haperen 2012, 152-157. (31) It was tried at the Bergeijk and Posterholt cemeteries where data are meager (Theuws/Van Haperen 2012; De Haas/Theuws 2013).

Table 11.11
The number of graves in each orientation group.

Orientation	Number of graves
350 - 354	6
355 - 359	12
0 - 4	76
5 - 9	58
10 - 14	29
15 - 19	14
20 - 24	2
25 - 29	1
other	2
	200

The graves have been assigned to three groups of orientations (fig. 11.14): a first group with orientations between 355 and 4 degrees, these are the graves that are almost west-east oriented (with the head in the west), a second group with orientations between 10 and 19 degrees and a third intermediate group of graves with orientations between 5 and 9 degrees. The west-east oriented graves are found almost over the entire trench but are less prominent in the south-western part of the cemetery and along the western border. The northern part of the cemetery is almost exclusively taken in by west-east graves. Graves of group 3 which have a more south-west/north-east orientation are found in the central part of the cemetery, and not in the northern part. The earlier graves in the northern part of the cemetery thus have a west-east orientation. The reverse conclusion, that west-east graves are relatively early, is difficult to substantiate, although many west-east graves are located in the south-eastern part of trench 5 which is the area where most graves were found that could not be assigned to one of the burial phases (fig. 11.10). So the west-east graves in that part of the trench cannot be dated although it is a zone where graves of phases I and II are present (fig. 11.12), in contrast to the south-western part of trench 5. It is also the zone that connects the early northern graves with those in trench 6. These are not conclusive arguments but it might be the case that a number of the west-east graves in the south-eastern part of trench 5 belong to the early (sixth century) phases of the cemetery. This zone might thus be a zone with a mixture of older and younger graves, whereas other parts of the cemetery are more dominated by earlier (in the north) or later graves (in the south and southwest). The southeast of trench 5 might thus show the same topo-chronological image as trench 6.

The orientations of the graves of group 3 clearly deviate from those of group 1. Three graves (104, 110 and 105) in group 3 merit special attention because they are located in an empty space in the middle of the cemetery (the green area in figure 11.15). Moreover the location of grave 110 was never used again in strong contrast to many grave locations surrounding it. On the map this empty space is somewhat obliterated by the presence of graves 181, 119 and 121. Grave 181 is a possible grave of which we have no other information than an outline. Its orientation is also different from the surrounding graves. It might well be that grave 181 is not a grave at all. Both graves 119 and 121 were most probably graves of children. They might have been interred in the empty space at a later time. Possibly there was a relation with the woman in grave 110.

Grave 162 was also respected because no new graves were placed on top of it. In view of its position between piles of graves this is a significant fact.[32] The size of the grave indicates that it was also a grave of a child. Grave 117, below grave 115, was probably also a child's grave although it is a possible grave. If this was a child's grave too we can observe that grave 110 was surrounded by graves of children on three sides. All the locations of these children's graves, except that of grave 117, were not used again in later times. Graves 104, 110 and 105 are not only surrounded by an empty space were no burials were placed, but also by a series of piles of stacked graves. This constellation of central graves, an empty space and stacked graves dominates the structure of the central part of the cemetery in trench 5. To this we can add the difference in orientation between graves 104, 110 and 105 with the west-east oriented graves. It was explained above that these three graves do not belong to the oldest burial phases of the cemetery. They were laid out when some west-east oriented graves already existed to the north of them. Their different orientation must have been a deliberate choice. What did those who buried the man in grave 104, the woman in 110 and the person in 105 wanted to express with this choice, what message did they want to convey? And when was this choice made?

The dates given to the graves in the discussion above were necessarily broad. Maybe it is possible to elaborate somewhat more on the date of burial of the man in grave 104 (which is below 105). If a certain space was really kept free around his grave, two scenarios can be suggested. The first scenario suggests he was buried in a free space next to existing burials to the north and east where graves of phases I and II were found. The second suggests that a certain space was kept free in the early phases of the cemetery to bury the man and the woman at a later date in that space. The distribution of graves of phase II shows that both to the north and the south of graves 104, 110 and 105 graves of this phase were present (fig. 11.3). It is not very likely that in the first half or middle of the sixth century a space was kept free in order to bury deceased people there in the later sixth century. It is therefore suggested that grave 104 was already created in the first part or middle of phase II (510-580/90). This date however could not be established on the basis of finds or stratigraphy and is therefore not presented as such in this chapter. The certainty we have is that it dates before 600 AD. Grave 110 could not be dated more exactly than to Phase II/IIIA. The same considerations presented for grave 104 apply to this grave.

(32) The stacked graves are analyzed in chapter 13. (33) On the complexities of interpreting founders graves see Theuws 2013. (34) Böhme 1993. (35) Morken: Böhner 1959, Hinz 1969, Latteri/Pohl in Engemann/Rüger 1991, 35-43, see also: http://www.landesmuseum-bonn.lvr.de/de/forschung/projekte/roemische_helme/HerrvonMorken.html (31-08-2015); Soest: Peters 2011; Rhenen: Wagner/Ypey 2001; Beckum: Winkelmann s.a; Beerlegem: Roosens/Gyselinck 1975; Borgharen: Lauwerier/Müller/Smal 2011, Lauwerier/De Kort 2014. The burials of the Servatius cemetery were subject to study by the Servatius project but have not yet been published.

In spite of the broad dates given to graves 104 and 110 the combination of all evidence (orientation, empty space, general development of the cemetery, organization in rows) suggests that at a certain time in burial phase II grave 104 and/or grave 110 were created, which had different orientations than the existing graves on the cemetery. Moreover some space around these graves was kept free and numerous people were buried around them in piles of graves. It is possible that from the creation of grave 104 or 110 the development of the cemetery followed two distinct routes or traditions: one which continued the oldest west-east burials on the site (in the south-eastern part of trench 5) and another that was geared to the burials 104, 110 and 105 (in the south-western part of trench 5)? It is even possible that both traditions intermingled in the central or south-eastern part of trench 5.

It will probably remain a mystery why the second tradition was created and what the social status of the persons in graves 104, 110 and 105 was. One is reminded of the so-called founder's graves, graves that mark the beginning of a burial ground or the beginning of a new part next to an existing cemetery.[33] Other scholars interpreted these 'exclusive' burials as part of a '*Nobilifizierungsprozess*', whereby newly emerging aristocrats use the burial ritual as one of the means to define their newly acquired position.[34] The inventories of graves 104, 110 and 105, however, were not especially sumptuous, certainly not for sixth century burials. They cannot be matched with graves like those from Morken, Soest, Rhenen, Beckum, Beerlegem, Borgharen or some of the graves in the Servatius cemetery that date to the middle of the sixth century.[35] In the end we cannot even be sure whether the persons in graves 104, 110 and 105 belong to the Maastricht community. Whereas others were allowed to be buried near the saint in the Servatius cemetery, others might not be able to get so close but created a solution of their own to get as nearby as possible. In Chapter 13 we will deal with the development and the characteristics of the Merovingian cemetery and place it in a broader context.

Fig. 11.15
Empty spaces in the centre of the cemetery.



Cemetery 3

Thirteen or fourteen burials were found in trench 3 (fig 6.10). There seems to be a western group of 9 or 10 graves, a northern group of 3 graves and one single grave in the eastern part of the trench. The orientation of the graves in the first group is very diverse, that in the northern group more uniform but different from most graves in the first group. Four graves were 14C-dated because none of the graves contained grave goods (see the dates in the catalogue and the 2sigma dates in fig. 6.10). Three of these dates have a date range from the early fifth until the end of the sixth century (graves 402, 403, 406). One has a most probable date range in the sixth and early seventh century (grave 347). It is most likely that the graves date to the fifth and/or sixth century. Cemetery 3 is considered a separate burial ground. It is possible that burial in this place started in the same period as on cemetery 4, or even earlier. It is curious that no grave goods were found which might suggest that the graves are quite early and date before the period in which lavish grave goods were deposited with the dead. However dating the graves to an early phase in the fifth century on the basis of the absence of grave goods is creating a circular argument. In is in the end not possible to date these graves more precisely than to the fifth and sixth centuries. It is however likely that some people were buried in this place in the same period in which cemetery 3 was in use. The separation and differentiation from the rest of the burials to the north is also accentuated by the absence of grave goods. It seems as if those who buried the dead in this place wanted to accentuate some kind of otherness. What this otherness was about is difficult to establish.

12 The Carolingian cemetery 5

Introduction

Quite soon after the start of the excavation in May 1969 the excavators found graves in the northern part of trench 1. Their discovery came unexpected because no early medieval graves where thought to be present in that corner of the Vrijthof Square. At first it was thought that the graves belonged to a large cemetery around the *basilica* of Saint Servatius and that further to the south more graves would appear. It did but at a certain point no more graves were found. There was no connection between these graves and a cemetery around the *basilica*. The idea developed that these graves belonged to the Witte-Vrouwenklooster (monastery of Penitent order of Maria Magdalena) located to the north of the square.[1] The graves were thus thought to date to the Late Middle Ages. This date reduced the excavator's interest in these graves. Until the start of the Saint-Servatius project it was believed that these graves dated to the Late Middle Ages. However we found out that the depth at which they were found made it possible that they dated to the Early Middle Ages. A number of ^{14}C dates confirmed that some of them dated to the Carolingian period. It is for that reason most likely that all graves in trench 1 dated to that period. Next it was discovered that in trench 5 an upper or younger layer of graves was present on top of the Merovingian burials. The analysis of the east section wall of trench 4 confirmed that there was a black layer with graves above the Merovingian graves. In what follows we will first deal with the top layer of graves in trench 5 and then combine these graves with those in trenches 1 and 4. After we identified all the graves of this cemetery its chronology and a number of characteristics will be discussed.

The top layer of graves in trench 5

The top layer of the cemetery in trench 5 consisted of graves without grave goods documented at the highest excavation level. The excavation of the cemetery in trench 5 started with the removal of c. two meters of archaeological strata (see chapters 3 and 6 for a detailed discussion of the excavation strategy). Because of the fuzziness of a large number of intersecting graves it was decided to lower the level a bit before a drawing was made. At the drawing of level 1 a few skeletons are indicated. The level was at an average height of 48.39 m +NAP. The excavators must have started to lower the level again. New skeletons were discovered, which were cleaned by removing the surrounding soil. Level 2 was reached at an *average* height of 48.33 m +NAP. The cleaned skeletons were lying on small raised plateaus of soil above level 2. On the drawing of level 2 outlines were drawn around some of these higher lying skeletons. It is not clear what these outlines mean and whether they are related to the cleaned skeletons. This top layer of burials must have been the youngest on the site. Fortunately three photographs give a good impression of this situation in the northern part of trench 5 (section A).[2] They are numbers 21630, 21663 and 21582 (see figs. 6.6-8 and figs. 12.1-3 with grave numbers). It was possible to identify all the higher lying skeletons, and these have been indicated on the photographs with their respective context numbers. They are contexts: 33, 42, 43, 47, 51, 52, 53, 62, 67, 103, 108, 109, 113, 114, 118, 122, 137, 139, 163, 169, 170, 186, 190, 401. Graves 75, 79, 86, 87, 88 and 92 are also at this height but these graves are with grave goods, and belong to the Merovingian cemetery. These graves are clustered in the northern part of the trench and form a group of graves that probably were below a

(1) Entry in the excavation diary, 24 November 1969. (2) See chapter 6 on the division of trench 5 in three sections, each with their own excavation history.

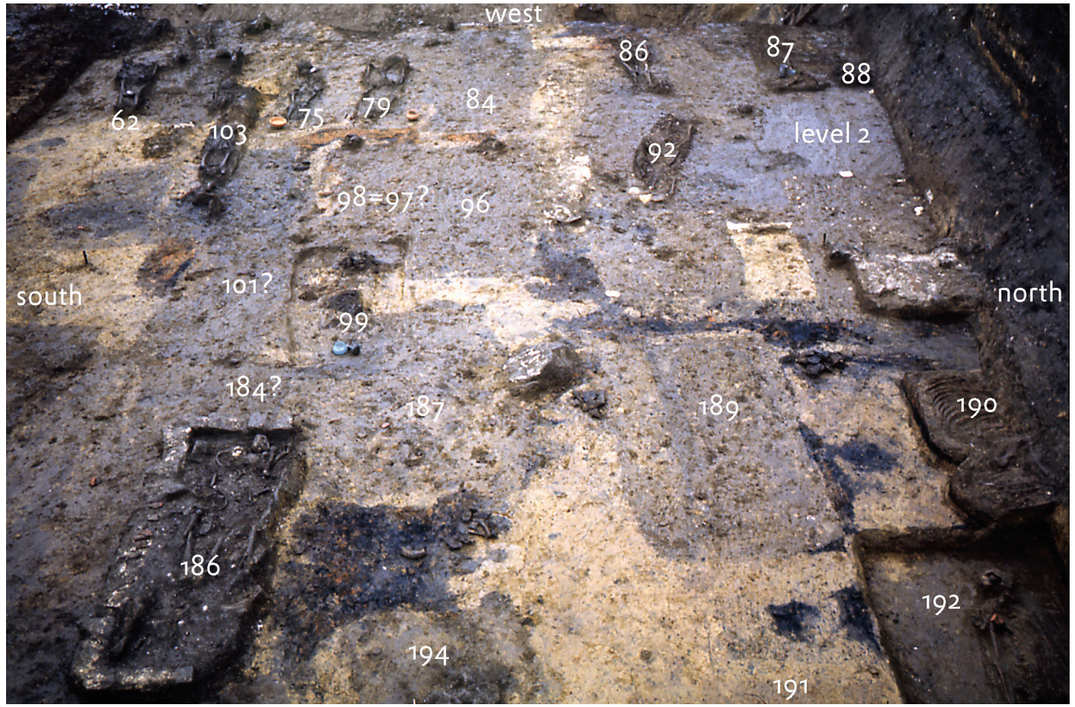
Fig. 12.1
Photograph of level 2 in trench 5 from the east. To the left is the black layer with graves (level 1).The difference between the lower lying Merovingian graves and the higher lying skeletons is evident.

Fig. 12.2
Photograph of level 2 in trench 5 from the northwest. In the top right corner the level is lower due to the removal of soil by the building contractor. In the foreground is the pit of trench 4. The workers are removing the soil of the northern deep dug in structure. From left to right the soil becomes darker. This is due to the sloping down of the terrain.





Fig. 12.3
Photograph of level 2 in trench 5 from the east. The patches with burned material belong to the Roman *vicus*. Context 190 is the animal grave. No skeletons can be observed in the lower lying Merovingian graves (such as contexts number 189, 96, 84).

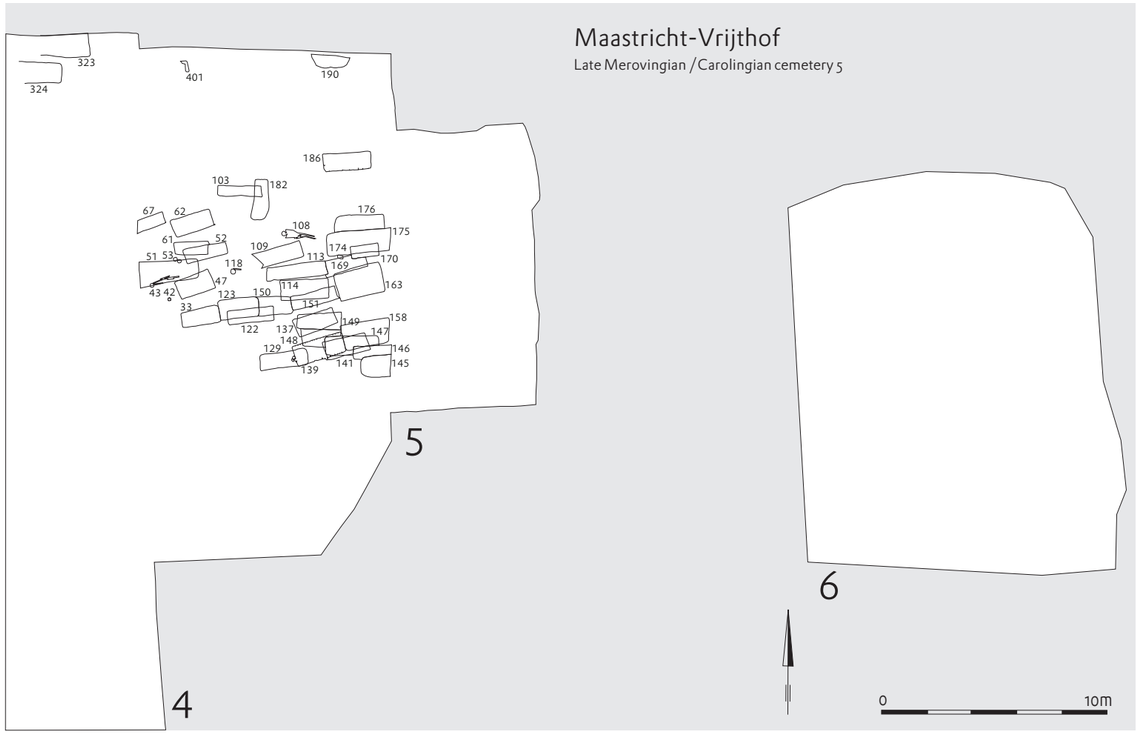


younger layer of graves that was removed. As a result, these graves became visible as part of the top layer, of which the first skeletons were encountered in the middle and south of section A. This destruction was probably a result of the excavation strategy which produced horizontal excavation layers, starting from the section where the first skeletons were encountered (in the middle of section A). This strategy resulted in the destruction of the upper layer of graves in the northern part of the trench, which was somewhat higher on the slope.

A total of 24 skeletons of the upper layer could thus be identified. The height of the skull and long bones was recorded of a number of these skeletons. The upper heights of the skulls of eleven of them varied between 48.40 to 48.20 m + NAP, except two (163 and 139) that were at 48.01 m +NAP and 48.00 m +NAP. Both these skeletons were in stone built containers which were dug in from a high level and certainly belonged to the upper layer of burials. Moreover skeleton 139 was the southernmost skeleton of this upper layer. It may lie somewhat lower because of the sloping down of the terrain to the south. In sixteen cases the upper heights of long bones were measured. They varied from 48.40 to 48.23 m +NAP, except the two just mentioned. The heights of their long bones were at 47.98 m +NAP (163) and 47.94 m +NAP (139). Finally the photographs show very clearly that the skeletons of the younger horizon were located in a black soil that contrasts with the light coloured soils below.

If we mark these skeletons in the Harris matrix of graves in trench 5 we see that in almost all cases these graves were the youngest in a stratigraphic sense (in figure 11.1 these graves are marked in a dark grey colour). There are, however, some exceptions notably grave 139. A number of graves was, in a stratigraphic sense, younger than the ones just mentioned. They are graves 141, 148, 147, 146, 145, 149 and 129 (they were also younger than grave 137 except for grave 141) (in figure 11.1 these graves are marked in a light grey colour). They were all the graves of which the outlines were indicated at level 1. Because conditions to make good observations at this level were limited we must be careful with the interpretation of this situation. Maybe not all indicated outlines were really those of graves. It can be seen in the Harris matrix that there were more graves that were younger than the graves listed above. Grave 182 was younger than 103, grave 61 was younger than 52, grave 150 was younger than 122 and 114, graves 123 and 151 were in their turn younger than 150, grave 158 was younger than 141, grave 174 was younger than 169, graves 176 and 175 were younger than 170. This means that another 15 graves

Fig. 12.4
The layer of younger graves in trench 5 (cemetery 5).



belonged to the top layer of burials which now totals 39 graves (see appendix 12.1).

If we indicate these graves on the map of the cemetery (fig. 12.4) we see that these graves only occur in section A which was first excavated. Context 190 is an animal grave, 401 disarticulated human remains and graves 323 and 324 are possible graves of which is not certain that they were graves at all. In sections B and C they are not present, probably because this horizon of skeletons was dug away.[3] Within section A they are mainly located along the western limit of the cemetery and in the central and southern part of it. In this part several graves of this horizon cut each other. It is also evident that three stone lined graves (186, 163 and 139) belonged to this horizon. Two other stone lined graves (95 and 40) seem to belong to older horizons. It is also evident that a large part of these younger graves had an orientation that is equal to that of group 3 (with graves 104, 110 and 105) discussed in chapter 11 (see fig. 11.14).

If we return to the photographs (especially fig. 12.1 and fig. 12.3) we can also observe that at level 2 no skeletons are visible in the grave pits below the top layer of burials. This means that the skeletons in these grave pits must be at a lower level. It has to be concluded that there is a small difference in height between the top layer of skeletons and the first layer of Merovingian skeletons below them. It is thus most likely that the top layer of skeletons formed a burial horizon of its own that was younger than the lower lying Merovingian graves. These observations correspond to those made while analysing the eastern section wall of trench 4 (fig. 5.6, C). A black layer with graves was situated on top of the Merovingian graves. In the drawing of the section wall the height of excavation level 1 in trench 5 is indicated. It can be seen that in the northern part of the trench the black layer was already removed at level 1. Further to the south the excavation level was in the black layer. This explains the absence of graves of the younger layer in the northern part of trench 5 and the concentration in the central and southern part.

It is safe to conclude that the younger layer of skeletons dated to the very late Merovingian and/or Carolingian period (see below).

After having identified the younger layer of graves in trench 5 we wondered whether the graves in trenches 1 and 4 were contemporary because they were partly at the same height as those in

(3) See chapter 6.

trench 5 (see fig. 6.13). The graves in the northern part of trench 1 were at a higher level but this could be due to height differences created in Roman times (see chapter 5). The graves in the northern part of the trench were on top of the raised layers of the Roman *vicus*, where as the graves further south were in the somewhat lower lying backyard area of the *vicus*. There were however no archaeological reasons to equate the graves in trenches 1 and 4 with those of the younger layer in trench 5. For that reason a number of ^{14}C dates were commissioned to check the dates of the skeletons. The results showed that the skeletons chosen dated to the late Merovingian and Carolingian period. We therefore consider the graves in trenches 1 and 4 to be contemporary with those of the upper layer in trench 5. We can now produce a plan of all graves that we assign to what we call cemetery 5 (fig. 12.5). The majority of the graves of this cemetery probably belonged to the Carolingian period. Next to 'graves' and 'possible graves' a series of 'disarticulate human remains', an 'animal grave' and a 'stone' are indicated on the plan. Table 12.1 gives an overview of the types of contexts in cemetery 5.

Table 12.1
The numbers of different contexts related to cemetery 5.

Context type	Number
Inhumation grave	60
Possible inhumation grave	22
Disarticulate human remains	12
Animal grave	1
Pit	1
Stone	1

Chronology

The younger layer of graves in trench 5 was located above the Merovingian graves. However it is not clear to what date the Merovingian cemetery was in use. Few graves could on the basis of finds be assigned to burial phase IV (670/80-750). The end date of phase IV is chosen quite arbitrarily because no finds indicate exactly the date of the youngest Merovingian burials. The graves assigned to this burial phase were located to the north of the concentration of graves of cemetery 5 (in trench 5). It is unlikely that only these few graves made up burial phase IV. A number of graves that could not be assigned to one of the burial phases and that had no grave goods probably also belonged to this phase. The top graves of the piles of graves in the central part of trench 5 (see chapter 14) were usually without grave goods and could very well date to burial phase IV. Although it cannot be established how long the Merovingian cemetery was in use it is safe to say that it functioned as a cemetery at least into the late seventh century.

Two skeletons (grave numbers 33 and 158) of the younger horizon in trench 5 were ^{14}C dated (see table 12.2). They belong stratigraphically to the youngest graves (see fig. 11.1). Their date range is rather broad: from the later seventh century to the second half and end of the ninth century. Because these graves are among the youngest ones it is suggested that they rather date to the eighth and/or ninth century. Grave 33 could date to the second half of the eighth and ninth century.

Two skeletons (grave numbers 364 and 392) of trench 1 were ^{14}C dated. Grave 364 is one of the older graves in the northern part of the trench and grave 392 is the southernmost grave in the trench. The date ranges shorter than those of trench 5: from the second half of the seventh century to the early ninth century.

The dates from the graves in trench 1 seem to be a bit older than those in trench 5. This might be due to the fact that the dated graves from trench 5 were among the youngest ones. The dates of the graves allow a number of suggestions to be made. First, in view of the dates given it is possible that the oldest graves in trench 1 are contemporary with the youngest of the Merovingian cemetery in trench 5. If that is the case a new burial ground was created west of the Merovingian cemetery. However we saw in chapter 5 that the graves in the northern part of trench 1 cut a number of deep pits that were dated to the (later?) Merovingian and (early?) Carolingian period (see fig. 5.14). The graves in fact cannot really date to the second half of the seventh century and dated rather to the early eighth century or later. Second there might not be a large chronological gap between the Merovingian cemetery and the oldest graves of cemetery 4 in trench 5. The fact that the new cemetery was located on the western part of the Merovingian cemetery indicates that the place was still remembered as a burial ground. In spite of these remarks there is also the possibility that a larger chronological gap existed because the graves might as well date to the middle of the eight and ninth century. The section walls showed after all that the graves in the black layer must be set apart from the Merovingian graves. In spite of all this it is most likely that from the first half of the eighth century to some time in the ninth century the northern part of the Vrijthof Square was used as a burial ground again.

Table 12.2
The ^{14}C dates of skeletal remains from graves assigned to cemetery 5.

Grave number	Sex	Age	^{14}C date number	Date	1 Sigma	2 Sigma
33	male	25-40	GrA-32713	1225 ±30 BP	710-750 (12.3%) 760-870 (55.9%)	680-750 (25.5%) 760-890 (69.9%)
158	female	20-25	GrA-32714	1245 ±30 BP	680-780 (60.4%) 790-810 (7.8%)	680-870 (95.4%)
364	female	50-65	GrA-32718	1275 ±30 BP	680-725 (31.8%) 735-770 (30.1 %)	660-810 (95.4%)
392	male	40-80	GrA-32705	1285 ±30 BP	670-720 (41.4%) 740-770 (26.8%)	660-780 (95.4%)

Cemetery 5: limits, topography, structures and numbers

As explained in chapter 6 cemetery 5 is in fact not one single cemetery. The graves are not distributed evenly over the cemetery area (fig. 12.5). It seems to have three cores, one in trench 5 (group 1) and two in trenches 1 and 4 (groups 2 and 3). Empty zones are present between these cores. In figure 12.5 the three cores are indicated with a red line. The position of graves 323 and 324 is somewhat peripheral. It was suggested before that these two possible graves of which we only have an outline are not graves at all. It is not expected that there were many graves beyond the northern limits of the excavation. The Roman road was probably the northern boundary for groups 1 and 2.[4] It is neither expected that further west many graves were present. So the western boundaries of groups 2 and 3 are probably also known. The southern boundaries of groups 2 and 3 are known too. It is more problematic to establish the boundaries of group 1. It is expected that in the northern part of trench 5 graves from cemetery 5 were dug away while opening the trench. The building contractor probably dug away graves of cemetery 5 in the south of trench 5 (sector B). This can be concluded from the photograph in figure 12.2. In the eastern part of trench 5 excavation level 1 was skipped. For that reason only the western half of graves 145 and 146 was recorded. It would be a coincidence if cemetery 5 stopped exactly at the limits of sector A and C in trench 5. So cemetery 5 also continued in an easterly direction in sector C. It was not possible to determine what the situation was in trench 6 further east. Younger graves might have been present there too which could have been removed while opening the trench. There is however one argument against this. In trench 6 the Merovingian graves were cut by deep pits that have to be dated to the (late?) Merovingian and/or (early?) Carolingian period. It is therefore unlikely that the area was in use as a burial ground at that time. It can be concluded that group 1 extended over almost the entire trench 5 and may even have taken in some area beyond its eastern limits. This means that the number of graves must have been much larger than the 24 inhumation graves and 8 possible inhumation graves that were found in trench 5. There must have been three to four times as much graves.

What does this division in three different groups mean? Where they contemporary? Why did many graves overlap and was the intermediate space not used? An easy answer is that cemetery 5 consists of three groups each related to a different burial community. This answer however is problematic in relation to what one thinks an early town along the Meuse River is and why such burial grounds were still in use where one would expect people to bury their dead next to Christian cult places in such centres. In chapter 15 we will come back to these problems. What we now have to do is to present more evidence that may help clarify the backgrounds of this cemetery.

One striking observation is that the old western and obviously rigid boundary of the Merovingian cemetery was given up. This boundary was marked by the bands of gravel in the eastern part of trench 4. It could be that the old boundary still functioned for group 1, but now new burials appeared in the area to the west of the old boundary, an area that seemed to be a no-go area for dead people in Merovingian times. That this boundary was given up some time in later Merovingian and early Carolingian times was observed before because the deep dug in structures in trench 4 did not respect this boundary either (see chapter 5). Later, when the deep dug in structures had disappeared the boundary was reinstated again, at least new bands of gravel appeared on the same location as the old ones. There was thus an intermezzo in which deep dug in structures and graves did not respect the old boundary. We could not determine the function of the deep dug in structures and their date was difficult to establish but it can now be seen that they were located in the open space between the three cores with burials. Were they contemporary?

Cemetery 5 consists of simple graves with no grave goods. The majority of the graves are trench graves which are graves with no constructive elements (see chapter 8). The dead were interred in the pits possibly wrapped in a shroud. Only seven graves had a construction in them: three had a stone built chamber (nrs 139, 163 and 186) and four had a wooden container (nrs 33, 51, 122 and 365) (fig. 12.6). In eleven of the trench graves stones were found that might have a relation with some kind of construction. All wooden container graves but one and all stone built containers were found in group 1. In two of the three stone containers women were buried. In the stone container of grave 163 remains of three other persons were found next to the articulated skeleton of a woman. The sex of the person in the third container is indeterminate, remains of three different individuals were found in the container, one woman and two men. It is possible that the stone containers were used several times. In the four wooden containers one man (nr 33) and one woman (nr 122) were buried and possibly a woman (nr 51). The sex of the person in the fourth container (nr 365) could not be established.

Osteo-archaeological evidence is only available for the inhumation graves.[5] In table 12.3 the evidence is presented. Indeterminate

Table 12.3
The number of men and women identified on cemetery 5.

Inhumation graves: sex	Number
Female	19
Male	9
Indeterminate	17
No evidence	15

(4) No graves were found in the University of Amsterdam excavation to the north of trenches 1 and 4. (5) And of course for the 'disarticulate human remains', but they are not considered here.

Fig. 12.5
Overall plan of cemetery 5 with all the graves assigned to this cemetery. Three different groups of graves are indicated with a red broken line. The question marks indicate that graves may have been dug away in those areas either in the Middle Ages or during the opening of the excavation trench. The band of gravel that formed the western limit of the Merovingian cemetery is also indicated.

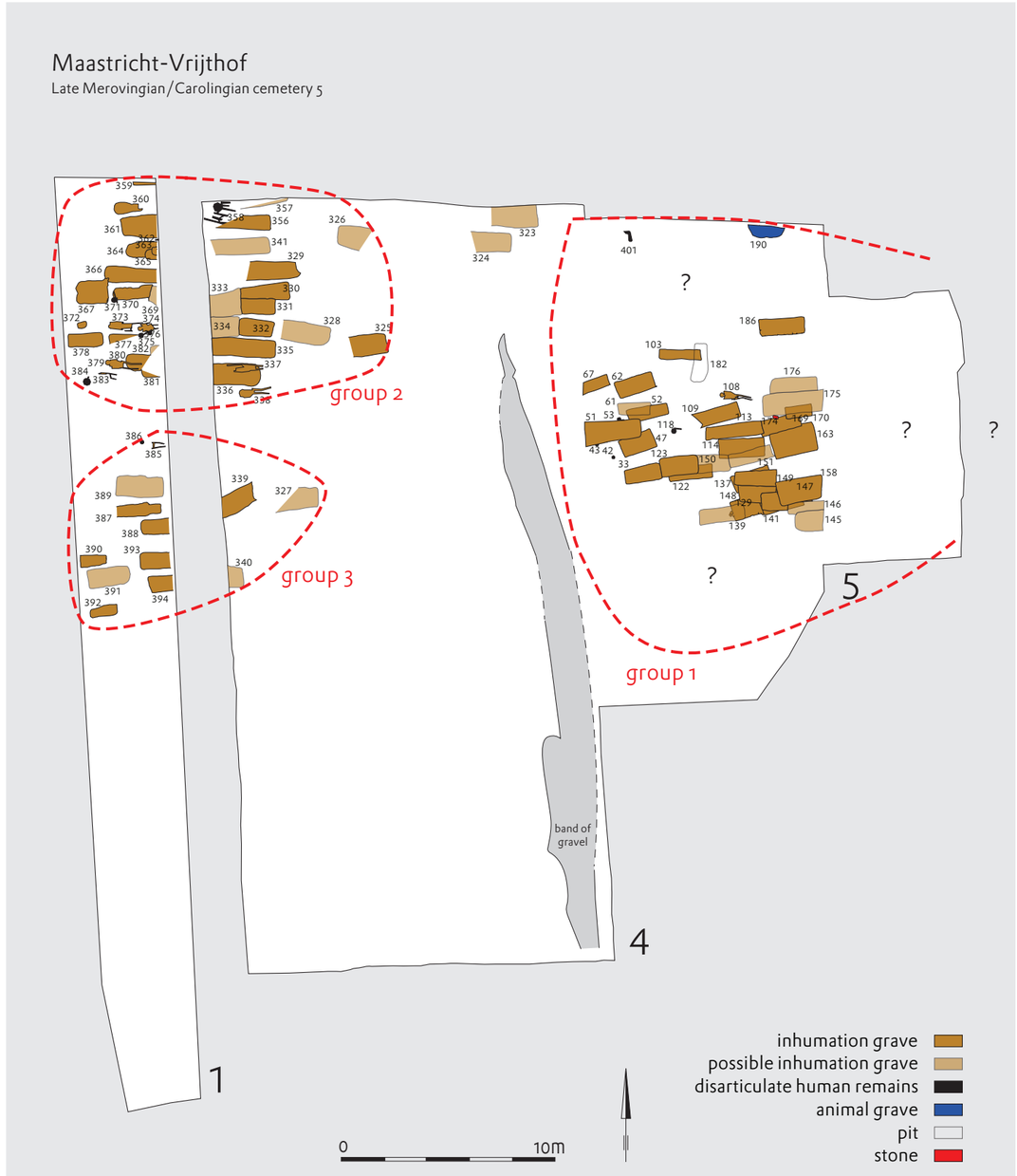


Fig. 12.6
The distribution of various types of graves over cemetery 5.

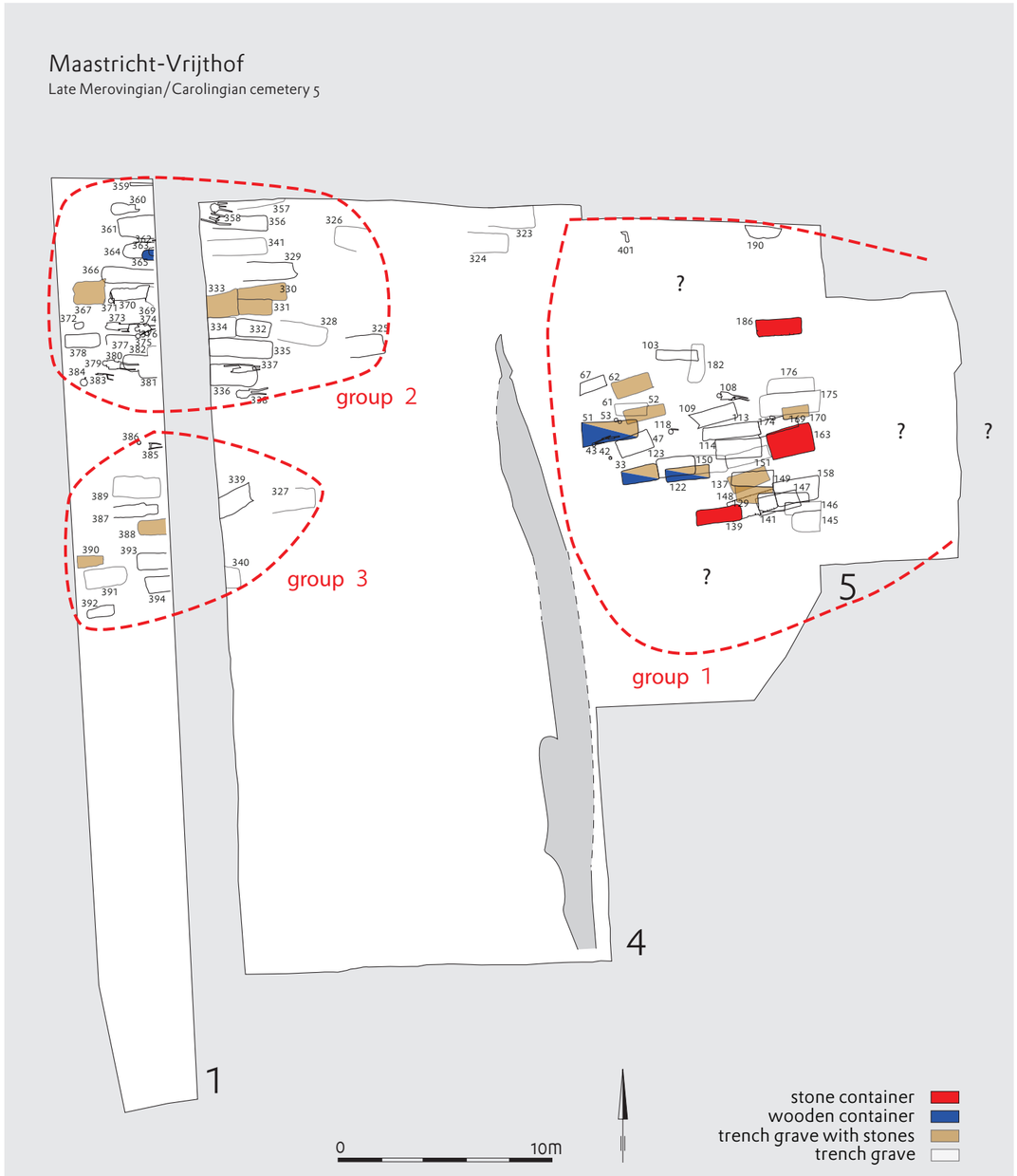
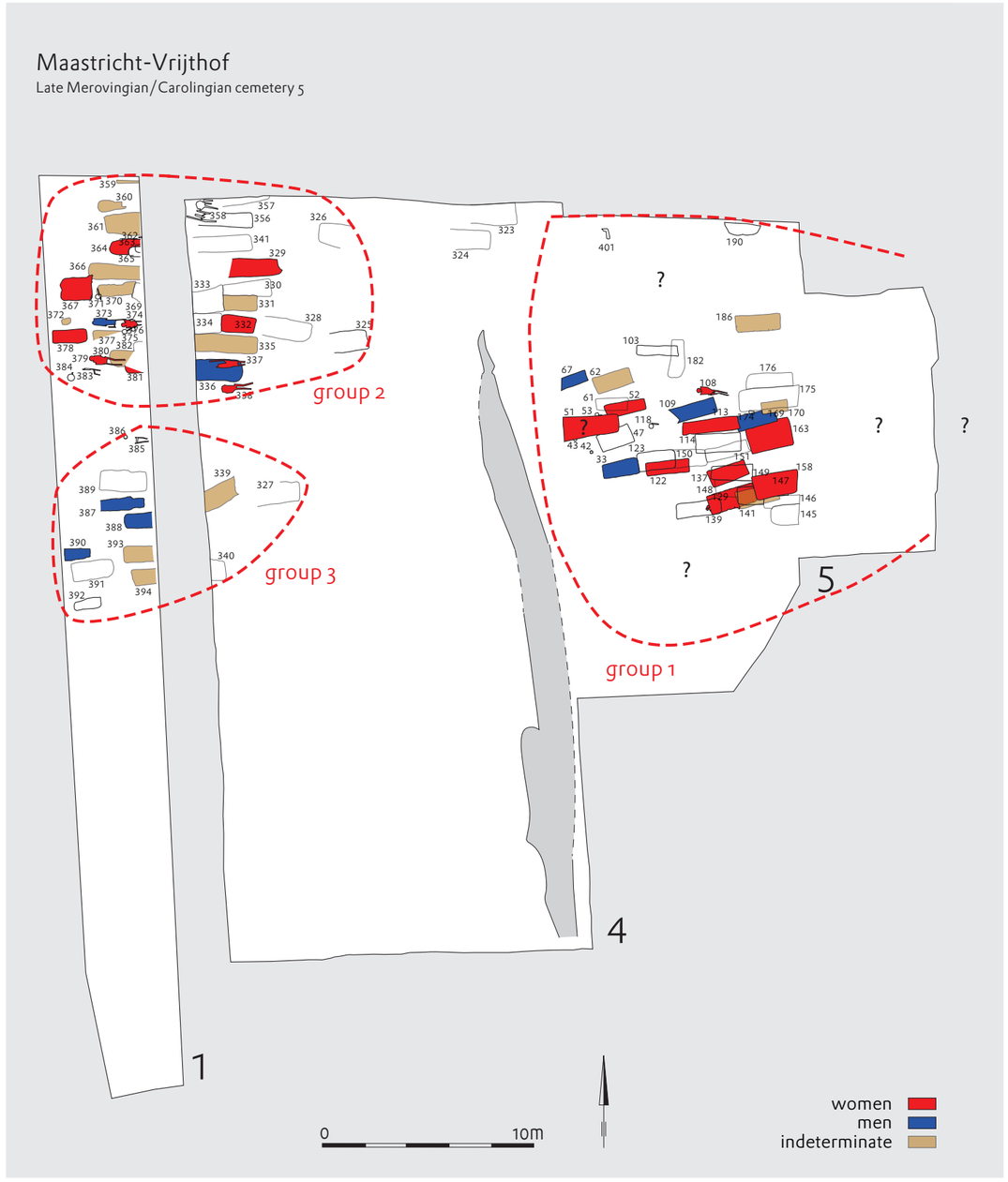


Fig. 12.7
The distribution of men and women over cemetery 5.



means that it is difficult to establish the sex of the primary burial because the skeletal remains do not allow a determination or because the remains of more than one person were present in the grave, no evidence means that no or very little human remains were found in the grave. The number of women exceeds that of men substantially. This might be a coincidence; many men might be hidden in the indeterminate or no evidence groups or might have been buried in those parts of the cemetery that were destroyed. It might as well not be a coincidence for in another Maastricht cemetery, that of the Boschstraatkwartier, the number of women also exceeds that of men considerably.[6] In groups 1 and 2 burials of both men and women were present (fig. 12. 7), in group 3 no women were identified, but again this might be a coincidence (or not?). The quality of the evidence is not good enough to draw far-reaching conclusions on the distribution of men and women over the cemetery. The size of some graves indicates that children were buried too in cemetery 5. In many graves the remains of more than one person was found. This might point to intensive use of the burial grounds but also to more elaborate burial practices whereby remains of other members of the community were deposited in graves of newly buried persons. In the case of the stone built containers it might also be related to reuse. Even then reuse might not be a random meaningless practice but be part of the definition of relations between previous and newly buried persons (see also chapter 13 on this topic).

Cemetery 5 counts 60 inhumation graves and 22 possible inhumation graves (table 12.1). Not many graves may have disappeared in groups 2 and 3. Of the burials of group 1 only a relatively small number seems to have been excavated. Twenty-four inhumation graves and eight possible inhumation graves were found in the central part of trench 5. These 32 graves are probably only a quarter of the original total number of graves because in the northern, southern and eastern parts of the trench this number of graves might have been present too. Thus group 1 might have consisted of c. 130 graves. If one adds this number to the 50 inhumation/possible inhumation graves of groups 2 and 3 cemetery 5 could have contained c. 180 graves. This is not much if one compares that to the possible use period of the cemetery between c. 700/725 and 850/875. If the cemetery was in use between 700 and 875 only one person a year was buried in this cemetery. If it was in use between 725 and 850 this number was 1.4. It might have been 2 if the cemetery was in use even shorter. These low numbers put cemetery 5 in a new perspective. Is this a normal early town cemetery? In chapter 14 this problem will be discussed.

(6) Panhuysen 2005, 154-155.

13 Burial practices: overview of general and specific practices on the Vrijthof cemetery

The appearance of Merovingian graves and cemeteries is the result of a number of rather general burial practices throughout Merovingian Gaul, in which variety on a local level can be observed. This chapter deals with some of the burial practices that produced the range of features characterizing the Vrijthof cemetery. First the features that are unusual for Merovingian cemeteries but distinctive for Vrijthof cemetery 4 are discussed. These are the stacked graves (more than one grave on the same spot, with more or less similar orientations) and the obvious burial density in especially the middle section of the cemetery. Secondly, a selection of the extended list of general Merovingian burial practices is discussed: the gender and age specific object deposition and the locations of the glass vessels within the Vrijthof graves. This collection is unique compared to the glass finds from other cemeteries in terms of both quantity and quality. A subject of major importance, which, however, is not discussed here but shall be in the upcoming volume on the Servatius cemetery, covers the description and analysis of the similarities and differences between the Vrijthof square and the early medieval burials on the plateau (the so called Servatius cemetery). A comparative overview of all the burials associated with the Servatius complex can shed some light on the specific characteristics of this extended burial ground, but also on the characteristics and meaning of the distinctive burial locations within the complex. For now, however, the focus is on the unique and some general features of Vrijthof cemetery 4.

Unique features: piled graves and the high density of graves

The Merovingian cemetery of the Vrijthof Square is foremost characterized, as it was already discussed in some of the forgoing chapters, by a high density of graves, especially in the centre of the excavated part of the cemetery (figs. 6.3, 11.11 and 13.1). The majority of the graves in this central section are stacked in piles of two to five graves. The considerable number of piles produced a vertical stratigraphy and thus a high density of graves, which are both rather unusual features for Merovingian cemeteries. Several suggestions regarding the stacked graves can be made: they can indicate (familial) ties between the deceased, but they can also refer to practical choices such as the choice for a recently used burial location for more or less contemporary graves, or to the limited space available for burials.

The Carolingian layer of graves on top of the Merovingian Vrijthof cemetery is characterized by relatively narrow grave pits (fig. 13.4). Narrow graves are also rather unusual for Merovingian cemeteries in the region; they often form the youngest phase of the cemetery and are situated at the fringes of the cemetery.[1] The narrow graves of the Merovingian Vrijthof cemetery are predominantly restricted to the stacked graves in the middle of the cemetery. The layout of the cemeteries of for example Bergeijk[2], Posterholt[3] and Sittard[4] show a distribution of considerably broad graves, of which only a few overlap one another just slightly. The narrow graves of the youngest phase are placed relatively close to one another, but stacked graves are absent in these cemeteries; this is rather typical for Merovingian cemeteries in the region.

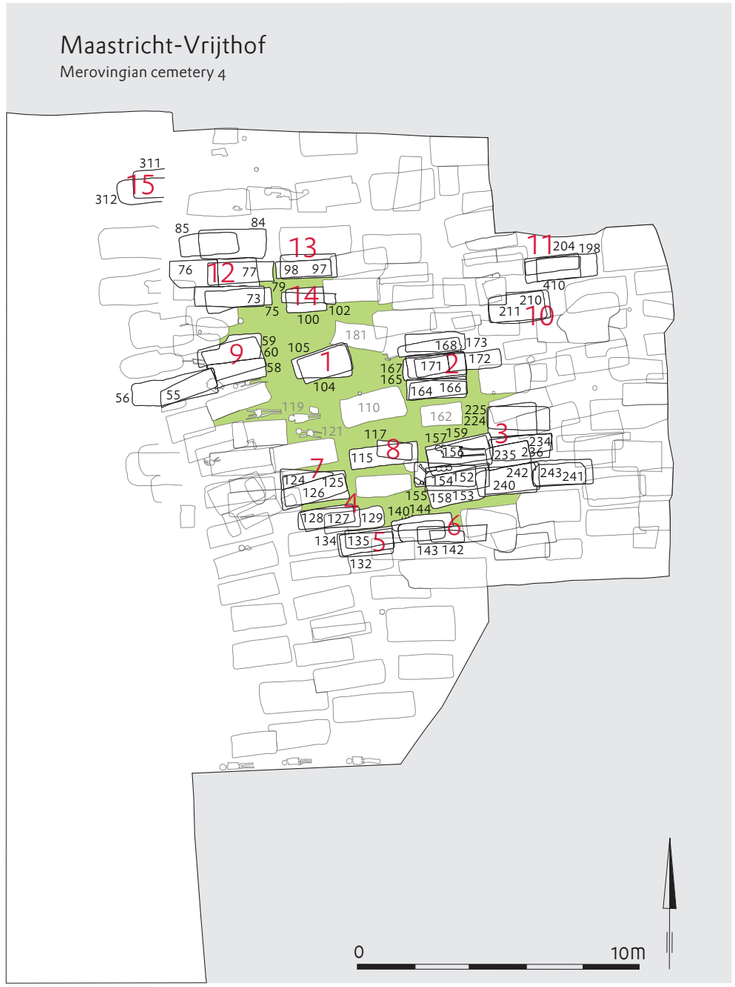
Another feature of the Vrijthof cemetery is that skeletal remains of more than one individual were indentified in the majority of the graves. Is this a result of the construction of multiple burials on one spot (younger burials disturbing the older ones), is it a result of other post-depositional processes, or was it intended and a result of specific burial strategies?

In order to understand the specific features of the Vrijthof cemetery a number of issues are reflected on in the following discussion of each identified group of stacked graves: how do the grave goods assemblages of each individual grave and their date ranges relate to the others of the pile, what is the number of identified individuals in one grave, what is the gender and age at death of the individuals in the piles, and are the graves with more than one individual disturbed? These observations can shed some light on the significance of the piles. Were the graves placed on top of each other deliberately? Are the interred related, or was the practice of placing graves on top of each instigated by other motivations?

At first sight it seems as if the piles of graves cluster around graves 104, 105 and 110, three relatively large graves of which 105 is on top of 104. There was an empty space around them (the green area in fig. 13.1).[5]

The chronological relation of the piles of graves with the 'central' graves 104, 105 and 110 will, among others, be discussed in the following overview of piled graves. The piles of graves are identified as such when two or more graves with (nearly) similar orientations were placed on top of each other. Graves of which only segments overlap are not considered to form a pile. Some of the identified piles are discussed in a group of piles of graves; the piles show some overlap or are placed exactly next to one another. What this proximity/overlap means in terms of social connections remains to be questioned, but for now the piles are either discussed as singular piles or as groups of piles.

Fig. 13.1
The spatial relation between the empty space around graves 104, 105, 110 (green) and the piles of graves numbered with red figures.



(1) Theuws/Van Haperen 2012, 163-164; De Haas/Theuws 2013, 162-171; Kars/Theuws/De Haas 2016, 253-254. (2) Theuws/Van Haperen 2012. (3) De Haas/Theuws 2013. (4) Kars/Theuws/De Haas 2016. (5) See chapter 11.

Group 1

The two large graves 104 and 105 are connected through their location and orientation; grave 105 is on top of grave 104 (table 13.1 and fig. 13.2). They seem to form a central point in an empty space together with grave 110 around which the other piles of graves (and a number of other graves, including graves of the top layer of younger graves) are clustered (fig. 13.1). This central position will be further investigated in the discussions of the other piles.

Grave 104, below grave 105 could not be dated on the basis of finds (it originally contained a francisca or axe, which is now missing). Grave 104 is a wooden container grave. The outline of the coffin is undisturbed as are the skeletal remains; they are intact and uncovered in their articulated original position. They are identified as the remains of a man, of which the age at death could not be established more precisely than 35-80 years. The grave is relatively broad compared to the other graves in its surroundings. The grave find (axe/francisca) was deposited at the right side of the body. A radiocarbon date of the skeletal remains is available on the basis of which it can be stated that the burial does not date after 600.[6] It can thus be dated either to the beginning of the date range accorded to grave 105 (around 610/20), or to a considerably earlier date range. In chapter 11 it was suggested to date grave 104 to the first half or middle of burial phase II (510-580/90).

Grave 105 dates to 610/20-670/80. It is the burial of a man, identified on the basis of a seax. Only the outline of a pit was observed, which is intact. The remaining skeletal remains are articulated. However, two individuals were identified in this grave. The legs and feet of the first individual are of a man with an age at death established between 19-80 years. Of the second individual only two bones of the lower right leg were available; the bones were identified as those of a child between 2-4 years of age. It is not clear where in the graves these bones were found (this was not recorded on the field drawing). Considering the undisturbed appearance of the grave, it can be suggested that the interment of two individuals within this grave could have been deliberate and was not caused by later disturbances. The child might have died before the associated adult (father, brother?), and (some of) its remains may have been reburied with him. Examples of secondary reburials were found in the nearby cemetery of Borgharen[7], but again, it remains to be questioned whether all the single graves with multiple individuals of the Vrijthof cemetery are a result of secondary burials. They can also be remnants of earlier burials and became intrusive material in newly created graves.

Graves 104 and 105 have a similar appearance; they are both relatively broad, they are the burials of men (both in a wooden coffin), and gender specific grave goods were deposited with both of them. The creation of burial 105 did not disturb grave 104. Two options can be suggested on the basis of the available date ranges. The first option is that a considerable period of time elapsed after burial 105 was dug and placed on top of burial 104, and that one was not aware of the presence of grave 104 anymore: the similar location and orientation are accidental. The second option is that burial 104 was respected when grave 105 was intentionally placed on top of it. This choice could be made on the basis of the relationship of the deceased (family?), or because of their specific standing (both men, buried with masculine grave goods), which was also expressed with their burial in this 'central' section of the cemetery. The established ages at death of the two adult men and the date ranges assigned to their inventories are considerably broad: claims about generational connections can be various and are difficult to substantiate.

Group 2

The second group consists of a cluster of three piles of graves: the pile consisting of the graves 168 and 173, the pile of graves 165, 167, 171 and 172, and the pile of graves 164 and 166 (figs. 13.1 and 13.2 and tables 13.2, 13.3 and 13.4). They are treated as one cluster because of their close proximity and alignment. These characteristics might point towards a deliberate burial strategy and the expression of some form of connection between the deceased.

With regard to the first pile: grave 168 is below 173; they are both dated to burial phase II (510-580/90) on the basis of their grave finds. Grave 176 (without finds) of the upper younger layer of graves (see chapter 12) is also on top of this pile, but probably not connected to the two underlying graves. Grave 168 is that of a man (based on the finds, among which a seax). It is a trench grave, in which an almost complete articulated skeleton was uncovered (the lower left arm, upper right arm and pelvis are lost). The catalogue mentions that: 'The pit seems to be too narrow, and as no outline of a coffin is indicated one wonders whether the outline observed could not be that of a coffin.' The majority of the grave is undisturbed. This indicates that digging grave 173 did not disturb, and thus that grave 168 was left intact deliberately. They are dated to the same date range, but of course, some time could have elapsed between the creation of burials 168 and 173. Grave 173 has

Table 13.1
The graves of group 1.

Grave	Individuals	Sex	Age	Finds/Gender	Date
105	1	Indet.	19-80	Male	610/20-670/80
	2	Indet.	2-4		
104	1	Male	35-80	Male	GrA 32715 + 35 BP 1 sigma: 430-490 (35.5%) 500-570 (32.7%) 2 sigma: 420-600 (95.4%)

(6) See table 14.1. (7) Passim in Lauwerier/Müller/Smal 2011, especially pp. 130-131.

Fig. 13.2
Groups 1 to 6. Plan of the piles and the individual graves.

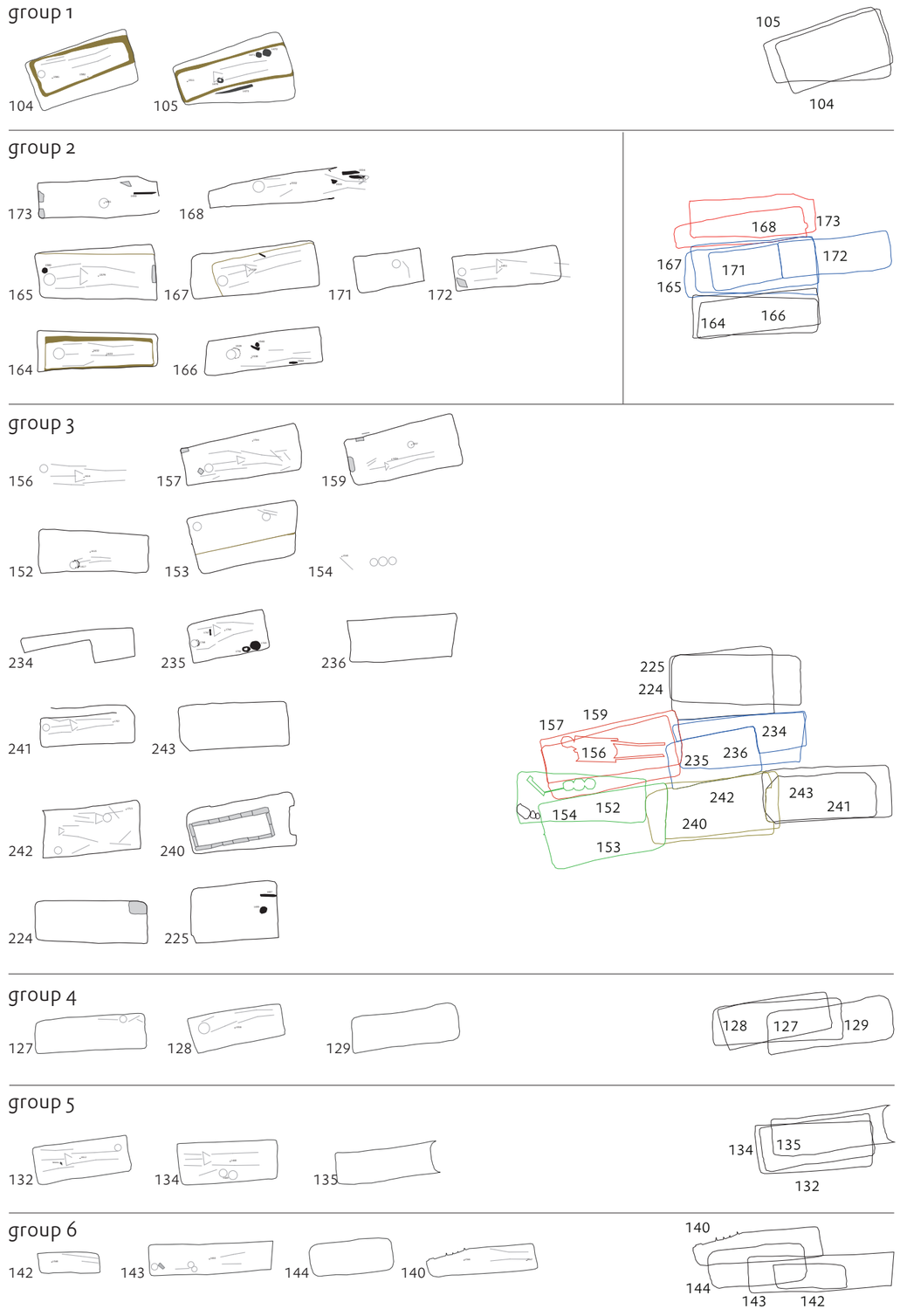


Table 13.2
The graves of group 2, pile 1.

Grave	Individuals	Sex	Age	Finds/Gender	Date
176?	-	-	-	-	-
173	1?	Female	25-35	Male	510/20-580/90
	2?	Female	10-20		
	3?	Female	20-34		
168	1	Indet.	12-18	Male	510/20-580/90

Table 13.3
The graves of group 2, pile 2.

Grave	Individuals	Sex	Age	Finds/Gender	Date
175	-	-	-	-	-
172	1?	Female	25-35	-	-
	2?	Female	10-20		
	3?	Female	20-34		
171	?	-	-	-	-
167	1	Male	63-73	-	-
165	1	Male	34-40	-	-

Table 13.4
The graves of group 2, pile 3.

Grave	Individuals	Sex	Age	Finds/Gender	Date
170	1	Female	40-80	-	Young layer of graves
	2	Male	20-80		
166	1	Female	20-40	Female	610/20-670/80
164	1	Female	60-70	Female	-

one find, a seax. The seax seems to be out of its original position, the bones are disarticulated and identified as those of three individuals, all female. The grave of the younger layer of graves (grave 176) or other post-depositional processes might have caused the disturbance of grave 173. The disturbance by grave 176 could indicate that the burial community connected to the younger layer of graves disregarded the older, Merovingian, burials and that this community was not related to foregoing burial community. The grave catalogue mentions that: 'The find number of the skull is the same as the skeletal material in context 172'. The outcome of the analysis of the skeletal remains relate to both graves 172 and 173; it is not sure to which grave the skeletal remains belonged. In view of the find of a seax (masculine grave good) it can be suggested that the identification of female skeletal remains were either part of grave 172 or were not part of the primary burial in grave 173 (secondary burials could have occurred). However, the seax from grave 173 is not in its original position and cannot with absolute certainty be assigned to this grave. A clear cut connection between grave 168 and 173 is impossible to make; it cannot be established whether the young male adult from grave 168 was related to the burial of the man or woman on top it.

Of the second pile grave 165 is the lowest one, on top of which are graves 167, 171 and 172. These graves could not be dated on the basis of finds: they were either empty or contained finds which could not be dated (precisely). The grave on top, grave 175, belongs to the upper layer of younger graves. The graves 165 and 167 are the broadest graves of this pile. Grave 165 is an undisturbed coffin grave, the complete skeleton is articulated, the outline of the grave is intact, and it can thus be assumed that the find near the head (missing, identification impossible) was at its original location. Grave 167 is also undisturbed; the skeletal remains are articulated and the outline of the coffin grave is intact. The object indicated on the field drawing is not present in the collection of grave goods. It can be stated that this grave, and the grave below, were again respected by the burials on top of them. Graves 171 and 172 are narrower; they are connected in their longitudinal direction and grave 171 seems to be partly below grave 172, so grave 172 (deliberately?) destroyed grave 171. A skull and long bone which have no find number are recorded as finds from this grave (171) on the field drawing; no human remains are thus available for examination. No grave goods were recorded in this grave. Grave 172 contained an almost complete articulated skeleton, except for the left arm and lower right arm. The find number of the skeletal remains was also assigned to grave 173, and it is not possible anymore to tell apart the skeletal material of the two graves. Of the younger layer of graves, possible grave 175 is on top of this pile. It is an empty grave, and no skeletal remains were identified. The catalogue describes that: 'It is reconstructed as a possible grave because the outline at level 1 does not match with one of the underlying graves. However, possibilities to make good observations were limited so that the outlines of graves at level 1 may not always be accurate'.

Because of the poor data uncovered from these graves it is difficult to suggest the nature of their connection: grave goods and date ranges are absent. It is however obvious that the two lower graves were those of men, as it was the case in the piles discussed above. The absence of date ranges and the age determinations implicate variable options (a son who died between 63-73 and buried on top of his father, a father died between 63-73 who died not long after his son and was buried on top of him, two brothers, of which one reached an higher age, etc.) The assignment of the female skeletal remains to grave 172 is uncertain. Graves 171 and 172, now considered as Merovingian graves, might belong to the top layer of younger graves because of their smaller size and the absence of grave goods. In that case group 2 consists of three piles of each two graves.

Of the third pile of group 2 grave 164 is below grave 166 and 170. Grave 164 is an undisturbed coffin grave; the skeletal remains are articulated and the outline of the coffin is intact. Burial 166 thus respected burial 164. Only one glass bead is known from grave 164, which could not be dated. It is the grave of a woman aged 60-70 years. Grave 166 is the grave of a woman of 20-40 years. It is undisturbed, and the grave finds (among which beads, brooch, purse) are thus at their original position. In the context of this cemetery it is relatively rich in grave goods. Of the younger top layer of graves, grave 170 is on top of this pile. It is on more or less

the same spot and shares a similar orientation. Finds were absent, and could thus not date the grave. Two individuals were identified in this grave on the basis of the uncovered skeletal remains. It is a rather narrow grave, which seems to be a feature of the younger graves on top of the Merovingian cemetery.

Again, a connection between the graves is hard to establish. Peculiar is the observation that the other piles (for which it could be established) consisted of the burials of men, and that this one consisted of at least the burials of two women. Considering the ages at death, it can be suggested that a daughter or granddaughter died not long after her (grand)mother and that, as a consequence, they were buried on the same spot. But this is of course a conjecture without further scientific analyses (DNA).

Together with grave 170, the graves 176 and 175 of the layer of younger graves may form a cluster on top of the piled graves of group 2 (fig. 13.4). They have more or less similar orientations and positions compared to the Merovingian burials. On the basis of these features a case can be made for a close chronological connection between the young layer of graves and the Merovingian graves, but hard evidence for this statement is absent since radiocarbon dates are not available and altogether, the similarities are not that straightforward.

Group 3

Group three consists of six piles which are obviously clustered and are for now discussed as one group of piled graves (figs. 13.1 and 13.2 and tables 13.5, 13.6, 13.7, 13.8, 13.9 and 13.10). The six piles are connected (they are located next to one another or overlap one another slightly), but it is not clear what this proximity actually indicates; it is for now merely an observation. Some of the graves do also overlap sections of other graves which are not incorporated in this cluster. They are not located on the exact same position as the discussed piles and/or do not share a similar orientation. Comparing them with the young layer of graves shows that a connection in terms of location and orientation is absent. Only a slight overlap of one of the young graves with a grave of group 3 can be observed, but this is most probably a coincidence.

The first pile consists of the graves (from bottom to top) 156, 157 and 159 (table 13.5). They could not be dated on the basis of finds; they were all without finds. Grave 156 is identified on the basis of a nearly complete articulated skeleton, but outlines of the grave were not observed. The catalogue says: 'No outline of a grave pit observed at levels 3 and 4. Complete articulated skeleton indicated at level 4 (except for the skull). However, immediately above, at level 3, two skulls are indicated of which one certainly belongs to a skeleton indicated at that level. We suppose that the northern skull of level 3 belongs to the skeleton of level 4 and that it has been moved a bit when the higher lying grave (context 157) was dug. The difference in height between levels 3 and 4 is 12 cm. Because skeletons are indicated at both levels we suppose that two graves are concerned because it is unlikely that the same skeleton was drawn twice. If this reconstruction is correct it is a nice example

Table 13.5
The graves of group 3, pile 1.

Grave	Individuals	Sex	Age	Finds	Date
159	1	Male	35 - 55	-	-
	2	Male	30-60	-	-
	3	Female	30-60	-	-
157	1	Male	53-58	-	-
	2	Female	35-55	-	-
	3	Female	40-60	-	-
	4	Indet.	20-80	-	-
	5	Indet	20-80	-	-
	6	Female	18-20	-	-
156	1	Male	35-55	-	-

of a situation where two skeletons are present on the same location with only a minor difference in height between them.'

Grave 157 contains a nearly complete articulated skeleton and the outline of the grave is undisturbed. The remains of six individuals were present under the find number related to this grave. The catalogue mentions: 'Near the feet is a collection of bones that does not belong to the skeleton, but must have been found and re-deposited while digging the grave. South of the skull there are some bone remains that neither belong to the primary burial'. These remarks are exemplary for the difficulties encountered with the interpretation of skeletal remains of multiple individuals (on the basis of just a few remains) in one grave. How should the fragments that were found in addition to the human remains of the primary burial be interpreted: as indications of disturbances of other graves and re-depositions, as intrusive material, or as an intentional secondary burial of human remains? It is, although this might also be a coincidence, striking that the primary burial from grave 157 is identified as that of a man, and all the other remains (when this was possible) as those of women. Is the secondary burial of women's remains in grave 157 related to this burial of a man at the bottom of the pile?

Grave 159 is the grave on top of the pile. The remains of three individuals were present in this find number. The catalogue mentions: 'Skeletal remains (1456) present at level 2: vertebral column, pelvis, both legs, articulated. Moreover there is a skull (1457) north of the left knee (of another person) and two long bones near the left upper arm, which may belong to the same person as well'.

Regarding pile 1 we can conclude that only the bottom grave contained one individual (a man). The other graves all contained, next to the primary burial, other remains of more than one individual. These remains cannot originate from a lower lying grave for they were undisturbed and of another sex. Does this suggest that the extra humans remains were intentionally placed in the grave, or does it mean that much human remains were left about on the cemetery area (including skulls), which ended up in the newly dug graves? The fact that the bones were at the same level in the grave as the primary burial suggests the first option, the presence of

collections of bones without grave context (including skulls) such as context 154 (see below) the second option. A connection between the graves of this pile is difficult to establish as is the intentionality of the burial of multiple individuals in one grave.

The second pile consists from bottom to top of the graves 152, 154 (disarticulated skeletal remains), 153 and 158 (table 13.6). Grave 141, of the young layer of graves, is on top of this pile, but not on exactly the same spot; it is therefore not connected to the identified pile. Grave 152, the bottom grave of this pile contained finds which date the grave to 580/90-c.750. The catalogue mentions: 'Skeletal remains indicated: skull, vertebral column, ribs (not digitized), left upper arm, both legs, articulated. Probably it is the grave of a child. The grave pit, however, is of normal size and thus much larger than needed to bury a child'. The skeletal remains indicate the burial of a child aged 3-4 years. It can be concluded that burial 154, and 153 on top, did not disturb burial 152. Disarticulate human remains indentified as context 154 consists of a collection of three skulls, a long bone and the remains of two long bones. They were not available for examination, and only one find was associated with the skulls; a buckle which dates to 580/90-670/80. The start of this date range is similar to that of grave 152. The grave and the original burial from which a part of the collection of bones originates might belong to the same phase. The collection of bones clearly shows that older graves were disturbed and that some of the human remains were collected and deposited in a pit. However important this observation is for the assessment of the burial rites on this cemetery, we do not have further information on this feature to establish when it might have taken place and whether this was done on a regular basis. The buckle might date the original burial; the deposition of the additional collection of bones might have taken place (much) later.

Grave 153 contained more than one individual as the catalogue mentions: 'Skeletal remains indicated: skull at the place where it can be expected. In the eastern part there is another skull and three long bones, disarticulate'. They were not available for examination. It is a broad grave with wood remains of the coffin.

For grave 158 was observed: 'Skeletal remains indicated: skull, the both collar bones (not digitized), ribs (not digitized), vertebral column, both upper arms, pelvis, left leg, articulated'. On the basis of these remains two individuals were identified, of which the age of both, and the sex of one, could be established. The radiocarbon date shows a date range which starts considerably after the beginning of the date ranges ascribed to graves 152 and 154. However, these two graves can date late in their established date range and grave 158 early in its established date range. The radioncarbon dates, however, might be based on intrusive material; it is thus not certain to which phase grave 158 actually dates. Grave 158 may be considerably younger, or the graves of this pile may all be contemporary.

This is a pile of graves of which the lowest grave is that of a child. The first pile discussed in group three is also a burial of a young person (12-18). The burials of top of the young deceased might indicate familial ties. The established date ranges of the graves are considerably broad: it is impossible to establish the time that elapsed between the burials, a problem which cannot be solved on the basis of the available data from the Vrijthof cemetery.

The third pile consists of graves 234, 235 and 236 (table 13.7). The grave finds date grave 235 to 460/80-565, the other two graves could not be dated on the basis of finds. Graves of the young top layer could not be associated with this pile, nor could they with the next piles (4, 5, and 6) of the cluster. Grave 234 was identified only on the basis of an outline. Other information was not available. It is a relatively narrow grave. In grave 235 two individuals could be identified on the basis of the skeletal remains: 'Skeletal remains indicated: skull, the both collarbones (not digitized), vertebral column and right side ribs (which are slightly out of place) (not digitized), pelvis and both legs. The skeletal remains are more or less in an articulated position except the vertebral column and ribs'. The primary burial (the articulated skeleton) is that of a woman, the other remains are of a child. No other information than an outline of a pit is available for grave 236.

The fourth pile is formed by grave 241 below 243 (table 13.8). In grave 241 a complete articulated skeleton of a woman, between 20-25 years of age was uncovered. Other remains were identified as those of an individual with an age between 20-80 years. If it was a secondary burial, the connection between the two individuals can thus be manifold. Of possible grave 243 only an outline of a pit was observed. Further information is not available.

The fifth pile, to the west of pile 4, consists of grave 240 below grave 242 (table 13.9). Grave 240 is a tufa stone chamber. No skeletal remains are indicated. With regard to the location of this grave the catalogue mentions: 'This grave pit (240) is situated at the same location as grave context 242 at level 3 (with a lot of skeletal material in disarray) with more or less the same outline of a pit. However it is impossible that they belong to the same grave because at level 4 context 240 is cut by context 241. That grave is also indicated at level 3 but it is cut by context 242 which thus has to be younger than 241 that in its turn, according to the field drawing, is younger than 240. According to the field drawings there is a clear stratigraphic and chronological relation: from old to young: 240, 241, 242, 243. Graves 240 and 242 are at the same location as well as graves 241 and 243. The result is that there are four graves that follow each other in time whereby twice a new grave is located on the location of a previous one'.

As mentioned, grave 242 has the nearly exact same location as grave 240. With regard to the mixture of the skeletal remains the catalogue indicates that: 'Skeletal remains observed of at least two individuals. Of the northern skeleton possibly articulated parts of the (lower?) arms, pelvis, and legs are indicated. Between the knees is a skull. Of the southern skeleton there are possibly the articulated remains of the pelvis, the right leg and the upper left leg. Along the southern limit of the pit disarticulate skeletal remains: skull and long bones'. It is difficult to specify whether this grave contains a primary and secondary burial. For now no further conclusions are made with regard to this grave and its content. Specifics about the connection between the two graves are also difficult to provide due to the absence of finds, date ranges and clear-cut conclusions about the skeletal remains.

The sixth pile of group 3 consists of grave 224 below 225 (table 13.10). Grave 224 is indentified on the basis of an outline only. However, as it is mentioned in the catalogue: 'It is possible that this outline of a grave has to be combined with that drawn on this location at level 3 (context 225). However there are no skeletal remains indicated in that grave either'. Grave 225 is also indentified on the basis of an outline, but in this grave a number of finds, among which perhaps a seax (see the catalogue). Further information is absent, and none of the graves could be dated on the basis of finds. The nature of their connection is therefore difficult to opt.

Table 13.6
The graves of group 3, pile 2.

Grave	Individuals	Sex	Age	Finds/Gender	Date
153	More than 1	-	-	-	-
154	3	-	-	Neutral?	580/90-670/80
152	1	Indet	3-4	Female	580/90-750

Table 13.7
The graves of group 3, pile 3.

Grave	Individuals	Sex	Age	Finds/Gender	Date
236	-	-	-	-	-
235	1	Female	44-60	Female	460/80-565
	2	Indet.	3-5		
234	-	-	-	-	-

Table 13.8
The graves of group 3, pile 4.

Grave	Individuals	Sex	Age	Finds/Gender	Date
243	-	-	-	-	-
241	1	Female	20-25	-	-
	2	Indet.	20-80		

Table 13.9
The graves of group 3, pile 5.

Grave	Individuals	Sex	Age	Finds/Gender	Date
242	1	Male	40-80	-	-
	2	Male	30-60		
	3	Male	14-24		
240	-	-	-	-	-

Table 13.10
The graves of group 3, pile 6.

Grave	Individuals	Sex	Age	Finds/Gender	Date
225	-	-	-	Male?	Roman antique + not datable finds
224	-	-	-	-	-

Table 13.11
The graves of group 4.

Grave	Individuals	Sex	Age	Finds/Gender	Date
129	-	-	-	-	-
128	1	Male	40-80	-	-
127	-	-	-	-	-

Group 4

The piles of graves of groups 4 and 5 are near each other (fig. 13.1), but discussed separately here. The graves from each group are stacked, but are also on top or below sections of the burials from the other clusters. What this connection means remains open for discussion.

Group 4 consists of, from bottom to top, graves 127, 128 and 129 (young layer of graves?) (fig. 13.2 and table 13.11). Grave 130, in the Harris Matrix below these graves, is not on the same spot as the piled graves. All the three graves are without finds and could thus not be dated on the basis of their finds. Neither could they be dated on the basis of their stratigraphic relation with dated graves. This may indicate that some of the piles (especially those without grave finds) are related to the young top layer of empty graves, a point which will be discussed later on, or that they are actual empty (late) Merovingian graves.

Grave 127 is a trench grave with disarticulate skeletal remains. They have no find number and could not be examined. It could be that the grave was disturbed when graves 128 and 129 were created. Grave 128 is a trench grave with skeletal remains of which the majority is articulated. The age at death of this man was indicated between 40-80 years. Grave 129 is also a trench grave. Skeletal remains are absent. Since no date ranges or grave finds are available from the graves of this pile, not much can be suggested about the nature of their connection.

Group 5

The graves (from bottom to top) 132, 134 and 135 form group 5 (table 13.12). They are also without finds and could neither be dated on the basis of associated graves. Graves of the younger layer do not have a stratigraphic relation with this pile, although some lie in the proximity.

Table 13.12
The graves of group 5.

Grave	Individuals	Sex	Age	Finds/Gender	Date
135	-	-	-	-	-
134	1	Male	20-80	-	-
	2	Indet.	35-55		
	3	Male	30-60		
	4	Female	20-34		
132	1	Male	39-45	-	-

Grave 132 is a trench grave; the complete skeleton is articulated except for the scull which was found near the left foot. This indicates that the grave was respected when graves 134 and 135 were dug, unless the skull was moved when digging grave 134. A copper alloy object was indicated on the field drawing, but was not available for examination. It is not known whether this object was gender specific, but the skeletal material was identified as that of a man who died between 39-45 years of age. Grave 134 is also a trench grave. Although at least two but possibly three individuals were identified under the associated find number, an almost complete articulated skeleton was also indicated on the field drawing. This is individual 1, a man who died between 20-80 years of age. Again a skull was found in a non-anatomical position. It could have belonged to the man whose skeleton was found, but this is not certain. Trench grave 135 was without finds and skeletal remains.

Because of the absence of date ranges, grave finds and clear-cut anthropological data it is difficult to provide suggestions about the nature of the connection between the grave s of this pile. Grave 135 is somewhat out of line with the two other graves. It can be questioned whether it should be associated with this pile. The location of the complete pile is not similar to the proximate graves of the younger layer and they seem thus not to be linked (fig. 13.4).

Group 6

The graves of this group, 140 (565-670/80), 142, 143 and 144, are not as neatly piled as the other stacked graves discussed in this section (figs. 13.1, 13.2 and table 13.13). However, the burials overlap that much that a connection between them can be assumed and deserves to be mentioned here. Grave 140 and 143 are located next to each other, and grave 143 is overlapping just a section of grave 140. The other graves are on top of these two graves.

Grave 140 is a trench grave with skeletal remains of which the legs are articulated. The single find from this grave, a shoe buckle, is difficult to define as exclusively feminine or masculine. Other finds were not uncovered in this grave, but it could be dated to the second half of the sixth century on the basis of this find alone. Grave 143, a trench grave, contained the skeletal remains of three individuals, of which the legs seemed to be in articulated position. As it is mentioned in the catalogue of graves: 'The reconstructed outline of the grave pit is long, the indicated skeletal remains divers. It is possible that two graves are involved that could not be distinguished in the field. The north-eastern skull and the legs may belong to a skeleton in articulated position in one grave and the remaining skeletal material and the stone in another located a bit more to the west. In that case the stratigraphic relation between both graves could not be observed'. Conclusions about the connection between the individuals from this grave and the others from the graves of this pile are therefore difficult to establish. Trench grave 142 has skeletal remains which indicate the burial of a mature individual, although the dimensions of the grave point towards the burial of a child. From grave 144, a trench grave, no finds and skeletal remains are known. The connection with the young layer of graves is absent in terms of location and orientation (fig. 13.4).

Fig. 13.3
Groups 7 to 15. Plan of the piles and the individual graves.

Group 7

Group seven consists of the graves, from bottom to top, 124, 125 and 126 with context 26 (a stone) on top (figs. 13.1 and 13.3, table 13.14). The cluster of graves to the west of group 7 is not incorporated in this discussion because these graves, although in an obvious stratigraphic relation with one another (see the catalogue of graves), do not share similar locations and orientations. Group 7 is different from the other piles discussed up to now because the graves all contained finds and could be dated on the basis of their contents. This cluster lies south of the graves of the recorded younger top layer of graves, and is in a stratigraphic sense thus not related to these younger graves (fig. 13.4).

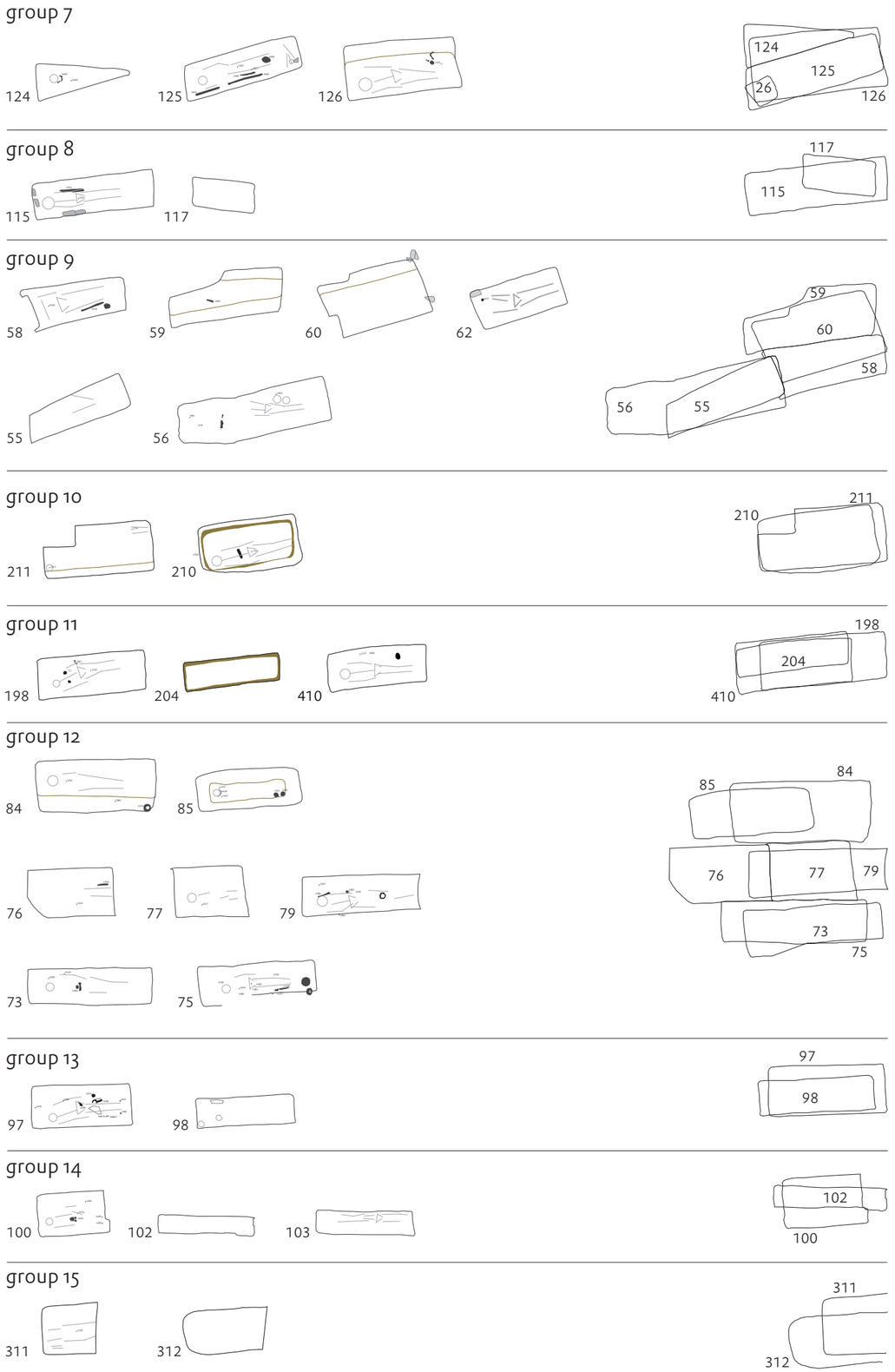
Trench grave 124 contained articulated skeletal remains. There are some doubts about the accuracy of the assigned find numbers to these remains. Considering the discrepancy between the gender association of the finds (beads), and the sex determination of the remains (a man, aged between 34-43 years), this assignment can indeed be questioned. Grave 125, a trench grave, also contained articulated skeletal remains (male, 35-45), which indicate that the grave remained undisturbed after grave 126 was dug. The catalogue of graves mentions that: 'In the eastern part of the pit the remains of a second person (long bones and skull fragment) are indicated. Are these the remains of the person in disturbed context 124? … The amount of iron objects indicated, points to the grave

Table 13.13
The graves of group 6.

Grave	Individuals	Sex	Age	Finds/Gender	Date
144	-	-	-	-	-
142	1	Indet	35-55	-	-
143	1	Female	40-80	-	-
	2	Male	40-80		
	3	Indet	11-12		
140	1	Indet	20-80	Neutral	565-670/80

Table 13.14
The graves of group 7.

Grave	Individuals	Sex	Age	Finds/Gender	Date
26	-	-	-	-	-
126	1	Male	33-45	Neutral?	610/20-670/80
125	1	Male	35-45	Male	640/50-725
	2	Female	20-80		
	3	Indet.	10-12		
124	1	Male	34-43	Female	510/20-670/80



of a man buried with weapons. The iron object besides the head may be a lance head. On photograph H643-8 a pot can be seen that disappeared completely from the administration. Find number 1557 is also indicated in relation to grave 126. It rather belongs to that grave.' Considering the find and the identified individuals, it might be safe to suggest that the primary burial was that of a man. The others can be secondary buried skeletal remains, but can also be intrusive material coming from other disturbed graves. Grave 126, a coffin grave, contained a complete articulated skeleton. The grave finds can be associated with both men and women, although predominantly with women (shoe buckles), but the analysis of the skeletal remains points towards the primary burial of a man who died at an age between 33-45 years.

This complete pile consists thus of the primary burials of adult men who died between 33 to 45 years of age. They were all buried with grave goods. It is possible that they were buried shortly after each other (see the date range of the graves), which implies that they were all of the same generation (siblings?). But it is also possible that a considerable time elapsed between the burials and thus that they were of different generations. These conclusions are difficult to substantiate since the available date ranges of the graves, established on the basis of grave finds, are covering more than one generation. DNA analyses and radiocarbon dates are required to draw further conclusions.

Group 8

Of the two graves of group eight, grave 117 is below grave 115 (figs 13.1 and 13.3 and table 13.15). Grave 115 dates to 510/20-580/90. The graves do not have exactly similar orientations, but are located on the same spot. The graves of the young top layer are not connected to this pile in terms of orientation and location, although segments of the graves overlap segments of graves 117 and 115.

Possible grave 117 has a rectangular outline and could have, considering its dimensions, been the grave of a child. No skeletal remains are indicated, and no finds are known from this grave.

With regard to trench grave 115 the catalogue of graves mentions: 'The reconstruction of this grave is problematic. At level 3 a clear outline of a grave pit has been observed with stones (along the southern wall near the chest) and brick (at the head end). At level 4 a skeleton is indicated and the western part of a grave pit. Because the difference in height between levels 3 and 4 is not much and at level 3 a pit and at level 4 a skeleton has been drawn we concluded that they belong to a single grave.' A complete articulated skeleton was indicated on the field drawing. The discrepancy between the sex determination and the gender specific finds might relate to the uncertainty about the identification of this grave. Because of all the reservations made with regard to these two graves it is also difficult to put forward suggestions about the nature of their connection.

Table 13.15
The graves of group 8.

Grave	Individuals	Sex	Age	Finds/Gender	Date
115	1	Female	20-40	Male	510/20-580/90
117	-	-	-	-	<580/90

Group 9

This cluster consists of two piles of graves (fig. 13.1, 13.3 and tables 13.16, 13.17). They are for now discussed as one cluster because of their proximity and stratigraphic relation.

The first pile consists, from bottom to top, of graves 58, 59 and 60. Grave 58 is immediately adjacent to grave 59. Grave 60 is much broader and covers the two graves. Only grave 58 could be dated on the basis of finds; it dates to 640/50-670/80. Grave 60 was without finds, and grave 59 contained a copper alloy buckle loop which could not be dated precisely. Of the young layer of graves only grave 62 shows a connection with the underlying grave with regard to its location and orientation; the other graves in the proximity have deviating orientations and do not share a similar location (fig. 13.4).

Grave 58 is a trench grave with articulated human remains. The outline of the pit could not be established correctly (see the catalogue of graves). The catalogue also mentions that 'the west end of the grave seems to have been disturbed while digging a younger grave'. This probably resulted in the identification of multiple individuals in this grave on the basis of small remnants of skeletal material. This example shows that the occurrence of multiple individuals in one grave is not necessarily the result of deliberate burial strategies but can also be the result of the high density of graves and thus the high risk of disturbing graves while digging new ones. Possible (coffin) grave 59 was without skeletal remains. The only find from this grave (a buckle loop) cannot be exclusively associated with men or women, and could not provide a date range for the grave. Possible grave 60 was also without skeletal remains and finds. In trench grave 62 an almost complete, articulated skeleton was found which was identified as an adult between 30-60 years of age. No finds were uncovered. Because of the absence of date ranges, sets of finds and clear cut associations between human remains and graves, it is difficult to establish a connection between the four graves other than their location and orientation.

The second pile of group 9 consists of grave 55 below grave 56. They both cut a segment of grave 58 of the pile described above. Grave 56 dates to 565-610/20, grave 55 had no finds. Graves of the young layer cannot be connected to this pile on the basis of their location and/or orientation. The catalogue of graves mentions about grave 55: 'Outline of a pit observed at one level only. Skeletal remains indicated: two upper legs (no find number). On the basis of these two upper legs (level 4) it was decided to reconstruct context 55 as a separate grave instead of combining it with context 56 into one single grave. Context 56 consists also of two upper legs and other skeletal remains'. And about grave 56: 'Outline of a pit observed at one level only in both trenches. The grave pit is relatively large in the west end. Maybe two graves are combined in

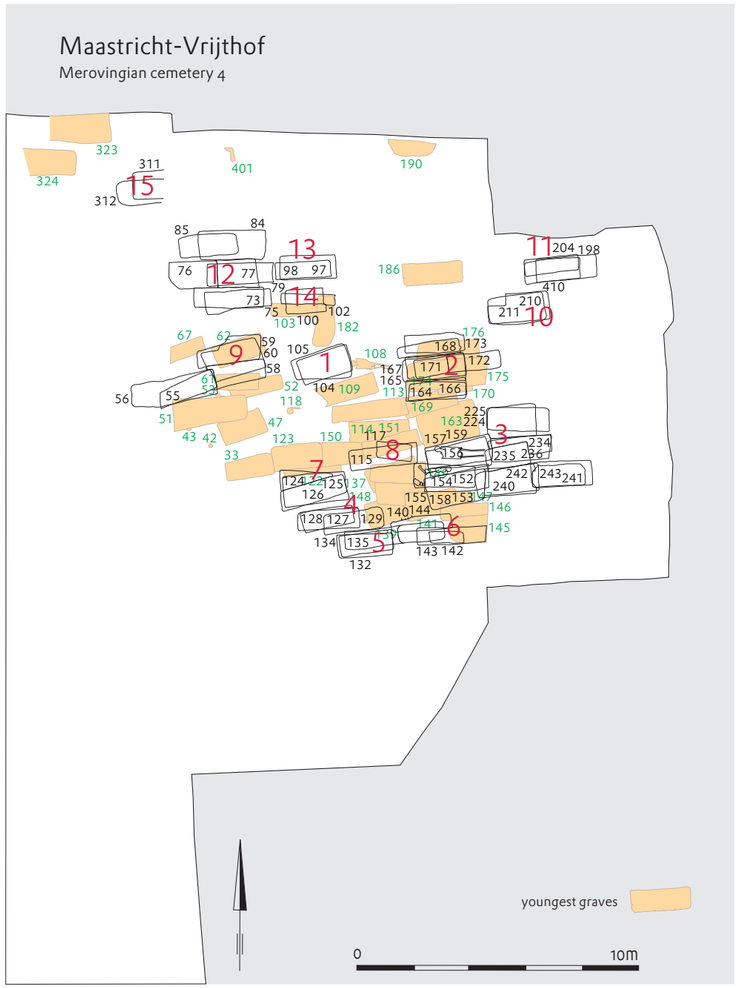
Table 13.16
The graves of group 9, pile 1.

Grave	Individuals	Sex	Age	Finds/Gender	Date
62	1	Indet.	30-60	-	-
60	-	-	-	-	-
59	-	-	-	Neutral	-
58	1	Male	35-55	Male	640/50-670/80
	2	Male	40-60		GrA- 32717 + 30 BP
	3	Indet.	18-80		1 sigma: 580-640 (68.2%)
	4	Indet.	18-80		2 sigma: 550-650 (95.4 %)
	5	Male	20-40		

Table 13.17
The graves of group 9, pile 2.

Grave	Individuals	Sex	Age	Finds/Gender	Date
56	1	Female	40-80	Neutral	565-610/20
	2	Male	23-40		
55	1	-	-	-	-

Fig. 13.4
Plan of the piles of graves of Merovingian cemetery 4 and the younger graves from cemetery 5.



one. Complete skeleton indicated except for the skull in the east end. Maybe lower arms are missing. There are two skulls near the left upper leg, one of which may belong to the skeleton. Maybe two graves are involved'. It appears that the degree of uncertainty is considerably high with regard to the identification of these two graves. The scarcity of information, together with this uncertainty, leaves little space for clues about the nature of their connection.

Group 10

Graves 210 and 211 are almost exactly on the same spot and share a similar orientation (fig. 13.1 and 13.3, table 13.18). Grave 210 (below 211) dates to 510/20-670/80 and grave 211 to 400-580/90 on the basis of its stratigraphic relation with grave 203. The two graves are located to the northeast of the above discussed cluster of piled graves in the middle of the cemetery, together with group 11 (fig. 13.1). It can be questioned whether they are part of the cluster, also because they are broader than the majority of the piled graves. They might even date early in their established date ranges, which would be considerably earlier than the other piled graves discussed before.

Coffin grave 210 contained a complete, articulated skeleton of a man died at an age between 35 and 40. The assemblage of grave goods is defined as masculine on the basis of flints and a pair of tweezers. Grave 211, 'reconstructed independent of context 210 because of stratigraphic reasons' (see the catalogue of graves), contained skeletal remains (female: 17-34). Only the bones of the legs were still articulated. The graves date relatively early compared to the other graves in the cemetery. Several scenarios can be proposed on the basis of the available data: The woman could have died not long after the man. They were either of the same generation (husband and wife?) or the man was older than the women (father-daughter?). The women could also have died a considerable time after the man, and was thus of a different generation (maybe more than two generations younger). Again, with the availability of an extended set of radiocarbon dates, and DNA these connections could be investigated more profoundly than on the on the basis of considerably broad date ranges established with the grave finds. However, the available radiocarbon dates for grave 210 also show a considerable time span which covers more than one generation.

Table 13.18
The graves of group 10.

Grave	Individuals	Sex	Age	Finds/Gender	Date
211	1	Female	17-34	-	< 580/90
210	1	Male	35-40	Male	Finds: 510/20-670/80 GrA-32719 1590 + 30 BP 1 sigma: 420-470 (27.6%) 480-540 (40.6%) 2 sigma: 410-550 (95.4%)

Table 13.19
The graves of group 11.

Grave	Individuals	Sex	Age	Finds/Gender	Date
204	-	-	-	Neutral	-
410	1	-	-	Neutral	-
198	1	Female	26-35	Female	-

Group 11

Another pile of graves to the northeast of the cluster of stacked graves are graves (from bottom to top) 198, 410 and 204 (fig. 13.1 and 13.3, table 13.19). The top grave (204) is the narrowest; it might belong to the top layer of young graves clustering in the middle of the cemetery. No finds are known from this grave. Whether grave 204 was placed on top of the pile intentionally remains to be questioned, but the comparable orientation and spot with the two graves below seems to indicate this. Finds are known from grave 198, but these were difficult to date precisely. There is a complete, articulated skeleton indicated (except the upper left arm) in this grave. Some beads and a (finger) ring, without find number, were indicated near the left hand. The ceramic pot from grave 410 was gone astray, due to which it could not be dated to a specific burial phase. A complete articulated skeleton was indicated but this also went missing. About possible grave 204 it is mentioned that: 'On the drawing of level 2 an outline of a coffin is indicated in this place. Some grey discolorations of the soil might be the last remnants of the fill of a pit. No skeletal remains indicated'. Due to the scarcity of information, not much can be suggested about the nature of the links between these burials.

Group 12

Three piles of adjacent graves are here discussed as one group, however, without the claim that this group has a specific meaning. The group can be found northwest of central graves 104 and 105 (fig. 13.1, 13.3 and tables 13.20, 13.21, 13.22).

The first pile consists of grave 84 below grave 85. Grave 84 dates to 565-640/50 and grave 85 to 510/20-640/50. The graves of the younger horizon do not have comparable locations or orientations, and can thus not be linked with the Merovingian graves (fig. 13.4). Central grave 105 dates relatively late, but the beginning of its date range (610/20-670/80) shows an overlap with the end of

Table 13.20
The graves of group 12, pile 1.

Grave	Individuals	Sex	Age	Finds/Gender	Date
85	1	Female	20-80	Female	510/20-640/50
84	1	Male	20-40	Neutral	565-640/50

Table 13.21
The graves of group 12, pile 2.

Grave	Individuals	Sex	Age	Finds/Gender	Date
79	1	Male	37-46	Male	565-610
77	1	Indet.	12-18	-	-
76	1	Indet.	19-80	Neutral	460/80-670/80

Table 13.22
The graves of group 12, pile 3.

Grave	Individuals	Sex	Age	Finds/Gender	Date
75	1	Indet.	12-18	Neutral	565-610
	2	Male	40-80		
	3	Indet.	12-14		
73	1	Male	20-40	Male	565-580/90

the date ranges of grave 84 and 85. If the piled graves were clustered around central graves 104 and 105 they might date late in the proposed date ranges, but if they were related to grave 104, which is below 105, they might date considerably earlier. This reasoning, however, remains rather speculative. The analysis of the articulated skeletal remains (skull, upper left arm, part of the pelvis (not digitized), both legs) of grave 84 reveal that it was the burial of a man with an age between 20 to 40 years. It only contained a biconical pot, which cannot be indicated as exclusively masculine of feminine. The grave was a wooden container grave. In grave 85 only a skull was uncovered. It was in its original position. Because the age at dead could not be established more precisely than to 20 to 80 years of age, the nature of the connection between the deceased from grave 84 and 85 can be various.

The second pile consists, from bottom to top, of the graves 76, 77 and 79. Grave 76 dates to 460/80-670/80 and 79 to 565-610. Grave 77 is without finds. At first sight it seems as if they are older than grave 105, but grave 104 is most probably of an earlier date than 105. The assumption that the other piles were orientated on the central graves 104 and 105 is therefore not necessarily rejected. The second pile is neither linked to the young horizon of graves (fig. 13.4). Of grave 76 the catalogue describes that: 'The remaining outline seems undisturbed, but it is probably partly destroyed by grave 77'. The skeletal remains consisted of the lower legs and feet in articulated position. Grave 77 lies in line with 76, but cuts it. The catalogue mentions: 'Skeletal remains indicated on the field drawing: skull, four long bones, which are in an articulated position if it concerns a child'. The analysis of the human remains points towards a child or young adult. Grave 79 is on top of graves 76 and 79, but is somewhat narrower. The skeletal remains were identified as the remains of a man between 37-46 years of age. The individuals of the graves beneath might be children who died earlier than their father, but the available date ranges of the graves cannot substantiate this suggestion.

The third pile consists of grave 73 (565-580/90) below grave 75 (565-610). The two graves date rather early. With regard to their connection to central graves 104 and 105 and to the young layer of graves the same applies as to the other two piles of this group. Grave 73 is an undisturbed grave with articulated skeletal remains. The finds are also found at their original location. The skeletal remains are of a man between 20 to 40 years of age. Grave 75 is a nearly complete undisturbed grave with articulated skeletal remains and finds in their original position. The primary burial is probably that of the child/young adult (12-18 years of age).

Group 13

Piles 13 and 14 are located to the northwest of 'central graves' 104 and 105. The piles are located next to each other, but are here discussed as separate piles since the nature of their cluster remains undecided and their association is not as obvious as the clusters of piles discussed above (fig. 13.1). Grave 97 dates to 565-580/90, and is below grave 98 (without finds) (fig. 13.3 and table 13.23). The relation with the graves of the young layer cannot be established; none of the graves are situated on the same spot (fig. 13.4). In grave 97 a complete articulated skeleton is indicated, apart from seven other individuals that were identified. It is questioned in the catalogue whether this was a 'simultaneous deposition' or that 'tiny fragments of skeletons from disturbed graves were incorporated in the grave when dug'. In grave 98 two skulls were probably present, but no human remains were available for examination. Because of the puzzling information (many individuals) available for grave 97 and the scarce information available for grave 98, no conclusions regarding their links can be drawn.

Group 14

Grave 100 dates to 565-670/80 and is below grave 102 (without finds) (fig. 13.1, 13.3 and table 13.24). Grave 100 is broad compared to grave 102. There is one grave (103) of the young layer which seems to be connected to this pile of graves. It has a simi-

Table 13.23
The graves of group 13.

Grave	Individuals	Sex	Age	Finds/Gender	Date
98	?	-	-	-	-
97	1	Indet.	Indet.	Female?	565-580/90
	2	Female	30-60		
	3	Indet.	Indet.		
	4	Indet.	20-80		
	5	Indet.	Indet.		
	6	Indet.	Indet.		
	7	Indet.	4-12		

Table 13.24
The graves of group 14.

Grave	Individuals	Sex	Age	Finds/Gender	Date
103	?	-	-	-	-
102	?	-	-	-	-
100	?	-	-	Female	565-670/80

Table 13.25
The graves of group 15.

Grave	Individuals	Sex	Age	Finds/Gender	Date
312	?	-	-	-	-
311	1	Indet.	20-80	-	-

lar orientation and is adjacent to grave 102 (fig. 13.4). Grave 100 is a partly disturbed. In the remaining part, the scull and upper arms are in their original position. However, no human remains were available for examination. From grave 102 no human remains are available for examination. About grave 103 the catalogue describes that: 'Grave context 103 is one of the highest lying graves. Almost complete articulated skeleton present, except for the skull, the upper right arm and lower right leg. It is also possible that the remains of two individuals were recorded. No find number. No human remains available for examination.' Again, the information that can be derived from this pile is to scarce for interpretations.

Group 15

In group 15 grave 311 is below grave 312 (figs. 13.1 and 13.3 and table 13.25). The graves are located in the north-western section of the cemetery. Datable finds are not known from these graves. A connection with the young horizon of graves seems to be absent because they are at some distance from this cluster. They are also dug in somewhat deeper than these younger graves. Altogether, they were probably part of the Merovingian cemetery. The skeletal remains from grave 311 were still articulated on the basis of which an individual with an age at death between 20 and 80 could be identified. From grave 312 no human remains were available for examination; none were indicated on the field drawing. Again, this pile is not informative for conclusions about the nature of the stacked burials.

The significance of the piles: the links between and within the piles of graves

The discussion of the contents and specifics of each pile separately makes one wonder how the section of the cemetery with the stacked graves should be understood and whether some general conclusions with regard to the links between the graves in the piles can be proposed. A number of the discussed piles consist of predominantly 'empty' graves which are as a consequence difficult to interpret, especially with regard to their internal cohesion.

At first sight a connection of some of the piles with the young layer of empty, mostly narrow, graves of cemetery 5 (see chapter 12) on top of the Merovingian cemetery can be assumed on the basis of the absence of grave goods and narrow dimensions and their proximity to graves of the younger layer. However, the sections of the excavation trenches, which are discussed in chapter 5, suggest that the Merovingian graves and the younger layer of graves of cemetery 5 are two different features. A direct connection (for instance continuity of burial from the Merovingian period into the Carolingian period) can also be rejected on the basis of the horizontal distribution of the young graves over the cemetery plan: the majority of the graves of the top layer and the piles of narrow and empty graves in the middle section of the cemetery have dissimilar locations and orientations (fig 13.4). Only the piles of group 2 seem to share similar locations and orientations with three graves of the younger layer, but this is probably coincidental. It can thus be concluded that the majority of the young graves are not connected to the underlying graves in terms of location and orientation; only a few are, but this can be considered coincidental and not intentional. The location of a younger cemetery on top of the Merovingian cemetery on the other hand is likely to have been intentional, but the individual graves of this young layer are not directly connected to the piles or the single graves of the cemetery below them; they are the outcome of two different burial communities.

A connection between the persons in each pile of graves is more plausible. But how can these links be established and interpreted? A number of piles are without grave goods and skeletal remains. For these piles only the intentionality of the burial location of the single graves can be assumed. For the other graves with skeletal remains and/or grave goods some observations regarding their internal cohesion were made in the foregoing discussion of single piles. These are predominantly based on gender and age associations. However, the majority of the burials contained human remains of more than one individual. The actual internal relations between the graves in piles which are disturbed and contain remains of multiple individuals are ambiguous and difficult to define. Various options can be suggested for the links between the undisturbed graves in piles[8], also those with remains of multiple individuals. These are summarized in the following.

A number of 25 piles (in 15 groups of piles) were identified. Of this total number, 15 piles have graves at the bottom with one individual with predominantly articulated skeletal remains. It can be assumed that these graves were not disturbed. For a considerable number of piles the bottom graves were 'empty'; no grave goods or human remains were uncovered. For these graves it is difficult to establish whether they were disturbed or intentionally reopened or not, or that other (excavation and interpretation) processes caused them to be without content. Nonetheless, it can be concluded that the choice for burying in piles was intentional and that it was aimed at keeping the older graves intact. Only one pile (group 9, pile 1) has a bottom grave which is obviously disturbed.

Of the 25 piles, three are completely without human remains, and 19 consist of one or more graves with remains of more than one individual. A few piles consist of graves which are all with one individual (group 10 and group 12, pile 1 and 2). Of the 25 piles, 7 piles consist of a majority of graves with datable grave goods, but of these 7 there are only three piles (10, 12.1, 12.2) in which these grave goods are combined with one individual (the contextual relation between the deceased and the grave goods is certain). Considering these numbers, it will be obvious that unambiguous claims about the links between the deceased in single piles and between the piles are hard to reach. However, some patterns can be observed and suggestions that shed an alternative light on the organization of burials grounds can carefully be proposed.

Considering the established biological sex of the individuals in the piled graves, it appears that a considerable number of the piles are composed of individuals of the same sex (considering the primary individuals when more than one individual is present and ignoring the children (indet.)).

Piles 1, 3.1, 5, 7 and maybe 12.3 are completely masculine, and piles 2.1 and 3 are completely feminine (fig 13.5). The obviously mixed piles are 2.2, 10, and 12.1 (all of these piles have the grave of a woman on top of the grave of a man). For the other piles the composition of the genders could not be established unambiguously.

Considering the established age at death a number of observations can be made. For some individuals the age ranges are that broad that not much can be concluded other that the individual concerned is a child or an adult. For all the other piles it can be concluded that there is a considerable variation: young and older individuals do not have an obvious position in the piles. They can be either on top, at the bottom, or in between the bottom and top graves of the piles.

There are two piles with a single burial of a child identified on the basis of skeletal remains. These burials are both at the bottom of the pile to which they belong (2.1 and 3.2). Grave 117 is identified as the burial of a child only on the basis of its dimensions. A woman (20-40) is in grave 115 on top 117. These three children's graves are thus associated with female burials on top of them. The other indentified children are one of the individuals in graves with remains of multiple individuals. A clear pattern regarding age at death and position in the pile cannot be discovered. Young deceased can be on top of old deceased, and vice versa.

Three piles (10, 12.1 and 12.2) have graves with one individual of which the gender/age is established and which are associated with datable grave goods assemblages. Piles 1, 3.2, 7 and 12.3 have graves with more than one individual of whom the gender/age is established and are associated with datable grave goods assemblages. They are discussed in detail above, but here some suggestions with regard to the relations between the individuals in the piles are given, which also reveal some obvious interpretative problems.

Pile 10 is chosen to exemplify both the possible connections and the problems with regard to establishing these. This pile consists of two graves of which the age range is rather precise. The top grave is dated on the basis of its association with another grave, the bottom grave is dated both on the basis of its finds and with radio carbon dating. The bottom grave is of a man between 35 and 40 years of age. The grave is dated to 510/20-670/80, and with the radio carbon dating method to 410-550 (95.4% certainty). The women on top had an age between 17 and 34, and her grave is dated to 400-580/90. Because of the date range of this grave, the date range of the grave of the man can hypothetically be narrowed down to 510/20-580/90. The man in it could have been born in the year 470 to the year 550. The women on top could have been born in the year 366 to the year 556. The maximum time between their births counts 84 years. The minimum time between their births could have been 6 years (the woman six years after the man). This example shows that many options regarding their relation in life are possible. The variety in these options applies to all the individuals in the piles. No clear-cut links can be established, due to a variety of reasons and problems.

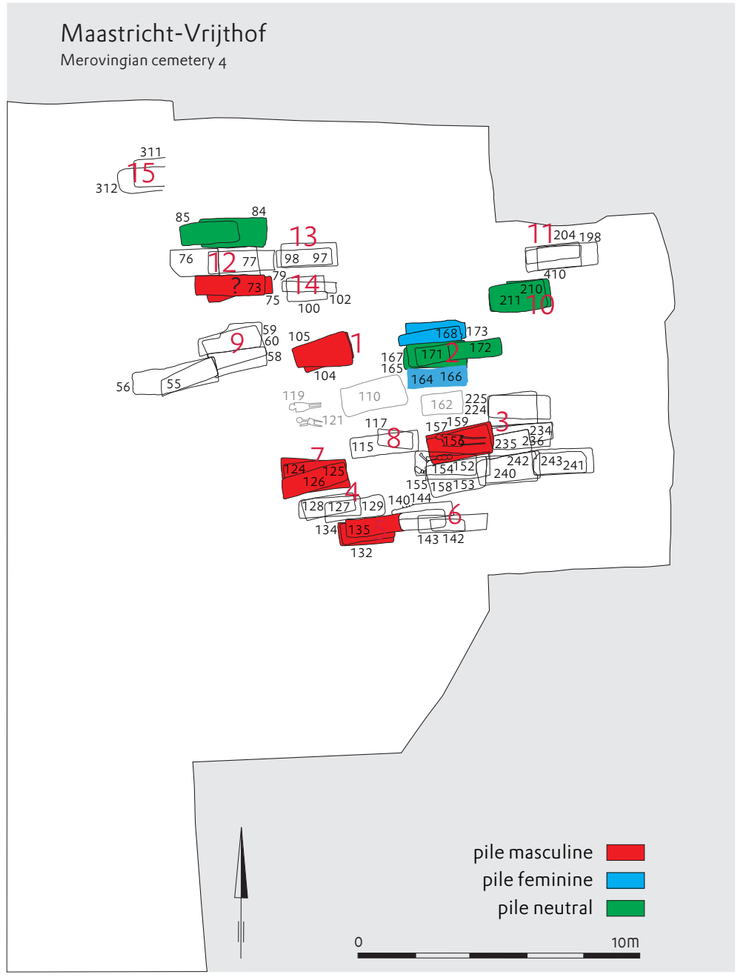
In short these are that both the date ranges of the datable graves and the established age ranges of the uncovered individuals are for the majority to long to establish the generational relation between the individuals in the piles, but also between the individuals in one grave.

The problem of prolonged circulation of the grave goods on the basis of which the graves are dated also disturbs a clear-cut image of burial phases. For these problems, more radiocarbon dates are required, although these do not solve all the problems: their date ranges also have a considerable time span.

The links between the individuals in the piles are in this discussion thought to represent their relationships in life. This implicates that these relationships are fossilized in the burial record. However, relationships can also be created during burial rituals and do not necessarily reflect the ones in life. Assuming that the connections between the individuals in the piles and other locations in the burial ground were created during the burial event, still the gender, age at death and associated grave goods assemblages remain the entrance for defining them. And these data, as it became clear above, are often insufficient.[9]

(8) Establishing the undisturbed outline of the graves, however, was problematic, which was partly due to the excavation strategies (see chapters 3 and 8). (9) Lack of money prevented us from pursuing an interesting line of research with DNA.

Fig. 13.5
The relation between the piles of graves and the sex of the deceased.



Remains of more than one individual in single graves

A considerable number of the graves, not only the piled ones, contained remains of more than one individual (see also chapter 8). It cannot be unambiguously concluded whether this was merely accidental or intentional. The occurrence of remains of multiple individuals in one grave is however a phenomenon which is quite specific for the Vrijthof cemetery when compared to other Merovingian cemeteries in the region. Apart from discussing the nature of the links between the individuals in the piled graves, the connection between the individuals whose remains were found in single graves also requires reflection. This is because already in an early (sixth century) phase of the cemetery graves with remains of multiple individuals were present. In some cases these remains cannot originate from lower lying graves because they were not disturbed. Was the burial activity in the earlier phases of the cemetery already that intensive that graves were disturbed on a regular basis? The topo-chronological development of the cemetery does not seem to suggest that this was the case. Or, were human remains brought to the Vrijthof cemetery to be interred in graves? This would be another form of the feature of complementary cemeteries. Recent research seems to suggest that the handling of human remains in Merovingian times was more complicated than is traditionally presented.[10] It is thus highly interesting to analyse the relation between persons whose remains were found in one grave.

Table 13.26
The children's graves in Vrijthof cemetery 4.
*: disarticulate remains.
**: belongs to the younger layer of graves (on top of the Merovingian cemetery).

Context	Individuals	Age	BS	Artefactual gender	Maastricht phases	
12	1	12-14	Indet.	Female	D-G	510/525-640/650
75	1	12-18	Indet.	Neutral	E-F	565-610/620
	2	40-80	Male			
	3	12-14	Indet.			
77	1	12-18	Indet.	-	-	-
97	1	Indet.	Indet.	Female?	E-E	565-580/590
	2	30-60	Female			
	3	Indet.	Indet.			
	4	20-80	Indet.			
	5	Indet.	Indet.			
	6	Indet.	Indet.			
	7	4-12	Indet.			
105	1	19-80	Indet.	Male	G-H	610/620-670/680
	2	2-4	Indet.			
110	1	23-40	Female	Female	E-G	565-640/650
	2	18-80	Female			
	3	0-15	Indet.			
119	1	9-12	Indet.	-	-	-
121	1	4-5	Indet.	-	-	-
125	1	35-45	Male	Male	H-I	640/650-725
	2	20-80	Female			
	3	10-12	Indet.			
143	1	40-80	Female	-	-	-
	2	40-80	Male			
	3	11-12	Indet.			
152	1	3-4	Indet.	Female	F-J	580/590- 750
163**	1	44-53	Female		-	-
	2	23-60	Indet.			
	3	10-20	Indet.			
	4	19-28	Female			
168	1	12-18	Indet.	Male	D-E	510/525-580/590
173	1	25-35	Female	Male	D-E	510/525-580/590
	2	10-20	Female			
	3	20-34	Female			
179	1	0.5-1	Indet.	Female	-	-
200	1	40-80	Indet.	-	-	-
	2	2-10	Indet.			
223	1	20-25	Male	Neutral	F-H	580/590-670/680
	2	0-20	Indet.			
235	1	44-60	Female	Female	C-D	460/480-565
	2	3-5	Indet.			
245	1	6-10	Indet.	Male	-	-
	2	7-11	Indet.			
	3	1-3	Indet.			
258	1	9.5-10.5	Indet.	Female	D-F	510/525-610/620
277	1	40-49	Female	Female	E-H	565-670/680
	2	0-15	Indet.			
288	1	1-2	Indet.	Male	E-G	565-640/650
	2	20-80	Indet.			
297	1	0-20	Indet.	Male	G-H	610/620-670/680
302	1	4-8	Indet.	-	-	-
303*	1	20-40	Female	-	-	-
	2	20-40	Male			
	3	40-80	Male			
	4	11-12	Indet.			

One way of establishing the variety of options for these links is taking the child burials as a starting point. Child burials are a clearly defined group, of which it can be assumed that their association with adults in a single grave had a significant meaning. The relations between adults in one grave can be manifold, and these can be assumed to be less obvious for us to understand than the relations between children and adults.

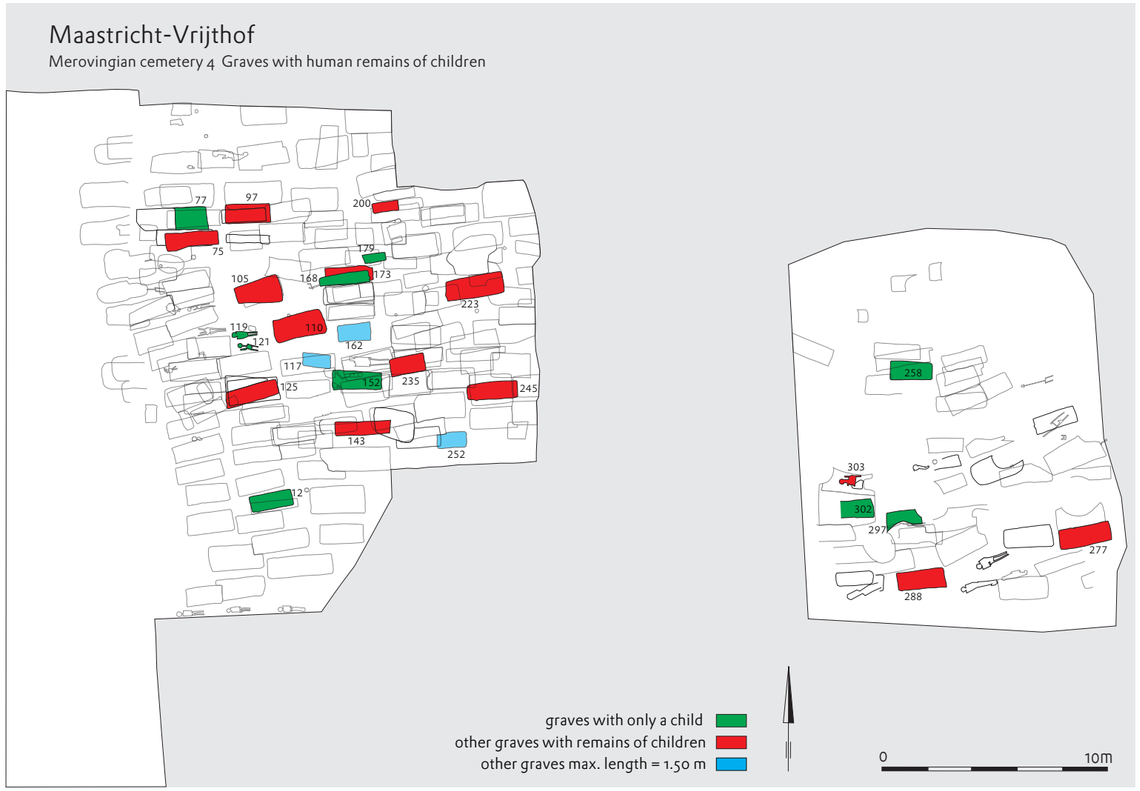
Table 13.26 shows that of the 23 graves with remains of children or juveniles from the Merovingian cemetery (4)[11], 9 were identified as the burials of one individual; the other skeletal remains of children/juveniles were associated with graves in which more than one individual was identified, and three graves were identified as children's graves on the basis of their length alone (116, 162 and 252) (fig. 13.6).[12] The identification of children is not unambiguous; the limit of 15 years is used in this discussion, but skeletal remains of which the age at death is identified within a range of for example 12-18, are also included in this discussion. The biological sex of children cannot be identified, but the artefactual constructed gender can for some of the children's burials be established (table 13.26). It is of course, in the case of remains of multiple individuals in a single grave, impossible to state with which individual the objects were associated.

Of the single child/juvenile burials, four graves (121, 152, 179 and 302) are those of very young children, below an age of 5 years (including grave 302: 4-8 years). For one grave the age group was identified as 0-20 (297); this grave can also belong to the group of very young children. The other single burials were those of children/juveniles above the age of 12, except for the graves 119 (age 9-12, no finds) and 258 (age 9.5-10.5, feminine finds, dated to 510/525-610/620). So a distinction can be made between a group of very young children, a group of 9-12, and a group above 12 years of age. The other child/juvenile burials were all associated with the remains of one or more adult individuals in the same grave, and in a few cases with another child. Grave 245 contained the skeletal remains of three children but no adult. The identified age ranges are 6-10, 7-11, and 1-3.

The association of more than one individual in a single grave can be accidental (due to post depositional processes), or intentional. Considering intentionality, various options can be suggested for the presence of human remains of multiple individuals in one grave of which at least one of the individuals is a child. The children could have had familial ties with the associated adults,

(10) Van Haperen 2010. (11) In the other Vrijthof cemeteries there were also graves in which more than one individual, among which children were identified. These are not included in this table, except for grave 163 of the younger layer of graves on top of the Merovingian cemetery; it is not certain what its relation with the Merovingian cemetery was (12) There are also some graves with a length of no more than 1.50 m that will have been children's graves.

Fig. 13.6
The location of children's graves in Merovingian cemetery 4.



and were re-buried in the graves of (one of) the parents who died some time after the child.[13] The remains of children could also have been interred in already existing graves of an adult, but this would cause disturbance to this grave (this feature could not be unambiguously observed in the Vrijthof cemetery). It can be imagined that the children in the indentified single child burials were not accorded a secondary burial because their parents moved and were buried elsewhere, maybe far away, or the time that passed between the death of the child and the parents was relatively long. Their graves may have been 'forgotten', but probably many other reasons which are difficult to perceive from our modern perspective on death and burial were current at that time.

Within the groups of piled graves, only grave 152 and possible child's grave 168 (12-18) are the single child burials. They are both at the bottom of the piles in question. So, it can be suggested that the burying group had various options: the grave of the child was kept intact and associations were consolidated with new burials on top of the child's burial, the remains of the child were buried again in a later grave of a parent, or the deceased child was placed in the already existing grave of (one of) the parents.

Finally it should be remarked that around grave 110 of a woman three graves of children were present (119, 121 and 162 (on the basis of its length, no skeletal remains)) whose grave locations were not reused (figs. 11.15 and 13.6).[14] The position of grave 162 is remarkable. In between piles of graves its location remained untouched in contrast to the (possible) grave of a child to the south of grave 110 (nr 117: identified as a child's burial on the basis of the burial pit's length). We do not know what the relation between the woman in grave 110 and the child in grave 162 was but both their graves were left untouched.

All these options to express, consolidate and/or define relations between the buried persons (might they be between persons in various piles of graves, between the individuals in piled graves or more isolated graves, or between individuals whose remains were found in a single grave), resulted in a variable burial record of fossilized networks of connections between the deceased. The nature of these (familial) ties is difficult to untangle without further scientific research.

General burial practices

Features that are characteristic for the Merovingain burial rite and occur regularly in the burial record all over Merovingian Gaul form an extensive list. A selection from this list are the gender-and age specific object deposition, the correlations between object categories and their location in graves, the regularities in the orientations of the graves, the recurring variety of grave structures, the order of the burials within the boundaries of the cemetery, and the deposition of pre-Merovingian antiques. A number of these phenomena were already discussed in forgoing chapters in this volume (a detailed discussion on grave structures and orientation can be found in Chapter 7). Here the artefactual construction of gender and age and the location of the glass vessels in graves (they form a exceptionally large collection recovered from a single Merovingian cemetery) are discussed.

Gender and age specific object deposition

Although it is difficult to present a clear-cut statistical significant pattern of the relation between burial assemblages of objects and the sex and age of the deceased, an overview of indisputable relations between skeletal remains and grave goods in the Vrijthof cemetery will be presented below. The statistical difficulties with regard to the Vrijthof cemetery relate to the incoherence of the physical anthropological dataset: in a considerable number of graves skeletal remains of more than one individual were identified, a considerable number of skeletal remains could not be allocated to a grave anymore, and of a considerable number of human remains the age at death and/or sex could not be established (precisely). Therefore, the sex and age association with graves goods is examined only for the graves with one individual.

Four age groups, similar for both sexes, form the basis for this analysis: the age groups 0-20, 20-40, 40-80 and 20-80 (table 13.27). It was not possible to define more distinctive groups due to the overlap in established age-ranges for each individual. The age group 20-80 consists of individuals of whom the age was difficult to determine, and the significance of the identified age-gender-object patterns within this group will therefore be low compared to the other groups. The age group 0-20 consists for the men (identified on the basis of grave goods) of two burials of individuals with grave goods, and for the artefactually gendered women of four graves.[15] For three other graves the age could be determined, but not the artefactual gender (no or neutral grave goods). For the age group 20-40 the number of graves of men is sixteen and of women nineteen. For the age group 40-80 there are 23 graves of men and twelve graves of women. The age group with a broad age range, from 20-80, contains one grave of a man and three graves of women. There is also a group of graves for which the age could be determined, but not the biological sex of the deceased. They are discussed together with the associated age group.

Age group 0-20

For the group of children and some of the young adults (0-20) it was only possible to observe correlations between the artefactual constructed gender and age at death since sex identifications are difficult to obtain with the remains of children (table 13.27). This was possible for six graves (two male, four female).

The table shows that one artefactual constructed 'man' in this group has an age above 12, and the other an age between 0-20. Both have a seax, an obvious 'masculine' object. Grave 168 dates to the sixth century, grave 279 to the seventh century. Of course this data set is too small to discover meaningful patterns, but at first sight it seems that the deposition of objects with a strong masculine association in the graves of the pre-adults was practiced for some time. However, considering their age range, these could also be the burials of young adults. Depositing seaxes was more general for the age group 20-40 and 40-80 (see below).

The four artefactually constructed 'females' in the group of children and young adults are, compared to the male graves, all of a younger age (table 23.7). Only one belongs to the age group 12-18, the others are younger than 12. All these burials are exclusively associated with beads. This category of objects is related to women of all age categories, but in particular chosen to deposit with children. Because strings of beads are specifically suited to express ties between mothers and their children through the transmission of a selection of beads from one string to another (after the child's death?), is can be questioned whether children's burials with beads were only those of girls. It might be possible that the connection between mothers and sons was also expressed with beads.

In this age groups there are five burials without objects, and one burial with a neutral object (a stone).

Age group 20-40

Sixteen graves within the age group 20-40 are identified as the burials of men on the basis of the analysis of the skeletal remains; six of these graves are without grave goods. One of the individuals has an age range of 18-25; it is assigned to the age group 20-40. In the following it will be determined which and how many of the obvious 'strong' masculine objects (axe/francisca, arrow head, lance head, seax and associated fittings) are associated with this group, and which other masculine objects are also frequent in this group.

Of the ten graves with grave goods, three are with only 'neutral' objects such as a glass or ceramic vessel. One of these graves has next to a glass vessel and knife also belt fittings. A clear artefactual

(13) There is an interesting case of such a practice in the cemetery of Borgharen, which was discovered with osteo-archaeological and DNA analyses (see note 7) (14) See Chapter 11. (15) The gender was established on the basis of the grave goods sine for children the biological sex cannot be determined. The correlations within this group apply only to the biological age.

Table 13.27
The relation between age categories and gender specific grave goods.

	Men & Women 0-20	Men 20-40	Women 20-40	Men 40-80	Women 40-80	Men 20-80	Women 20-80
'Strong' gender specific finds	168: man 297: man 12: woman 152:woman 179: woman 258: woman	73 284 201 310	230 214 189 247 166 187 198 95 124	11 15 39 86 104 194 205	164 314 315	-	85
Gender specific finds	-	79 210	138	96	-	-	-
Neutral objects	121	66 84 126	293	94 222 309	184 286	218	-
Conflicting gender specific finds	-	313	115	308?	16 139?	-	-
No finds	77 119 302	33 67 165 213 215 336	22 49 57 93 137 211 329	7 43 128 132 156 167 192 289 320 321 331	24 31 332 337 338	-	46 272
Total	10	16	19	23	12	1	3

constructed gender cannot be established for these graves; the associated belt fittings can also be found in graves of women (as shoe wear). One grave contained feminine objects (a string of beads). For the remaining six graves the relation between grave goods and age can be analyzed.

Objects with a strong masculine association can be found in three graves: a seax in grave 73, a lance and *francisca* in grave 310, and an arrow head in grave 201. Grave 284 contained objects which are associated with a seax, and on the basis of these finds identified as artefactually male. Graves 79 and 210 are artefactually constructed with less 'strong' masculine objects as tweezers, fire steels and flints. These objects were also found in the other graves: in four graves flint was found, in two graves fire steels were found, in one grave tweezers were found. So, of the sixteen graves in this age group, only four have objects with a 'strong' masculine association, and two graves have objects with a less prominent masculine association.

The group of burials of women in the age group 20-40 counts nineteen single burials indentified on the basis of analysed skeletal remains (table 14.27). Of these graves, seven are without finds, and one contained masculine finds (grave 115). Obvious (strong) feminine objects are brooches, beads, hair/cloth pins. It will be analysed how many of the remaining graves in this age group are associated with these sort of objects.

Of the eleven graves, ten contained obvious feminine objects. One grave has neutral objects, which are not unambiguously male or female. For the ten graves in this age group the association with specific feminine objects can be analysed. In four graves a set of beads and brooches was found (twice with an age of 20-40, once with an age of 24-30, once with an age of 30-36), in two of these graves also other feminine objects such as a finger ring and ear rings were found. The graves with brooches and beads are the graves with the most extended sets of grave goods. The brooches are all garnet disc brooches, which are, with one exception, not associated with the other age groups. The other graves with 'strong' feminine objects were identified as such on the basis of beads (also including the graves in which beads were recorded, which are now missing).

Five burials of which the biological sex could not be established, are also part of the age group 20-40. One burial is artefactually constructed as that of a man (on the basis of tweezers), the others are without finds or unidentifiable finds.

Age group 40-80

Of the twenty-three graves with skeletal remains of male individuals, eleven are without grave goods. Of the other twelve graves, three contained so-called neutral objects, and one contained objects which can possibly be associated with the burial of a woman (toilet utensil and rock-crystal bead). Of the eight graves with gender specific objects a considerable number is associated with objects with a 'strong' masculine connotation. Six graves contained seaxes, and one grave contained an axe/*francisca* (although at present missing from the collection). Of the graves with seaxes, one also contained an axe (grave 15). Of the graves with seaxes four also contained scabbard fittings. The other graves contained masculine objects which are less 'strong', such as fire steels, flints, and shears.

In this age group there are twelve graves with female individuals established on the basis of the analysed skeletal remains. Of these, five are without grave goods, and two contained objects which are rather masculine (an axe and a seax), and two contained neutral objects. The three graves with obvious feminine objects all have strings of beads, one of these also a garnet disc brooch (a category more prominent in the foregoing age group). The graves belonging to this age group have considerably less extended grave goods assemblages than the graves of the foregoing age group (table 13.27).

For five single individuals of this age group the biological sex could not be determined. One of the graves of these individuals contained a feminine assemblage of grave goods (identified on the basis of beads), and the other graves were without grave finds.

Age group 20-80

In this age group one grave with the skeletal remains of a man is indentified; it contained a biconical pot (a 'neutral'object). The skeletal remains of women of this age group were identified in three graves. One grave contained finds (a peculiar brooch, deviant from other brooches known from the Merovingian period, and beads), the other two were without finds. The grave with the set of feminine grave goods might contained the burial of a woman in the age group between 20-40 years since the majority of 'strong' feminine objects are associated with this age group in the Vrijthof cemetery.

Of the graves within this age group of which the biological sex could not be determined two contained neutral objects and five were without finds. The grave goods assemblages in this age group are modest.

Conclusions

Although the dataset is not suitable for statistical analysis, some patters regarding age-gender-object relations could be identified and described. First it can be observed that the grave goods deposited with young children are predominantly strings of beads. The biological sex of the young individuals could not be established. It was suggested that the burials of this age group which contained beads could be of both girls and boys. The older individuals, above the age of 12, were associated with obvious masculine assemblages, and these can thus also be young adults.

Strings of beads are associated with women of all age groups. Considering the categories of obvious masculine and obvious feminine objects, it appears that women are associated with 'strong' feminine objects in especially the age group 20-40, and men with 'strong' masculine objects in the age group 20-40, but predominantly in the age group 40-80. It appears that in the age groups 40-80 the women are buried with considerably less and less obvious feminine objects than in the age group before (20-40). Neutral objects occur in the graves of all age groups, except that they are in the Vrijthof not so obviously associated with children. The age group 20-80 is broad, but is appears that this group contains a high number of graves without objects or with neutral, or just a few objects. Although very speculative, this might carefully point toward the diminishment of object deposition with the elderly. See for example the graves in the age group 40-80 of which the age could be more precisely determined; the graves of individuals above the age of 50 are for the majority without grave goods. Although the dataset does not offer conclusions which can be statistically substantiated, some patterns were observed. These seem to be in line with the overall patterns in the burial data of Merovigian Gaul.[16] However, the specifics of age-object correlations deserve some further investigation, especially the exceptions from the general patterns such as the elderly with extended grave goods assemblages and the correlations between the specific characteristics of strings of beads and children.

A final observation is that when osteo-archaeological data are available it appears that only a minority of the men and women in the various age categories are buried with gender specific objects. Only six men of sixteen in the age category 20-40, and eight of twenty-three in the age category 40-80. For women the following figures are available: ten out of nineteen for the age category 20-40 and three of twelve for the age category 40-80. Most of the gender specific objects in the Vrijthof cemetery are not of an exceptional quality or rare, so one wonders why many men and women were not buried with such relatively easily available grave goods.

The locations of glass vessels in the Vrijthof graves

The collection of (complete and nearly complete) glass vessels from the Vrijthof graves is significantly large compared to the number of glass finds from other cemeteries in the region. The collection of glass vessels consists of twenty-two complete or nearly complete vessels and a number of vessel fragments (fig. 13.7 and table 13.28). Within this collection, ten are so-called globular beakers with short necks (grave 39, 85, 88, 99, 116, 235 and 407) and long necks (graves 21, 105 and 116). These beakers (all blue, except for one brown specimen: grave 407) are in this quantity not known from other Merovingian cemeteries. The other vessels are

(16) Significant correlations between gendered age groups and assemblages of grave goods were, for example, also found in the burial evidence from Anglo-Saxon England, see Stoodly (2000); Härke (1989, 1992, 1997); Lucy (1997), and was also investigated by Brather for Southern Germany, especially on the basis of the evidence from the cemetery of *Pleidelsheim* (2008) and by Stauch (2008).

Fig. 13.7
The Merovingian glass vessels from the Vrijthof cemetery 4.



a bell beaker (grave 126), a large cylindrical bottle (grave 66), small bottles (graves 69, 99, 178, 250, 294, 408), two dishes (graves 221 and 309), two palm cups (graves 36 and 87),
It is known that ceramic vessels, especially biconical pots, were generally deposited near the feet, although variations in this regular pattern do exist.[17] For the glass vessels from the Vrijthof cemetery it will be analysed whether these regularities are similar to the deposition of ceramic vessels.

Of the graves with more than one individual, the first individual (with the majority of the skeletal remains) is considered to be the primary burial. It appears that of the twenty-two vessels two are associated with the burials of women, and six with the burials of men. For fourteen of the graves in which complete glass vessels were found the biological sex or artefactual constructed gender of the interred individual could not be established. The three graves in which glass fragments were uncovered are all of women. It cannot be concluded whether the predominant association with men is indicative for the Vrijthof cemetery since the data set is too small for such conclusions.

Of the graves in which the globular beakers were found, five could not be identified as either the grave of a women or men. One of the graves was identified as that of a woman on the basis of the associated grave goods. Of the other four graves, two were identified as those of men on the basis of the skeletal remains, and two as those of women.

In two graves of women the globular beakers were deposited near the right foot, and in one grave near the left foot. In the graves of men such beakers were once deposited near the left foot, for the other grave the find location was not established. In the neutral graves the globular beakers were deposited near the left foot in two graves, and almost certain in two other graves. In one neutral grave the globular beaker was deposited in between the feet.

The age ranges of the individuals associated with globular beakers are rather broad (no clear pattern can be indentified) but they are all adults. With regard to the complete collection of glass vessels and fragments it can however carefully be suggested that women above 40 were more likely to be buried with a glass vessels (with liquid content) than younger women, and that men between 20-30 were more likely to be buried with glass vessels than men of other age groups. Moreover, it also seems as if the deposition of glass vessels near the right foot appeared more often in the graves of women: of the six graves in which the vessel was deposited near the right foot, four were the burials of women and two were identified as 'neutral'. The deposition of vessels near the left foot is, however, not exclusively associated with men.

In general, all the glass vessels were found near the feet or lower legs, either to the left or right side of the body; a slight tendency towards the deposition near the right foot in the graves of women and the left foot in the graves of men can be observed. The dataset, however, is too small to make strong statements regarding this pattern.

Glass vessels were in the Vrijthof cemetery deposited with both men and women, never with children, and either near the left or right feet/lower legs or in between them. The deposition repertoire is thus comparable to that of ceramic vessels which are generally deposited near the feet.

(17) See for instance the pattern of deposition in the Bergeijk cemetery (Theuws/Van Haperen 2012, 175).

Table 13.28
Graves with glass vessels.

Grave	Find		Glass vessel	Type	Date (Maastricht Phases)	Location	Gender	Biological Sex / Age
21	1619	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Left foot	Neutral	-
39	1574	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Left foot	Male	Male: 30-60
85	1422	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Right foot	Female	Female:20-80
88	1390	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	-	-	1: Male:20-40
								2: Male:21-24
								3: Female:20-34
99	1852	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Between feet	Neutral	-
105	1471	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Left foot	Male	1: Indet:19-80
								2: Indet:2-4
116	1564	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Left foot?	Neutral	-
116	1564	2	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Left foot?	Neutral	-
235	1750	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Right foot/leg	Female	1: Female:44-60
								2: Indet:3-5
407	1522	1	Beaker, globular	Fag S-Gla 3.2.	D-H (510/20-670/80)	Left foot	Neutral	-
126	1573	1	Beaker, bell	Fag Gla 8B/C	E (565-580/90)	Left foot	Neutral	Male:33-45
66	1566	1	Bottle	Feyeux 2003, 10.0	B-D (400-565)	Left foot	Neutral	Male:20-30
69	1427	1	Bottle	Isings 82b2 (variant)	LR / Merovingian?	Stray find	-	-
99	1853	1	Bottle	Isings 82b2 (variant)	LR / Merovovingian?	Between feet		-
178	1406	2	Bottle	Feyeux 2003, 20.0	B-F (400-610)	Right foot	Female	Indet:40-80
250	1795	2	Bottle	Feyeux 2003, 20.0	B-F (400-610)	Right foot	-	-
294	1803	1	Bottle	Feyeux 2003, 20.0	B-F (400-610)	Right body	Neutral	-
408	1521	1	Bottle	Feyeux 2003, 20.0	B-F (400-610)	Stray find	-	-
309	1732	1	Dish	Siegmund Gla 1.3.	B (400-460/80)	Between feet	Neutral	Male:40-80
221	1723	1	Dish, ribbed	Isings 3b	69-98	-	-	-
184	1510	1	Fragment	Isings 52/55	70-200	-	-	Female:40-70
247	1754	2	Fragment	Fragment	-	Right foot	Female	Female:20-40
277	1807	2	Fragment	Fragment	-	Head right	Female	Female:40-49
								Indet:0-15
36	1623	1	Palm cup	Siegmund Gla 2.2.	G-H (610/20-670/80)	Left foot	Neutral	-
87	1392	1	Palm cup	Siegmund Gla 2.1	F-G (580/90-640/50)	Between feet	Neutral	-
223	1651	1	Unknown	Siegmund Gla. 4.?	B-D (400-565)	Between feet	-	Male:20-25
								Indet:0-20

14 The Vrijthof Square area and the early development of Maastricht as a town

Introductory remarks

In the introduction a basic question was asked: how did Maastricht develop in the centuries after 300 AD? The development of an early 'town'[1] is not as straightforward as we thought two decades ago. It is not just about the topographical development of a special kind of settlement. Of course its physical fabric is important and understanding it is a prerequisite for further research. An early medieval centre like Maastricht can be qualified in many ways. Traditional terms such as trading settlement, religious centre or administrative centre stress only one aspect of its complex place in the regional settlement system, and the designation 'town' is too vague to evoke specific research questions. In our view, an early medieval site like Maastricht is first and foremost a *meeting place*. It owes its position to people who want to meet other people. At times this meeting of people gets special significance, for instance at the feast days of the local saint, which is in our case the 13th of may, the feast day of Saint Servatius. The meetings might have had the character of 'tournaments of value' as defined by Appadurai. They were 'complex periodic events that are removed in some culturally well-defined way from the routines of economic life'.[2] As Appadurai explains: 'what is at issue in such tournaments is not just status, rank, fame or reputation of actors but the disposition of the central tokens of value in the society in question. Though such tournaments of value occur in special times and places, their forms and outcomes are always consequential for the more mundane realities of power and value in ordinary life.'[3] Maastricht was not just a meeting place like many others but a special one due to the presence of the saint. At his feast day many exchanges will have taken place and many contracts signed or agreed upon orally. These exchanges will have had special significance, even if they looked like commodity exchange for the superficial observer, because of the meaning they were imbued with on this special day. They were lifted above the mundane realities of everyday life, they were enchanted transactions embedded in cosmological meanings. The objects exchanged during this day (or these days) obtained a special worth even if they were commodities at that time. They could thus possibly be used in the long term sphere of exchange in the words of Bloch and Parry.[4] I suggested before that the *tremisses* struck in Maastricht by various *monetarii* were struck on these occasions, and that for that reason they were imbued with a supra-mundane value which made them 'usable' in a large variety of transactions such as trade (commercial or not), contract, diplomacy, burial rite, marriage, and other life cycle rituals. The saint, rather than the king whose name is lacking on the coin, so goes the argument was always associated with the coin although his name was neither on the coin.

If Maastricht was first and foremost a meeting place we have to consider two other propositions. First: the visitors to the 'town' are equally important to its standing as a centre as those who live there permanently. These visitors range from the king to the poorest peasant.[5] We thus need an '*archaeology of visitors*' to understand the importance of the place (see below). The second proposition is that it is not easy to distinguish between 'town' and countryside because a part of the rural population was of great importance as visitors to the nature of the centre. They might have dwelled some time on a seasonal basis in the 'town'. Rural dwellers might thus have been 'town' dwellers during a shorter or longer period of the year. Seasonality is therefore crucial to understand the yearly rhythm of live, even in a place like Maastricht. The open unfortified character of Maastricht was essential to its existence as a meeting place. I am hesitant to distinguish early medieval 'towns' folk from country folk like one can do for the later Middle Ages when town walls cut out a part of the landscape and gave those inside another juridical status than those outside. People who buried their dead relatives in Saint Servatius' vicinity might not have perceived this as 'burying a relative in a 'town''. They might have perceived this as burying a relative in Traiectum, a place they might have perceived as part of 'their wider physical landscape' and most likely they perceived it as burying a relative near a saint. Of course there are other early medieval 'towns' with the walls of the Roman period more or less intact. The question is what role these walls played in the perception of the place by those who lived most of the year nearby and at times inside the walls. It is therefore interesting to see that the Merovingian kings considered Paris, which is except for the Ile de la Cité an open town, as a shared 'capital'.[6]

The qualification of Maastricht as a meeting place relates to another, more abstract proposition. Maastricht can be qualified as an arena where social positions, norms, values and ideas were formulated, contested and negotiated. It is a place where social, political, religious, economic and cultural negotiations, debate and competition gave form to society. These elements were intricately articulated and practices in the 'town' never referred to one of these aspects in isolation.

If we depart from the propositions that Maastricht was (a) first and foremost a meeting place and (b) an arena for the (re-)creation of society we have to acknowledge as archaeologists that we have to write ephemeral practices such as meetings into our models of post-Roman towns. These meetings were very visible and real to those who were there but are difficult to observe archaeologically. Maastricht obtains its importance not only from those who live there and created tangible archaeologically observable remains such as splendid churches, graves and pits, but also from those who visited the place and who left less tangible remains. In recent years 'meeting place or assembly site archaeology' gives due respect to this aspect, however it has not really influenced the archaeology of early medieval 'towns'.[7] We really have to redirect our research questions and research efforts and perspectives on early 'towns' if we want to understand the essence of their 'being'. The ephemeral is as important as the tangible, the voids as important as the churches. The great challenge of archaeological research of early towns is to relate the physical fabric of the 'town' (the built up area and the voids) to such ephemeral practices. It is also crucial to understand that the physical fabric is not just the décor to those practices but that it was an essential element in the constitution of the 'central tokens of society'.

It will take some time before we can really appreciate the relation between material manifestations and the central tokens of society in Maastricht because we are just at the start of a detailed analysis of its physical fabric.[8] At first sight the Vrijthof square seems to be a representation of this meeting aspect par excellence since it was not a market square but an urban meeting place. The Market Square is in fact one hundred and fifty meters to the northeast of the Vrijthof square. Of course a market square is a meeting place too, but it is of a completely different nature. However, in spite of our very detailed analysis of the archaeology of the Vrijthof Square we cannot answer the million-dollar question: when did this square come about? The theory that, as formulated by Panhuysen and Leupen, it was a creation of the tenth century and symbolised the articulation of ecclesiastical and secular power cannot be upheld,[9] since there are no indications for the creation of a square in that period. There were building activities at certain points around the present square in the late tenth and eleventh century (Saint-Servatius church, the large building to the north and possibly already the Saint-Servatius hospital), but we did not find any indications for the creation of a square or soil improvements to create a proper (raised) surface as has been observed on the Heumarkt in Cologne.[10] The muddy surface of the Merovingian/Carolingian period was in use well into the Middle Ages (at least twelfth/thirteenth century if not later). The muddy unattended character of the area does not exclude that it was used as a meeting place from the eight or even the seventh century on. If it was a meeting place since those days why are there so few ceramics from the Carolingian/Ottonian periods and Central Middle Ages? Did these meetings have an a-ceramic character? This is difficult to believe. Moreover, at the moment we do not know when the closed off character of the square came about; it could have had an open character for a long time. There is no evidence on medieval profane buildings around the square due to a lack of archaeological research. The present day line of buildings dates to the Modern period and is almost without exception national well-protected heritage.

The Vrijthof excavations, however, allow a number of observations to be made that are important for an analysis of the early 'town'. In the past the development of Maastricht and other towns in the Meuse valley was presented as an evolutionary linear development. They supposedly developed from a Roman core into the late medieval town. International trade was accorded a prominent role in this development.[11] However, Verhulst presented another image, one of decline of the Meuse towns in the eighth and ninth centuries although some texts suggest that Maastricht was a thriving 'town'.[12] It was suggested that their recovery took place in the late ninth and tenth century, and that of Maastricht possibly even later, during which regional trade replaced international trade. He also proposed that international trade extended to Maastricht from Dorestat, which was in his view of more importance at that time.[13] And he even boldly suggested that the real development of

(1) I write town between brackets to distinguish the early medieval 'town' from the Roman and later medieval towns. (2) Appadurai 1988, 21. (3) See also Theuws 2004. (4) Bloch and Parry 1989. (5) Theuws 2001. (6) Dierkens/Périn 2000. (7) http://www.ucl.ac.uk/archaeology/research/projects/assembly (viewed on 11 April 2016). (8) In the past, and in the introduction to this book, maps of early Maastricht have been presented by various authors (recently Panhuysen 2011, 2013) indicating the extent of the habitation. The maps, however, have a speculative character for almost nothing has been published of the Maastricht excavations up till now in such detail as to present such images. See also note (19) (9) See chapter 5. (10) See chapter 5. (11) See for instance Rousseau 1930. (12) Verhulst 1999, 47-51. (13) Verhulst 1999, 50.

the Meuse valley towns was initiated from the north and not from the south. An archaeological test of his suggestions on the basis of the scanty published evidence from Merovingian and Carolingian times in Maastricht showed a surprising image: it was very hard to find evidence for Carolingian habitation in Maastricht.[14] Maastricht seemed to have evaporated in Carolingian times, which was not expected on the basis of written evidence indicating that Maastricht was a thriving town.[15]

At the same time new thoughts were formulated on the topographical development of Maastricht.[16] Verhulst's analysis and the archaeological evidence devastated the old model of continuous growth and a linear development of the town. It is not certain at this moment what model will replace the older one. A new model has to include new conceptions of an early 'town' mentioned in the introduction and above. The old model predicts that early 'towns' are fixed elements in the landscape because they were built up around an ancient core. In the case of Maastricht this core was supposed to be the Roman fortress built in the fourth century.[17] However, early 'towns' do not need to be stable elements in the landscape. We have to include the idea of 'wandering' towns in our analysis, as the idea that some towns go through a phase of spatial fixation only as late as the eleventh/twelfth centuries.[18] We also have to include the importance of ephemeral features related to seasonal and temporary activities. Archaeologists usually search for solid elements of early towns: churches, houses, harbour constructions, and roads.

In the following several topics will be discussed on the basis of the evidence from the Vrijthof Square. The images of the early 'town' as presented below, are to be considered as elements in a continuing debate on the nature of the 'town'. New analyses of the data from other excavations might change these images.

Maastricht's Merovingian burial landscape and its role in the urbanisation process

Several Merovingian/Carolingian burial grounds were identified on the Vrijthof Square (fig. 14.1). Cemetery 3 probably dates to the sixth century although some burials might be somewhat older, cemetery 4 dates to the sixth and seventh century, cemetery 5 dates to the late Merovingian and Carolingian period and the burials indicated as 6 might belong to a late Merovingian settlement. Next to these cemeteries there is the large cemetery at the site of the *basilica* of Saint Servatius (cemetery 1), the burials at the Sint-Servaasklooster site (cemetery 2, which might be part of cemetery 1) and the two isolated burials at the Dominicanerplein site. It is possible that there were more isolated early medieval burials under the Generaalshuis and under Café Brittanique. All these burial grounds, large and small, are part of the burial landscape of the 'town' of Maastricht and its immediate environs (fig. 14.2).[19] This burial landscape is in its turn part of a burial landscape in the immediate hinterland of Maastricht where cemeteries can be found in Rosmeer, Borgharen and Meerssen-Rothem, of which the earliest burials, generally speaking, date to a later period than those of the Servatius complex. The 'funerary colonisation' of the environs of Maastricht thus starts at a time when furnished burial at the Servatius complex was already a regular phenomenon from the sixth century onwards.[20] Table 14.1 gives an overview of the various early medieval cemeteries in Maastricht and the number of graves excavated as far as can be established now.[21] Several observations can be made.

First there are four sites with isolated burials (nrs 7, 9, 12, 13) next to the large cemeteries (Servatius and Vrijthof). On these sites only one to three burials were present. In general they date to the seventh century, although one grave at the Dominicanerplein site could date to the eight century. To this list we can add the three graves on the Vrijthof Square indicated as cemetery 6. We suggested that this cemetery belonged to the habitation of which traces were found in the southern part of trench 4 and we referred to similar small groups of graves found in settlement sites in the southern Netherlands.[22] Some of these groups count up to 15 graves but others only one or two. The isolated burials in Maastricht might have a similar background: they could be burials directly related to habitation although this is in some cases difficult to substantiate. At the Dominicanerplein site a homogeneous layer dating from the eighth to the tenth centuries was discovered, but traces of habitation dating to the Merovingian period were not found.[23] The Marktmaas burial (with a burned sword scabbard) might be related to limited habitation on a low ridge between the Meuse River and an abandoned gully to the west, of which only faint traces were observed.[24] The Céramique burials were probably related to the potters working there.[25] Finally the burials in the cloisters of the church of Our Lady are difficult to interpret. They are at least in a prestigious location directly north of a church which must have stood at the location of the present church of Our Lady. To this list we can also add the isolated burials on the Boschstraat site. The Boschstraat 'cemetery' consists of a larger group of burials and three isolated groups of two, two and five graves respectively (fig. 14.3).[26] At the Boschstraat site there

(14) Theuws 2005. (15) Einhard described the 'town' as a vicus, with a lot of inhabitants, mainly merchants (see Van Ommeren 1991, nr 56). (16) Theuws 2001, 2005. (17) Panhuysen 1996, 51-58. (18) Theuws/Bijsterveld 2014. (19) I refrained from indicating the possible extent of the inhabited zones on maps 14.2,14.5 and 14.7. It is too speculative. Moreover it suggests a homogeneous habitation everywhere, which might not have been the case. Each time an excavation is published we can fill in the image in a more detailed way. (20) I use the term 'funerary colonisation' because it is possible that inhabitants of settlements in the environs of Maastricht at first buried their dead at the Servatius complex. (21) See also R. Panhuysen 2005, 54 for an overview. In our overview we have split up some of the cemeteries he mentioned in separate cemeteries. (22) Theuws 200a; Theuws 'Farmyard burials', in prep. (23) Arts 2007, 68-73. (24) Janssen/Spitzers in prep., 292-293. (25) Panhuysen et al. 1992, 263-274. (26) R. Panhuysen 2005, 101.

Fig. 14.1
The late-Roman and early medieval graves (indicated in red) discovered in the excavation trenches in and around the basilica of Saint-Servatius. 1. The Saint Servatius cemetery; 2. the graves at the Saint-Servaasklooster site; 3. the sixth century burials in the centre of the Vrijthof Square; 4. the Merovingian cemetery on the Vrijthof Square; 5. the Carolingian cemetery; 6. three graves probably related to habitation on the Vrijthof Square. Green dots: isolated grave finds, probably/possibly early medieval.



Table 14.1
An overview of Merovingian/Carolingian cemeteries in Maastricht.
The numbers correspond to the numbers on figures 14.2 and 14.7.

Number	Name	Number of graves	Appoximate dates
1a	Sint-Servatius (late Roman/Merovingian)	c. 1000[1]	IV-VII
1b	Sint-Servatius (Carolingian)	>73[2]	VIII-IX
2	Sint-Servaasklooster	c. 18[3]	V and VII
3	Vrijthof cemetery 3	14[4]	VI
4	Vrijthof cemetery 4	335[5]	VIb-VII
5	Vrijthof cemetery 5	82[6]	(VIId/) VIIIA-(IXa)
6	Vrijthof cemetery 6	3[7]	
7	Dominicanerplein	2[8]	VIIb and VIII
8a	Lage Kanaaldijk (Merovingian)	19[9]	
8b	Lage Kanaaldijk (Carolingian)	c. 30[10]	
9	Marktmaas	1[11]	
10	Boschstraat	50[12]	VII
11	Sint-Martinus (Saint Martin)	?	
12	Céramique	3[13]	VII
13	Onze Lieve Vrouwekerk (Our Lady, cloisters)	c. 2[14]	VII

(1) Verwers 1986 (with too low estimate of the number of graves); R. Panhuysen 2005, 66 table 3.2; Kars 2011. (2) This is the number of graves excavated in the church (R. Panhuysen 2005, 95). There will have been Carolingian burials in the Pandhof too. (3) This number is based on the provisional analysis of the grave structures by M. van Haperen. J. Verduin does not deal with the graves in het MA thesis (Verduin 2008). (4) See chapter 6. (5) See table 8.5. (6) See table 12.1. (7) See chapter 6. (8) Arts 2007, 70-72. (9) Panhuysen 1984,80-81; Hulst/Panhuysen 1995, 203-205, R. Panhuysen 48-50. (10) Hulst/Panhuysen 1995, 206. (11) Janssen/Spitzers in prep, 293. (12) R. Panhuysen 2005, 101-106, and passim. (13) Panhuysen et. al. 1992, 263-264. (14) Panhuysen/De La Haye 2002, 105.

Fig. 14.2
Finds from the Merovingian period in Maastricht. The black figures indicate Merovingian cemeteries. The brown figures indicate sites with craft production. The background map is the cadastral plan c. 1830 with the thirteenth and fourteenth century town walls. Cemeteries: see table 14.1. Crafts: 1. Mabro site; 2. Derlon site; 3. Boschstraat site; 4. Jodenstraat site; 5. Céramique site; 6. Witmakersstraat site; 7. Franciscan monastery site; 8. Lage Kanaaldijk site.

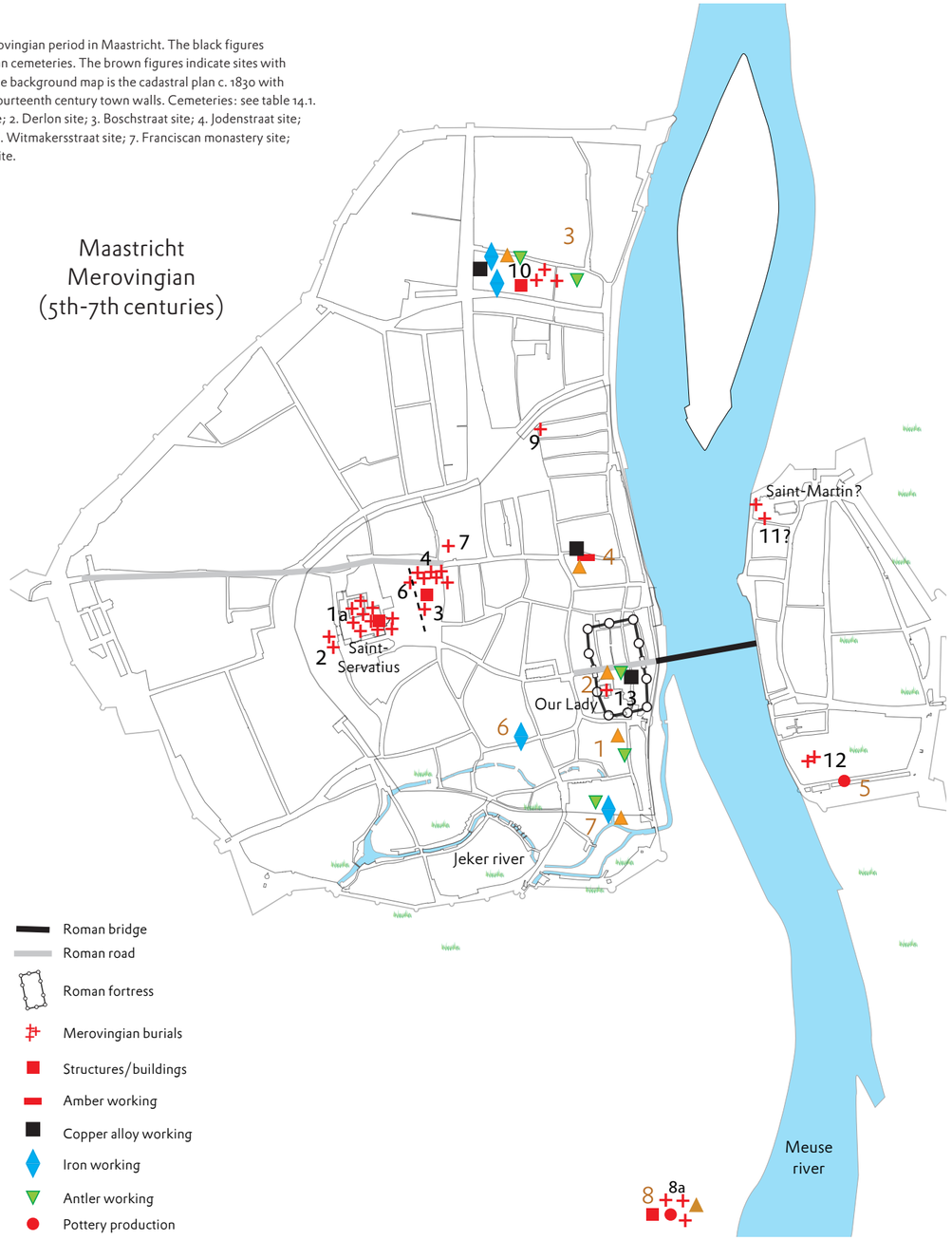


Fig. 14.3
Schematic plan of the Boschstraat cemetery.



were clear indications of habitation and craft production in the Merovingian period, so the isolated groups are likely to be yard burials as well. Maastricht thus shares a characteristic of its burial landscape with the rural world where farmyard burials occur from the middle of the seventh century to the middle of the eighth century.[27] The question is to what extent the Boschstraat site is a part of 'Maastricht'. It might as well be considered a separate riverine settlement with agricultural and craft activities.

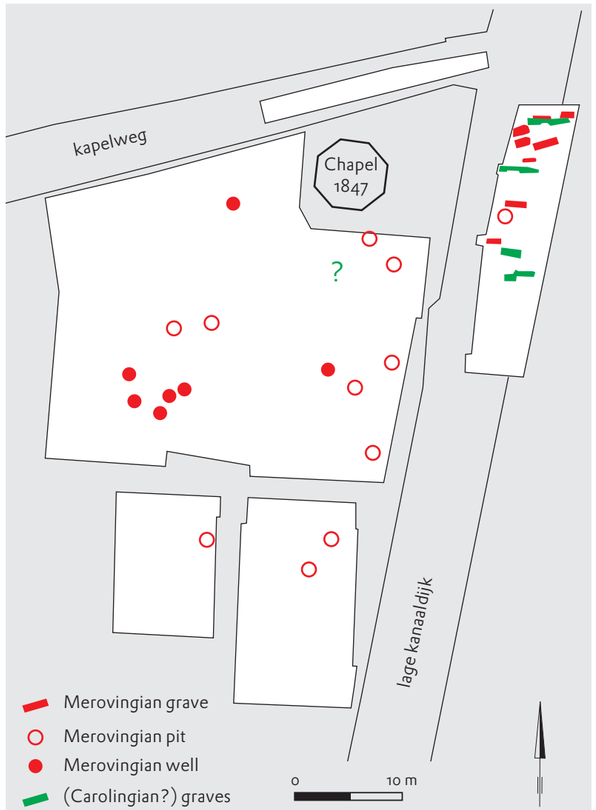
Secondly there were two cemeteries related to habitation nearby: Boschstraat and Lage Kanaaldijk. As said the Boschstraat cemetery consists of a clustered group of graves and three isolated groups of burials. The cluster in its turn can be divided in a large group (c. 40 graves)[28] and a small group to the northwest of it (c. 10 graves).[29] All graves were trench graves and the number of grave gifts is very low; only a few pots and beads were recovered from the graves. This scarcity may relate to a date of the burials in the later seventh century. The sex could be determined for 30 out of 54 persons: there were 24 women and only 6 men.[30] This unbalanced distribution of men and women is not easy to explain. Panhuysen suggests that the men may have been buried in one or more other cemeteries.[31] The other inhabitants of this site might have considered themselves part of Traiectum and might have buried a number of relatives on the Servatius and Vrijthof burial grounds.[32] This adds to the difficulty of defining the 'town' population of a place like Maastricht as discussed above.

The cemetery at the Lage Kanaaldijk in the south is of a different nature. It is at the site of the later parish church dedicated to Saint Peter. It has been suggested that the site was the burial ground of bishop Lambertus (+714), but this is a matter of debate.[33] The present chapel dedicated to Saint Lambert was built after the church (by that time already a new one from 1749 replacing the medieval church, dedicated to Saint-Lambert) was demolished in 1847 because the canal Maastricht-Liège was built.[34] Next to the preliminary report by Hulst and Panhuysen showing Merovingian graves, there is the short description by R. Panhuysen showing Carolingian graves and sarcophagi.[35] In figure 14.4 the two available plans are combined, but the result is a map which is only indicative due to the small schematic plans published. Panhuysen published photographs of some of the finds.[36] These finds date from the late sixth to the middle of the seventh century.

The cemetery is known because of the find of 20 limestone sarcophagi in the seventeenth century, during the construction of the canal in 1847-1850 and during the excavations in 1980.[37] This is a relatively high number. Sites with limestone sarcophagi are almost without exception cult sites.[38] However the excavated remains of a church date to the twelfth/thirteenth century. The sarcophagi seem to align along the foundations of this church and could have been reused. R. Panhuysen however using the same alignment of some limestone sarcophagi as an argument suggests that they were placed along a wall of an earlier, thus probably Carolingian, church. I cannot deduce from the publications whether the sarcophagi were at their original location or not.[39] They might have been in a reuse position. If they were in their original position, as R. Panhuysen suggests, then the walls of the later medieval church must have been in more or less the same position as those of an

(27) Theuws 2000a; Theuws 'Farmyard burials', in prep. (28) Panhuysen 2005, 102, group A (29) Panhuysen 2005, 102, group B. The exact number of graves/burials is difficult to establish because next to graves disarticulate human remains were found that could indicate graves. (30) Panhuysen 2005, 151-155. (31) Panhuysen 2005, 277. (32) R. Panhuysen 2005. (33) Werner 1980, 248-251. (34) Werner 1980, 250 note 63 and Hulst/Panhuysen 1995, 203. The excavations at the Lage Kanaaldijk need a new evaluation. (35) Panhuysen 2005, 48-50. (36) Panhuysen 1984, 80. (37) Lammers 1989, 377-379, 408-409. (38) Lammers 1998, 379; Finoulst 2012, 53. (39) As said this site needs en new thorough investigation. The photograph in R. Panhuysen figure 2.8 however shows a way of excavating the sarcophagi (digging along the walls of the sarcophagi) that tempers too high expectations.

Fig. 14.4
Schematic plan of the Lage Kanaaldijk site.



older Carolingian church. It is possible but on the basis of the present publications it cannot be seen whether old foundations were either reused of broken away. If they were broken away it is curious that the limestone sarcophagi, which were usually placed against a wall or foundations were left untouched. Another problem is the dating of the sarcophagi. R. Panhuysen dates them as a group to the Carolingian period. We have seen that in the Meuse valley limestone sarcophagi can be older.[40]

Whatever is the case, the find of 20 limestone sarcophagi, reused or not, sets this cemetery apart from that of the Boschstraat site where only trench graves were found. How can this difference be interpreted? Both sites are close to the river, so the difference cannot be explained in terms of differential access to river transport. Another explanation is related to the date of the sarcophagi. When they indeed date to the eighth and ninth centuries and not to the sixth/seventh centuries, it is unlikely that many will be found on Merovingian cemeteries. The use of sarcophagi is often explained in terms of unequal social positions.[41] From this perspective sarcophagi are related to persons with a higher social status because it was 'expensive' to have such a grave monument. It has already been noticed that sarcophagi were often found at cult sites. R. Panhuysen observed on the Servatius site that when it was possible to determine the sex of the deceased buried in a sarcophagus it was a man.[42] Otten suggests that the trapezoid sarcophagus was preferred by the higher ranking clergy.[43] If we combine a late date for sarcophagi (late seventh/eighth/ninth centuries) with a preference of clergy to have themselves buried in a limestone sarcophagus then one can understand why so few are found at Merovingian cemeteries. The majority of these are rural cemeteries of burial communities without a cult place and (high ranking) clergy, and they were abandoned around the end of the seventh century.

Why was there a new cemetery at the Vrijthof Square?

The evidence of the Boschstraat and Lage Kanaaldijk cemeteries puts the cemeteries on the Vrijthof Square in a new perspective. Vrijthof cemetery 4 (Merovingian) has characteristics of both, but in many respects it is also different from those two as it is from the Servatius cemetery as far as we know it now.[44]

Cemetery 4 has also a number of characteristics that sets it apart from rural cemeteries in Maastricht's hinterland. They are: a large number of trench graves, a dense horizontal distribution of graves, a dense vertical distribution of graves which led to piles of graves, the presence of a sarcophagus and stone built graves, a relatively large amount of disarticulate human remains, the presence of feet and head stones and finally the large number of graves (originally maybe about 1000). The large number of graves and the dense horizontal and vertical distribution are related phenomena because the cemetery obviously was restricted to a limited area. It had clear northern, southern and western boundaries. Why did it have such clear boundaries? The sharp western boundary is interesting because it seems to suggest that the burials could not cross a line that ran from north to south over the middle of the Vrijthof site (indicated in fig. 14.2 with a broken line and on fig. 14.1 the related feature is dark grey). This line suggests that there was a boundary between an area with a cemetery (and since the third quarter of the sixth century *the magnum templum* of Monulphus) in the west and an area to the east where cemetery 4 was.

Why were there two huge cemeteries close to one another but clearly separated from one another? An old interpretation is that the Servatius cemetery (nr 1) was used by the Christian population which continued to live in Maastricht since Roman times (*Romanen* in German language) and the Vrijthof cemetery (nr 4) was used by Germanic newcomers (Francs).[45] This interpretation of burial remains in ethnic terms is not tenable anymore after the analysis of the Vrijthof cemetery. In German research the opposition between *Romanen* and barbarians determined the interpretations of cemetery evidence of the fourth, fifth and sixth centuries considerably.[46] German scholars distinguished between two major burial rites: one with almost no grave goods and one with grave goods with especially jewellery in women's graves and weapons in men's graves.[47] They interpreted this difference in terms of oppositions: *Romanen* vs Barbarians and Christians vs Pagans. The nature of the burial ritual of *Romanen* was defined negatively: it did not have the characteristics of that of Germanic people. Elements of the *Romanen* burial rite were the use of sarcophagi, more than one burial in a sarcophagus, a large number of graves without grave goods, sets of women's grave goods different from those of Germanic women, and the almost complete absence of weapons in men's graves (if there were weapons it only concerned seaxes).[48] It was also concluded that *Romanen* and barbarians were often buried in the same cemetery and thus that they must have lived in the same villages. So it was difficult to identify cemeteries as exclusively Roman or Germanic. The Romanen-Germanen opposition as a useful interpretative tool has been subject to intensive debate and can be considered out-dated (Fehr 2010).

It is at the moment not possible to make a detailed comparison of the Vrijthof and Servatius cemeteries.[49] Nonetheless, a number of facts are known from the Servatius cemetery that are of interest in a comparison with the Vrijthof cemetery. The Servatius cemetery was in use before the Vrijthof cemetery, probably since the fourth century.[50] The number of graves that might be assigned to Maastricht phase B (400-460/80) on the basis of grave goods is limited to 13. However, many of the grave goods in these graves have long date ranges extending well into the sixth century. Only three graves can be dated exclusively to phase B. This observation seems to point to a decline in the number of burials from the fourth to the fifth century.[51] The number of burials increases in the late fifth and sixth century. The oldest burials on the Vrijthof site could be dated to phase B, but again the grave goods in these graves have a long date range or could be antiques. The same goes for the graves of phase C (460/80-510/25). The number of graves that could be assigned to phase D (510/25-c. 565) increases, but again most of the grave goods have considerably long date ranges. It is safe to assume that burial activities at the Vrijthof Square started in the second quarter of the sixth century, possibly in two locations (cemeteries 3 and 4) although a few burials could be somewhat older. This means that both the Servatius and Vrijthof cemeteries were already in use at the time the *magnum templum* was built by Monulphus (see chapter 1).[52] Unfortunately it is not possible to make an unambiguous distinction between the beginnings of cemeteries 3 and 4. Did they start at the same time or was cemetery 3 in use before cemetery 4? Cemetery 3 may have started earlier, as was suggested in this volume, and cemetery 4 might have started to be used not long before, or possibly at the time the *magnum templum* was built. At the moment we have no certainty on this.

Different starting dates of the Servatius and Vrijthof cemeteries might to some extent explain the differences between them as perceived by previous scholars advocating the ethnic interpretation. However, the Vrijthof cemetery started to be used at a time when, according to their model, both types of burial rites were merging and it was hardly relevant to make a choice between burial type A (Barbarians) or B (*Romanen*). By the middle of the sixth century women were buried with jewellery and grave goods at the Servatius cemetery, as they were in Vrijthof cemetery 4.[53] It is neither possible to differentiate both cemeteries in the period 400-525 because the Vrijthof cemetery did not exist yet. Was the Servatius cemetery reserved for Christian *Romanen* so that a new cemetery had to be created for non-Christians? Such a distinction however seems to be a feature of later times.[54] It is, however, certain that Christians were buried in the Servatius cemetery. The Christian gravestones, exclusively found in the context of the Servatius cemetery, testify of this.[55] They date mainly to the fifth and early sixth century and are thus, except maybe one stone (Felegaridus-stone), older than the *magnum templum*. Most of them might also be older than Vrijthof cemetery 4. They date to a period when other signs of a Christian population (Argonnen ware with Christian symbols, glass bowls with Christian symbols) were present in the Meuse valley in the fifth and early sixth century.[56] However, there are also finds that indicate, in the eyes of those who adhere to the *Romanen*/Barbarian opposition, the presence of Germanic warriors. In grave 9 of the Sint-Servaasklooster

(40) See chapter 8. (41) See R. Panhuysen 2005, passim. (42) R. Panhuysen 2005, 261. However only a small number of trapezoid sarcophagi contained sufficient skeletal remains to determine the sex of the deceased. (43) Otten 2003, 108. (44) The Servatius cemetery has been studied in de context of the Servatius and Anastasis projects. It is our intention to continue working on its publication. R. Panhuysen studied the Servatius cemetery in the context of his dissertation on the skeletal remains of the church excavations. However we need detailed information on the stratigraphic position of each grave vis à vis other graves and walls and layers before we can make any further inferences. M. Kars studied the grave finds from the Pandhof excavation in the context of her dissertation (Kars 2011) (45) For an echo of this opinion see Panhuysen/De La Haye 2002, 105 and Panhuysen 2013, 377. (46) For Instance: Böhner 1958, Stein 1974 and Schulze-Dörrlamm 1990, 344-356. For a more nuanced view on different types of burial rituals and the Romanen/Germanic people debate see Stein 1989 who discusses the older literature. The terminology has changed from Romanen and Germanic people to burial ritual A and burial ritual B. In the end however both are again related to Romanen and Germanic people whose burial rituals merge in the course of the sixth century.

(47) Stein 1989. (48) Stein 1974, 582, 585, (49) We have to wait for the final analysis of the Servatius cemetery. (50) Kars 2011, 131 (Maastricht Phase A: third/fourth century). This observation is based on the dating of grave goods. It is however necessary to evaluate each grave. When the date of a grave is based on a single grave find this is a tricky way of dating graves, as Kars acknowledges herself. The date has to be compared to the stratigraphic position and the nature of the grave construction. A new series of ^{14}C dates will have to be commissioned. See also R. Panhuysen 2005, 68-79 and a list of existing ^{14}C dates (p. 69). There are no ^{14}C dates yet which allow beyond doubt to identify fourth century burials. (51) It is possible that on the basis of stratigraphic arguments more graves without grave goods can be dated to the fifth century. (52) The construction of the church probably took place in the second half of the sixth century. Monulphus was bishop some time after 549. It is difficult to establish at what time his episcopacy started and ended. It ended at least before 614 when his successor is mentioned (Kupper 1982, 50-51). (53) See for instance grave 94 (Panhuysen 1988e). (54) Treffort 1996a, 2001. (55) Boppert 1986. (56) Theuws 2014. As far as I know no Christian gravestones have been found in Tongres yet.

site a sword scabbard of the 'Krefeld' type dating to the middle and second half of the fifth century was discovered.[57] It is better not to assign an ethnic affiliation to such swords but to analyse the meaning of the deposition of swords in their specific contexts.[58] The 'weapon grave' indicates that the variability of burials and burial rites practiced in the fifth century Servatius cemetery is considerable.[59] The *Romanen*/Barbarian dichotomy is probably too simple to explain this variability.

The abundant presence of weapons was an argument to consider the Vrijthof cemetery as belonging to a group of Germanic people. The study of the grave goods of the Vrijthof and Pandhof excavations by Kars, however, shows that the differences in the deposition of weapons in both cemeteries are not outspoken (table 14.2). More weapons were found in the Vrijthof cemetery, but the differences are not that big that it can be suggested that two different ethnic groups used the Servatius and Vrijthof cemeteries. Moreover, to the figures of the Pandhof the sword scabbard just mentioned should be added as well as the weapons in a man's grave discovered during the excavation of the basilica's treasury.[60]

Another observation is also relevant in this debate. The Vrijthof cemetery does not share many characteristics with rural cemeteries (see chapters 8 and 13). When the rural cemeteries of Maastricht's hinterland are also considered to be Germanic or of Francs, we have to conclude that Germanic people in the countryside defined their Germanicness quite different from those burying their dead at the Vrijthof cemetery. Using the opposition between Germanicness or Romaness of burial rites cannot bring much new insights, it leads us in a dead end street. I suggest we search for other reasons why there were two large cemeteries so close together. One cemetery already existed on the hill to the west of the Vrijthof site and one (cemetery 3/4) came into being somewhere in the first half or rather second quarter of the sixth century. Why was it necessary to create a new cemetery?

Table 14.2
The presence of weapons of various types in the Vrijthof and Pandhof cemeteries.

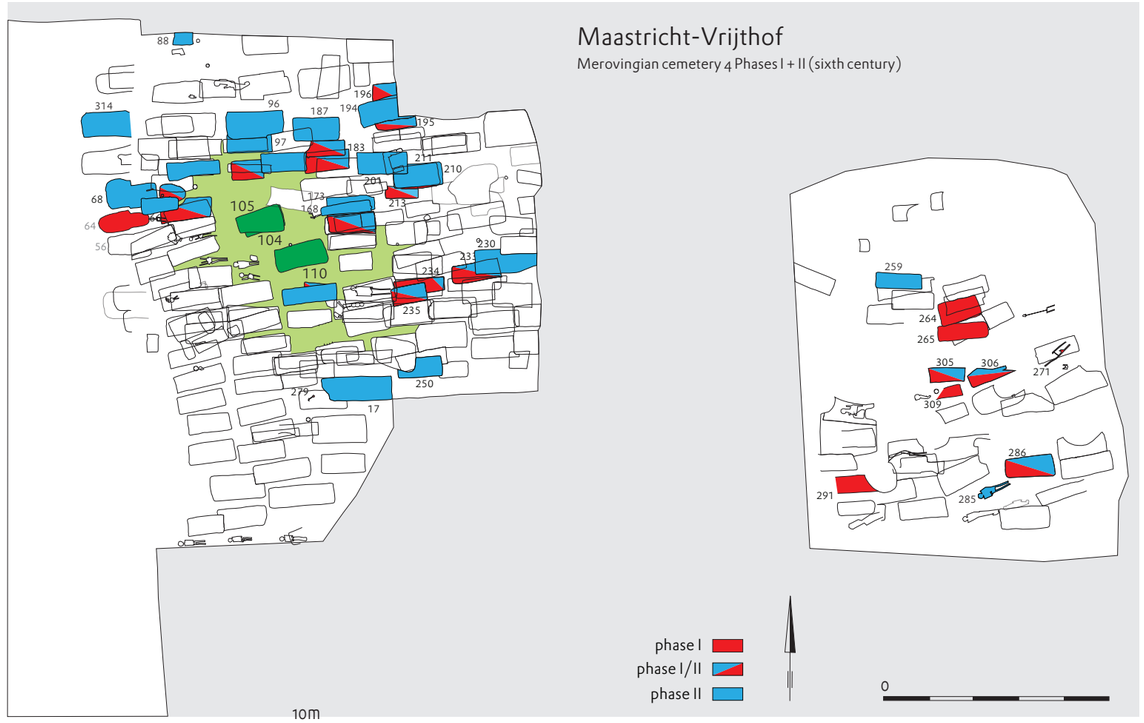
Weapon type	Servatius cemetery	Vrijthof cemetery
Seax	12 (1)	17
Axe	8	9
Shield	0 (1)	1
Lance	1	4
Arrows	0	2
Sword	0 (2)	1
Total	21 (25)	34

Fig. 14.5
The Merovingian Vrijthof Square cemetery, western part.
The location of graves 104, 105 and 110.



Before we discuss a possible answer to this question we have to deal with a specific observation we made while investigating cemetery 4. It concerns the position of burials 104, 105 and 110 discussed in chapter 11 (fig. 14.5). They are surrounded by an empty space which is remarkable in this densely used cemetery. Moreover the location of grave 110 was never used again, which is an even more striking feature in this part of the cemetery. These three graves are surrounded by piles of graves, and the woman in grave 110 is surrounded by children's graves. It was suggested that grave 104, which is stratigraphically older than grave 105, did not belong to the oldest graves of the cemetery. It is the grave of a man (as was grave 105 on top of him) which seems to have been created when graves already existed to the north, west and east of it (fig. 14.6). That would imply that the free space in which he was buried was kept open and was eventually chosen as his burial spot. It seems, however, unlikely that a space was kept free around the middle of the sixth century to bury persons there a generation later. It is more likely that grave 104 was among the earliest burials in that part of the cemetery and that subsequent burial took notice of that grave (and 110). That burial 104 is indeed a founder's grave cannot be excluded. In fact this seems to be the most plausible explanation for the topographical situation in that part of the cemetery. This is not to say that the man in grave 104 was a local leader or an aristocrat in life. Founder's graves can be interpreted in various ways, depending for instance on the conceptualisation of personhood. Founder's graves do not necessarily represent a specific historical person in life but can also be a communal effort of a family or group defined otherwise, to create a burial that provides a ritual embedding of that group in the wider community.[61] Moreover, grave 104 may not be the only example of such a grave in the cemetery, although other possible founder's graves were not identified in the less well excavated parts of the cemetery.

Fig. 14.6
The Merovingian Vrijthof Square cemetery, western part. The location of graves 104, 105 and 110 in relation to the graves of the early phases I and II.



An important element in the interpretation of the position of the Vrijthof cemetery in the burial landscape of Maastricht is its clear western boundary. This boundary seems to exist from the beginning. The oldest graves already respected this boundary (see figures 11.1 and 11.3). Why did a new cemetery have such a clear boundary? What can such a boundary mean in the context of an early 'town'? It is clearly a boundary between two areas with burials, but is it also a boundary between two different communities (not necessarily ethnic groups)? Is it related to the right to bury the dead in one area and not (anymore?) in another? The answer depends to a large extent on the relative date of the oldest burials in cemetery 4. In other words it depends on the chronological relation between the burials on the Vrijthof square and the building of the *magnum templum* by bishop Monulphus.

Unfortunately it is not possible to date the oldest burials in cemetery 4 precise enough to establish this, and even the exact date of the construction of the Merovingian cult place at the location of the *basilica* of Saint-Servatius, which was identified by Panhuysen as the *magnum templum*, is not known.[62] The burials in cemetery 3 seem to be older than the *magnum templum*. This group is however small and the graves show an irregular ordering and do not contain any grave goods. Why did burial not continue in this area? Could burial have been stopped there and taken up further to the north at cemetery 4? If that was the case the creation of cemetery 4 and its strict western boundary could be related to a reshuffle of the burial landscape on the occasion of the building of the *magnum templum*. A look at the map in figure 14.2 shows that there were, as far as we know now (many excavations were carried out in the 'town' centre), no other large cemeteries in Maastricht. There were isolated burials but these are relatively late (nr 7 and 13) or belong to other communities (nrs 9, 10, 8). The habitation observed in trenches 3 and 4 dates to the later seventh and first half of the eighth

(57) Ypey 1985, 6-9. (58) Theuws/Alkemade 2000; Theuws 2009. (59) The grave find of Bonn-Jacobstrasse shows that burial in a sarcophagus and the deposition of both a sword and objects with Christian symbolism do not exclude each other (Haupt 1973). (60) Panhuysen 1982, 48-51 (grave 2). In the grave a sword, seax and shield boss were found. The author dated the grave to the seventh century. In table two these figures are added between brackets. (61) Theuws 2013. (62) See note 59.

century and is thus hardly contemporary with the Merovingian cemetery. Was the Vrijthof cemetery the burial ground of the population of the *vicus* and was the Servatius cemetery reserved for clergy and members of certain families since the start of the Vrijthof cemetery? Is it possible that the old Servatius cemetery, which related Maastricht to its Roman past, became a more exclusive burial ground that was taken over by one of the leading groups in Maastricht? At a certain point it was not obvious anymore that everyone in the *vicus* was going to be buried in the Servatius cemetery, which was, as far as we know now, the only cemetery in use in the major part of the later fifth and the first half of the sixth century. The lavish burial of women, for instance the woman in grave 94, might also have played a role in this process of redefinition of positions in Maastricht. It might have been along the same sort of lines a century later, when women's monasteries played an important role in the supernatural anchoring of aristocratic groups.[63] One reservation, however, must be made: do such rich women's graves reflect the positions of historical persons or are they a construct of a family or other kind of group in a process of defining positions?

The first family and group that might be responsible for such a development that comes to mind is that of Monulphus who built a church (*magnum templum*) on the hill with the ancient cemetery.[64] It was suggested before that he created his *magnum templum* not only as bishop but also as a member of an elite group in order to enhance its position and give it a cosmological authentication.[65] It will have been his intention to be buried next to the saint of which he elevated the remains and for whom he created a place of worship. His kin group, probably augmented with additional families and friends, was certainly a differentiated whole. The presence of two cemeteries might thus be related to burial rights and the growing exclusivity of the Servatius cemetery which was from about the third quarter of the sixth century also an *ad sanctus* cemetery. Positions of power can be created with the establishment of boundaries and differential rights of access.[66] This model does not exclude the burial of members of various groups other than those directly affiliated with Monulphus' kin group at the Servatius cemetery, but burial might have been controlled by a specific group and burial *ad sanctos* a privilege that had to be obtained from them. Burial *ad sanctos* could thus have developed into a gift from one group to another. Such a model predicts that ancient DNA and isotope analyses will show quite a differentiated population buried in the Servatius cemetery. But what we cannot see is to what extent burial on this site was regulated. However, we can hypothesise that there is a close articulation of changing social/power positions and religious development. This is not a new conclusion, but the burial archaeology of Maastricht can show how this process was given form with the help of the burial ritual. What we can see is that burial was regulated to some extent on the Vrijthof cemetery producing the exceptional position of graves 104, 105 and 110. Where Monulphus' family uses the remains of a saint to create a special position, other groups may have performed a burial rite to create a similar position by creating ancestral graves that were respected for a long time. I am hesitant to consider the first one Christian and the second one pagan. Those who created the Vrijthof cemetery might also have been Christians in their own perception but did not have a saint. There is no archaeological evidence related to the Vrijthof burials that indicates the religious adherence of those who buried their dead there.

We do not know how Monulphus' family and group of clients developed in the seventh century. It might not be relevant to know because the control of the Servatius cemetery could have been taken over by another group who maintained the exclusive rights. The development of the Servatius cemetery will certainly have been complicated. We have to await the results of the analyses of the burials discovered in the cloisters and the church itself to be able to make a final judgment. Hopefully we can provide better images of the possible growing exclusivity of the Servatius cemetery as for the role of women and the creation of elite groups in this process. Finally not all those buried in the Servatius cemetery will have been high-ranking persons. Families had low ranking members too.[67] Moreover, many of those buried in the Servatius cemetery need not have been living permanently in the immediate surroundings of the *basilica* of Saint-Servatius, the Roman fortress or the habitation encircling it.

This brings us to the complementarity of burial grounds in Maastricht. R. Panhuysen suggested that the burial grounds in Maastricht were not strictly related to specific communities and that families could bury some of their dead on another cemetery than the nearest one or 'their own'.[68] The Maastricht cemeteries 'could have functioned in a system of complementary cemeteries'.[69] The unbalanced distribution of sexes on the Boschstraat cemetery where relatively few men were buried compared to a normal equal distribution over the sexes, inspired him to make this suggestion. It is possible that complementarity existed but this proposition has to be nuanced. The burial at a specific cemetery might after all not have been open to all; the cemeteries might not have been free accessible places. The clear boundaries of the Vrijthof cemetery and the existence of two big cemeteries close to one another suggest that there could also have been strict rules as to where a person could be buried. We do not know much about the control of burial grounds in Merovingian times in northern Gaul but there might have been more control than we think now. There might not be such a free choice as suggested. Moreover, complementarity and exclusivity may have differed in various periods.

(63) Graus 1965; Prinz 1965, 489-495, 502-503; Prinz 1967; Helvetius 1994, 148; Helvetius 1999; Mcnamara 1992, 6-7; On women and burial archaeology see Halsall 1996. For England see Hamerow in press. (64) The archaeological proof for the identification of the *magnum templum* with a church excavated at the site of the Saint-Servatius church has yet to be presented. (65) See chapter 1. (66) See discussion by Gilchrist 2009. (67) R. Panhuysens (2005) qualified graves as of low, intermediate and high status on the basis of burial inside and outside/close to a church, interment in a sarcophagus/stone built grave or trench grave and the quality of the grave goods. A detailed analysis of all burials of the Servatius cemetery is needed to show whether this classification is usable. (68) R. Panhuysen 2005, 277-283. For complementary cemeteries see also Theuws 2000a. (69) R. Panhuysen 2005, 282. (70) Another element of which we know almost nothing is possibly a building for lepers. The lepers (*leprosi Treiectenses*) were mentioned in the Testament of Adalgisl Grimo of 634 (Levison 1932 [1948]). (71) Van Ommeren 1991, 27. The text dates to 772. This implies that the *basilica* whose dedication is celebrated is older. (72) See the various entries in Van Ommeren 1991; Theuws 2001a; Theuws 2015. (73) Huijbers 2010, 216-218. (74) Werner 1980, 243-248. (75) See chapter 1. (76) Theuws 2004; Carver 2015.

There is one last suggestion that I would like to make. It is a highly hypothetical one but one that must be considered. The Merovingian Vrijthof cemetery 4 shows many of the characteristics of a burial ground related to a cult place. The intensive use of the cemetery, the piling up of graves, the stone built graves, the single limestone sarcophagus and the head and feet stones in some of the graves are elements that are also seen in cemeteries of cult places. One has to consider the possibility that the Vrijthof cemetery 4 was related to a cult place of which we have no knowledge. It could be located further to the east, south of the Roman road. It could have been a church created by another family competing for a piece of the cake in Maastricht. That such a cult place is not mentioned in the written sources is not an argument to discard this possibility.[70] Many cult places are not mentioned in the early sources. In the *Martyrologium Hieronymianum* a church (*basilica*) dedicated to the archangel Michel is mentioned.[71] The presence of another cult place might explain the clear boundary to the west of the cemetery, it might be a boundary between to cult places and their burial grounds.

In the previous sections I suggested that the creation of the Vrijthof cemetery might be related to changing power positions in Maastricht and that it was necessary to have another cemetery, possibly with a cult place, next to the Servatius cemetery. One of the reasons could be the growing control of the Servatius cemetery by one of the leading groups in Maastricht, possibly the group of Monulphus who, after having gained control of the site, built a church on it. This could also be the beginning of a more intensive interference of the bishops with Maastricht which ultimately led to a transfer of the episcopal seat to Maastricht. When this happened is not known. It could already have happened in the days of Monulphus or it could have happened later. It is less likely that it happened before because there are no indications that the bishops Domitianus and Falco which occupied the bishop's seat before Mobulphus were interested in Servatius and Maastricht. Servatius' cult in Maastricht is a creation of Monulphus (see chapter 1). Until its transfer the episcopal seat must have stood in Tongres.

The king must have been involved with the growing interference of the bishops with Maastricht since Maastricht was royal property and was to remain so for a long time. There is good evidence for the active involvement of Merovingian kings with Maastricht.[72] The bishops and the groups from which they originated, had to accommodate themselves with the king. There is not much written evidence to go by if one wishes to create an image of the social fabric of Maastricht in Merovingian times, but later sources provide an insight in the social and juridical status of its inhabitants. I will discuss that in the next section but its basics have to be recounted here because the younger situation might have old roots.

In the central Middle Ages there are two basic groups in Maastricht: the *homines imperii* and *homines episcopi*. Also mentioned are the *familia Sancti Servatii* and the *familia sancti Lamberti*. The *homines episcopi* and the *familia sancti Lamberti* might be identical unless the *homines* are a special category of people *(traders?)*.[73] The *homines imperii* seems to consist of a small group of those who belonged to the *familia sancti Servatii* and the rest of the *homines imperii*. The special status of the episcopal family might have come about when the church of Our Lady was granted immunity at the end of the seventh century. It is possible that until then all people of Maastricht were *homines imperii*, which is also indicated by the fact that later newcomers should be *homines imperii*, indicating that the *homines episcopi* were a group cut out of the people of the king. If all the other people of Maastricht were people of the king one can imagine that social differentiation was related to a differential access to the king. This might not have been very important in the beginning with only few people living in Maastricht, but this might have changed in the course of the sixth century. The king will have had two representatives in Maastricht. The first is a *comes*, or in our case a *praeses* which seems to be the title of the father of bishop Lambertus who represented royal power and must have lived in the middle of the seventh century.[74] The second is a supervisor of the royal property, a *domesticus*. Both might have had their seats in Maastricht, although no indications of where these might have been are found today. If different families provided each of these positions there might also have been a competition for power between both. The bishop might come from one of these or from a third one. Could the creation of the Servatius complex and the Vrijthof cemetery have anything to do with the development of these power positions? Could they have been created as statements in this process?

Could those who created both cemeteries not just have defined positions vis à vis one another but also enhanced their position vis à vis other groups who were either buried in one cemetery or another? Could the creation of the Vrijthof cemetery be a counter action against the creation of the Servatius cemetery and cult place? Could there have been another cult place that we do not know? The creation of the Vrijthof cemetery may have marked a struggle for power that ultimately led, several generations later, to the murder of bishop Lambertus whose father was *praeses* by Dodo, a *domesticus* and a member of a competing family, probably related to the Pippinids.[75] Maastricht's burial landscape also shows again how intimately cult and urbanisation are intertwined.[76]

Maastricht's Carolingian problem

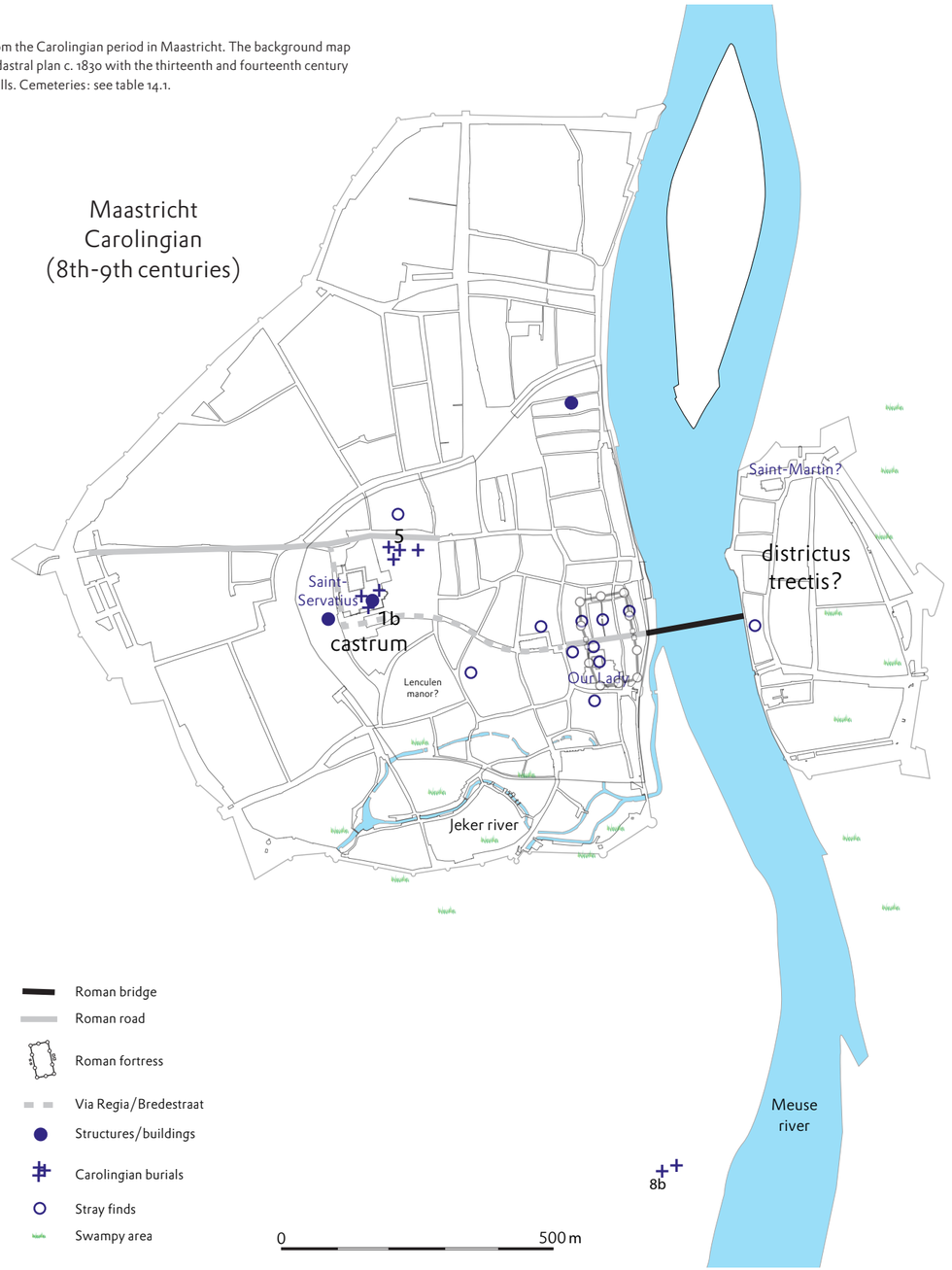
Maastricht has a Carolingian problem that I outlined before.[77] A survey of the short reports on the excavations in Maastricht showed that hardly any structural elements of the Carolingian 'town' were recorded. Stray finds of pottery were present in the area around the church of Our Lady but no substantial remains of houses, roads, ditches, pits, etc. were found. The finds represent a limited area with habitation around the church of Our Lady and the former Roman fortress. One could argue that new building traditions emerged which made Carolingian houses archaeologically invisible. The argument goes as follows. Carolingian houses were built on sills at ground level. These sills were taken away when a house was demolished. Later disturbance of the soil made the house completely invisible. But what about structures that were dug in deeper such as wells and pits? Why were these not recorded in larger numbers? And why is there not much pottery from the Carolingian age? When we compare this situation with that of the previous Merovingian age the contrast becomes even more apparent. The area with Carolingian finds is much smaller than the area over which Merovingian finds and features are scattered (compare figures 14.2 and 14.7). In many excavations craft activities dating to the Merovingian period were recorded even at the outlying Boschstraat and Lage Kanaaldijk sites and across the Meuse river (see fig. 14.2).[78] These craft activities stopped at the beginning of the eighth century. On a whole, there are no indications for craft production from the Carolingian age. The same goes for minting. Maastricht is an important mint in the Meuse valley and northern Gaul in the Merovingian age. Twelve *monetarii* working in Maastricht are known.[79] However, indications for minting in the Carolingian age are few.[80] Not many coins that can be attributed to Maastricht with certainty are known. Moreover, the Merovingian habitation of the Boschstraat site does not continue into the Carolingian age.

The archaeological visibility of Carolingian Maastricht is thus limited (fig. 14.7), but what do we know? First of all there is a *basilica* of Saint Servatius.[81] Secondly it is generally expected that there was a Church of Our Lady, although no remains of an early medieval church have been excavated up till now.[82] There is possibly a church at the site of Saint-Martin on the east bank of the river Meuse.[83] On the Sint-Servaasklooster site a pit of which the younger fill contained pottery dating to the Carolingian period was found.[84] The fill was the only feature from this period, but remains of houses could have been destroyed by later building activities on the site. Faint traces of habitation were recently found in the Marktmaas excavations in the northern part of the 'town' centre.[85] In the end there are only two sites that provided (faint) traces of habitation and a church! Burials were found in and around the *basilica* of Saint-Servatius (fig. 14.7, 1b), on the Vrijthof Square (5) and at the Lage Kanaaldijk site (8b). The evidence thus provides a meagre image of Carolingian Maastricht, an image which contrasts hugely with the written evidence.[86]

Einhard, writing around 830, qualifies Maastricht as a place 'crowded with a host of residents and especially merchants'.[87] Where did these merchants do their business? In 779 Charlemagne exempts the monastery of Sait-Germain-des-Prés near Paris from paying tolls at a number of places. One of these is Treiecto, Maastricht.[88] Maastricht is mentioned along with Rouen, Amiens, Quentovic and Dorestat, all important trading places.[89]

Another interesting document is the well-known treaty of Meerssen of 870.[90] It is an agreement between Charles the Bald and Louis the German on the division of the kingdom of Lotharius. In Maastricht two elements are mentioned: the abbey of Saint-Servatius and a *districtum Trectis*.[91] There is a debate as to what this division means. *Districtus* is a seldom-used term. In the treaty however Aachen is qualified as such too (*districtum Aquense*). The abbey goes to Charles the Bald and the *districtus* to Louis the German. Elements of Maastricht were thus divided between the two kings, a division which triggered a historiographical debate. Maastricht is usually considered to be a settlement on the left bank of the river. It is clear from the division of abbeys and regions that the Meuse River was considered a border over a fairly long stretch. If Maastricht was considered a settlement on the left bank an exception was made because Louis the German would then receive property west of the Meuse, in the area donated to Charles the Bald. In an analysis of the meaning of the term *districtum Aquense* Flach concluded that it was a special area exempt from the normal exercise of power and related to market activities, minting and exacting toll.[92] In a study on the topographical development of Maastricht I suggested that the Maastricht *districtus* was not situated on the west bank but on the east bank.[93] If the *districtus* was located on the east bank the Meuse was indeed a border between the kingdoms of Charles the Bald and Louis the German. The Maastricht *districtus* might have had the same character as that in Aachen and be related to trade and exacting toll. Minting, however, must have been a minor activity. There are nevertheless neither much archaeological remains from the Carolingian period on the east bank.[94] The river probably washed away part of the settlement and facilities for landing boats because it moved in the course of time in an easterly direction. The east side is the erosion side. At first sight it seems strange that an important settlement was on the threatened bank of the river. In a study of the location of Merovingian sites along

Fig. 14.7
Finds from the Carolingian period in Maastricht. The background map is the cadastral plan c. 1830 with the thirteenth and fourteenth century town walls. Cemeteries: see table 14.1.



(77) Theuws 2005, 2007a. (78) Dijkman 2016. (79) Pol 1995. (80) See for instance Depeyrot 1993, 169-171. I do not understand why he assigns some coin types to Maastricht. (81) Panhuysen 1990, 1991. (82) The written sources are silent on this church for a long time. The first contemporary references to the church date to the early eleventh century. However there are later sources that refer to gifts to the church in the second half of the ninth and tenth century (Bosman 1990, 18; Van Ommeren 1991, nrs 66, 86, 103, 104). (83) Panhuysen/De La Haye 2002, 115. (84) Verduin 2008, passim. (85) Janssen/Spitzers in prep., 292-293. (86) There should be a systematic analysis and publication of the excavations in Maastricht in order to arrive at a better understanding of the Carolingian remains in the town. (87) Einhardi, Translatio et Miracula S.S. Marcellini, C. 13. Van Ommeren 1991, nr 56. Translation: Dutton 1998, 122. (88) Mühlbacher 1906, 122. (89) Traiectum is traditionally identified with Maastricht, Utrecht could be another candidate but there is no knowledge of an important trading settlement there in the eighth century. It is neither likely that a mistake was made and that Dorestat was meant. (90) Nonn 1983, 189-193; Nelson 1992, 224-227. (91) All the elements in the treaty text are in the accusativus (Nonn 1983, 189). (92) Flach 1976, 341-351. The *districtus* was thus outside the control of the local count. (93) Theuws 2005, 111-114. A suggestion categorically rejected by Deeters (1970, 86). (94) Panhuysen 1997, 12-16.

the Rhine River in the Bonn area, Müssemeier concluded that almost all settlements along the river were at the erosion side.[95] She concluded that settlements that were related to the river were located as close as possible to the river. For that reason they were on the erosion side and not on that side where swamps and sand banks hampered river traffic. Other trading sites like Namur, Huy and Liège were also on the erosion side of the river.

Finally the modern name of this eastern quarter of Maastricht is Wyck, which might be related to *vicus* or *wik*.[96] With the suggestion that the *districtus* was related to trade and toll and was located on the east bank, we touch upon an old discussion on the alleged free status of the merchants and their wish to avoid the control by the bishop.[97] Deeters, however, pointed to the fact that there are no indications for the presence of free merchants.[98] This debate is also related to the old idea that early towns consisted of two cores: a pre-urban core and a merchant's settlement which was the driving force behind the process of urbanisation.[99] In this model the settlement was inhabited by dependent merchant's and craftsmen who worked under manorial conditions; they were not free entrepreneurs. Verhulst suggested that the changeover from merchants and craftsmen working under manorial conditions to rather free merchants doing busyness on their own accord and for a private profit engendered a new phase of urbanisation.[100] Verhulst dated this transition already to the tenth century although there are indications that this process continued over a longer period as the example of Vught/'s-Hertogenbosch shows.[101] Flanders will have seen early stages of this process. This means that when there was a merchant's settlement on the right bank of the Meuse in Maastricht in Carolingian times it will have been a settlement that was still functioning under manorial conditions, which is not surprising in view of the strong control exercised by the king and the bishop over the settlement(s).[102] However, the bishop will not have controlled the merchant's to a great extent for the settlement was under royal control, unless the bishop acted as his representative. King Louis the Child (900-911) donated the right to mint and extracting tolls at Maastricht to the bishop of Liège before 908 showing that these rights were (still?) in the hands of the king by that time.[103] Unfortunately it is not indicated that these rights were related to specific locations in Maastricht.[104] A later source (a charter of Lothar III, 1132) seems to indicate that the *homines imperii* and *homines episcopi* were not topographically separated communities in Maastricht.[105] Another group mentioned is the *familia Sancti Servatii* next to the *familia sancti Lamberti*.[106] The *homines imperii* seems to consist of more people than just the *familia sancti Servatii*, the persons related to the abbey of Saint-Servatius, which was under royal control. Actually in view of the limited amount of property of the abbey in Maastricht itself[107] it could be that the *familia sancti Servatii* is relatively small compared to the *homines episcopi* and the other *homines imperii*. This can also be concluded from the stipulation in a later source (1132) that foreign people who wanted to settle in Maastricht became *homines imperii*.[108] So there might have been two major communities (*homines imperii* and *homines episcopi*) and the *homines imperii* were probably divided in a small *familia sancti Servatii* and the other 'men of the king'. To what extent this organisation of the population of Maastricht already existed in Carolingian times cannot be extracted from the written sources, but it is possible that it existed already in late Merovingian times.[109] There are no indications that free men were settled in Maastricht.[110] To what extent the situation in the early twelfth century with a mixed population already existed in Carolingian times cannot be determined on the basis of the written evidence. It is possible that the three communities lived relatively separated in those days.

Leupen drew attention to the *Gesta Fontanellensis Coenobii* written during the years 833-840.[111] In the *Gesta* the story of Wando is recounted. Somewhere between 719-747 he was sent in exile to Maastricht. The *Gesta* indicate Maastricht as a *castrum* three times. Leupen concluded that by the time the *Gesta* were written Maastricht was fortified. Not all of Maastricht, but only the abbey of Saint-Servatius on the initiative of the king to defend it against the Vikings. This fortification then most likely dates to the 830's. The *vicus* or *districtus*, like Dorestat must have been left undefended. Unfortunately no remains of the *castrum* are yet discovered. I suggested that the later course of a number of streets indicated the presence of a circular fortress.[112]

Carolingian Maastricht could thus consist of three elements: the royal abbey of Saint-Servatius which was turned into a fortress, habitation around the church of Our Lady (possibly only within the old Roman walls) and a trading settlement under direct royal control on the east bank of the river. Could this topographical situation be related to the three communities in Maastricht mentioned above? The Roman bridge was probably still an important connection between the habitation on the east and west banks. I suggested before that the Bredestraat (indicated as *Via Regia* in the past) formed an important connection between the bridge, the area around Our Lady and the Servatius abbey (fig. 14.9).[113] It probably replaced the course of the Roman road between the two areas. Maybe it continued along the southern limit of the Vrijthof Square and turned north-west of the abbey church.[114] It is impossible to tell when this connection became important, maybe this was only in Carolingian times. Of all these elements the Servatius abbey was most prominent. Almost all texts from the Carolingian and Ottonian age relating to Maastricht deal with the abbey. The church of Our Lady is not mentioned and obviously turned into insignificance compared to the abbey. What caused this dramatic change in Maastricht's topography? I will come back to this question after I dealt with the evidence of the Carolingian period from the Vrijthof excavations.

How do the observations at the Vrijthof Square fit into this model of Carolingian Maastricht? First of all we expected to discover a lot of evidence on the Carolingian age. The abbey of Saint-Servatius and its immediate environs were after all considered to be an important core of 'Maastricht' in the Carolingian age. When working on the evidence we were at first disappointed, then flabbergasted and now curious on how we have to imagine Carolingian Maastricht. The number of Carolingian pottery shards recovered is extremely low (see table 5.1). It is too low to suggest that there was habitation on the site after 750. In Carolingian times the square must have been an open area. However, in the northern part of the square area there were graves as well as remains of habitation dating to the later seventh and early eighth centuries. In the late seventh and early eighth century the habitation and the cemetery were contemporary, but the burying of dead persons probably continued after the habitation had disappeared.[115]

The remains of the habitation consists of postholes, wells, ditches, a substantial number of deep pits and two long rectangular dug in structures related to activities with fire. The deep pits and the long structures related to fire are not known from rural sites. The habitation did not last very long, probably no longer than c 75 years, but it could as well have lasted only 25 years because the long date range of the material culture need not be identical to the duration of the habitation. It might be shorter. This short-term habitation is not part of a long-term settlement of the area; there is no previous or later habitation on the square area. The recorded habitation thus seems to be of a temporary nature. Nevertheless a large number of deep pits were dug that must have functioned as latrines (see chapter 5). Our first thought, based on the stratigraphic position of the pits, was that the deep pits were dug during seasonal meetings on the square in Carolingian times, a perfect example of meeting place archaeology and the importance of open spaces in an early town. This conclusion is however impossible to substantiate because there is hardly any pottery from the Carolingian period in the deep pits. It is difficult to imagine that such meetings had an a-ceramic character. We concluded that the deep pits were an element of the short-lived habitation in the later seventh and early eighth century. One possibility is that the traces of habitation, the pits (latrines) and long rectangular structures are the remains of habitation related to the building of the early Carolingian *basilica*, a kind of workers village.[116] However, there are no indications of craft activities, for instance stone workers who may have left easily identifiable waste.[117] Whatever is the case, this habitation did not develop into a *vicus monasterii* that determined the development of so many early towns.[118] The Vrijthof area became an open space again.

But what about the Carolingian graves? It is possible that a number of graves on the site were associated with this short-lived habitation and were they connected to a cult place? One would expect this to be the case in a Carolingian centre, but it is not certain in view of the structure of the cemetery as a whole. It does not show the compact dense use like the Merovingian cemetery. The number of graves is not very large. Eighty-two graves were identified, but a number of graves were certainly lost. When there were 125-150 graves and the cemetery was in use between c. 700 and 825 there was c. one burial a year. This seems to be too low a number for a *vicus* although it is known that the Carolingian habitation to the west of the Meuse was limited. But was it that limited? Could this cemetery be the cemetery of lay people dependent of the abbey? One argument for this proposition is that the ancient clear western border between the Vrijthof cemetery and the area to the west was not respected when the Carolingian cemetery was in use (see fig. 12.5). This suggests a relation between the abbey and this cemetery. But in that case too the number of graves seems to be low. Could it be that this burial ground takes in an exceptional position in the burial landscape of Maastricht? Are there alternative interpretations possible? Could it be that the graves might be those of outsiders and their families working on the Carolingian *basilica* who died? The location might have been chosen because the site had already been used as a cemetery.[119] The Carolingian burials could form a kind of 'strangers cemetery'. It was probably kept in use after the habitation disappeared but we do not know for how long. An attractive interpretation is that it continued to be used as a strangers cemetery and that occasionally persons were buried there for instance when religious festivals were organised.

It is difficult to identify archaeologically the seasonal meetings that must have taken place in the open area to the east of the *basilica*. In the eighth and the ninth century there are several references to the feast day of Servatius on the thirteenth of May.[120] These feast

(95) Müssemeier 2012, 30. (96) On the name Wyck: Schrijnemakers 2014, 274-284. (97) Ennen 1987. (98) Deeters 1970, 115 [opzoeken] See Schrijnemakers for an overview of this debate (2014, 281-284). (99) See for this debate Verhulst 1999. (100) Verhulst 1999, 56. (101) Huijbers 2012. (102) Deeters 1970, 86-100. (103) Van Ommeren 1991, 39-40; Deeters 1970, 94. (104) Later sources seem to indicate that the *homines imperii* and homines episcopi were not topographically separated communities but lived mixed in Maastricht. (105) See for an extensive discussion: Deeters 1970, 96. (106) Deeters 1970, 111; Dutton 1998, 123-124 (*Translatio et miracula sanctorum Marcellini et Petri* by Einhard); Van Ommeren 1991, 32. (107) Hackeng 2006, 57-72. (108) Deeters 1970, 96. (109) It might have come about at the time of the granting of immunity to the church of Our Lady in the late seventh century, which must have created a difference between the royal people and the people attached to the Church of our Lady (see Deeters 1970, 93-94 on the problems surrounding the information on this immunity provide by Nikolaus in the twelfth century). It could be that until that time the entire population of 'Maastricht' was at least nominally under royal control. However within that group there might be strong social differences depending on how close one was to the king. Representatives of the king such as a *domesticus* or *praeses* or *comes*. (110) Deeters sketches an interesting image of how this community of unfree developed into the *cives* of Maastricht (Deeters 1970, 58-66, 110-118). (111) Leupen 1996. (112) Theuws 2005, 106-111. (113) Theuws 2005, 109-110. (114) The road to the west of the abbey (Sint-Servaasklooster) was an important connection in later times that obviously could not be built over. Two big arches connect the west work of the church with the deanery to the west since the twelfth/thirteenth centuries. (115) The date range of some of the ^{14}C dates of skeletal material allows this conclusion (see chapter 12). (116) Pesch 2005, 15. (117) In trench 2 directly to the east of the apse of the church a few crucible fragments were found. They have not been dated yet. (118) Verhulst 1999. (119) There could be a direct continuity of burial from Merovingian to Carolingian times but this is not certain.

days will have attracted large crowds that may have camped in the open area to the east of the basilica. This sounds attractive but then again the question is: why did they not leave any pottery shards on the site? Some of the visitors probably died in Maastricht. They could have been buried on the cemetery that was already in use for strangers. This sounds like an attractive hypothesis but it is impossible to prove. Again, one argument could be the relatively small number of graves in this cemetery. Moreover, in all the suggested alternatives up till now no use has been made of the structure of the cemetery with three groups of burials, each comprising graves of men and women. However, at this moment we cannot establish to what extent these men and women in a group were related or not. If it is a strangers cemetery, why were there three groups? The model of the strangers cemetery predicts that there are hardly any relations between the persons in the cemetery. Future DNA and Isotope analyses might provide interesting answers.

This brings us to the burial landscape of Carolingian Maastricht. Where was everyone buried? Explaining the relatively small number of Carolingian burials is one problem, explaining why large scale burial on the site in the late Merovingian period stopped another. Where did the burial community responsible for the densely occupied Merovingian cemetery bury their dead after AD 700? Had it disappeared? If we accept a tripartite structure of Maastricht with the royal abbey of Saint-Servatius, the episcopal church of Our Lady and a trading settlement on the right bank we can expect that several burial grounds must have been present. The abbey of Saint-Servatius housed a number of clerics who will have been buried on the Servatius cemetery. These clerics certainly did not live in complete isolation. There must have been a community (however small) of laymen next to it that was vital to the upkeep of the abbey. We expected to find their settlement at the Vrijthof Square, but it was not there. It might have been located to the west of the abbey where later the remains of the deanery were discovered at the Sint-Servaasklooster site but there too, Carolingian features were extremely rare. And where were the lay persons related to the abbey buried? Is the Carolingian cemetery at the Vrijthof site their burial ground after all? We suggested, in view of the relatively small number of graves that it could not be. The division in three groups however is difficult to relate to a strangers cemetery unless strangers from different areas were buried in different locations.

One can expect that the clerics of the church of Our Lady were buried near their church although we do not know exactly where. A community of lay people must have been attached to this church too. We have no idea where they were buried. The same goes for the supposed community on the east bank of the river. The Carolingian burials (sarcophagi) at the Lage Kanaaldijk site are most probably related to a privileged group that was allowed to bury (some of) their dead in that location. So for Carolingian Maastricht it is not only difficult to find the whereabouts of the living, it is also very difficult to find the dead.

Why is it so difficult to find Carolingian Maastricht? What happened to the town? There are in principle two sorts of answers possible. One is that the archaeological invisibility is related to the nature of the archaeological record; another is that it is related to developments in the 'town' in the early eighth century.

It is possible that the nature of the archaeological record of the Carolingian period is quite different from that of the Merovingian period. New types of houses, other ways of dealing with garbage, destruction of the Carolingian layers by later building activities, a different way of fetching water and other factors could be responsible for this. In other words a totally different way of living might be responsible for the different archaeological records of the Merovingian and Carolingian periods respectively. There is a complicated stratigraphy in and outside the walls of the Roman fortress with 'black layers'.[121] Some of these layers were, however, formed in the Merovingian period but some (inside the walls?) could be Carolingian. Is it possible that the habitation in the Carolingian period restricted itself to an area inside the old Roman walls? Most of the dots (Carolingian finds) around the church of Our Lady on the map in figure 14.5 are within or at the walls.[122] If the nature of the archaeological record is responsible for the invisibility of Carolingian Maastricht why is there not a larger scatter of pottery over the area of the town? If cellar digging from the thirteenth century on is responsible for the destruction of Carolingian layers why don't we find the material elsewhere in the spread out soil? Can we imagine that the destruction of Carolingian layers is so drastic that almost everywhere the Carolingian features have disappeared but the Merovingian ones remained? It is most unlikely. The invisibility of Carolingian Maastricht, the termination of craft activities and minting, and the difficulty to find the dead are more likely related to fundamental changes in eighth century Maastricht.

One fact comes to mind when one tries to explain this development: the transfer of the episcopal seat to Liège. This is an evenemential explanation where there might be more structural reasons too. The timing of the transfer of the episcopal seat to Liège is a matter of debate. Some scholars advocate a transfer already early in the eighth century by bishop Hubertus, the successor to the murdered Lambertus, who transferred Lambertus' body to Liège. Others opt for a more gradual transfer of the seat and suggest that this was a fact only late in the eighth century.[123] One of the arguments of Kupper for a late transfer is that in the *Vita Landiberti* (c. 727-743) Liège is indicated as *villa* whereas Maastricht is a *civitas*.[124] We probably have to consider different aspects of such a transfer of seat: a practical one (*de facto*) and a formal one (*de iure*).[125] The formal transfer could indeed have taken place only later in the eighth century. In terms of practices this might already have happened under the episcopacy of Hubertus. It is generally acknowledged that he spent a lot of energy in creating a cult centre in Liège.[126] Most of Hubertus' attention went to Liège, not to Maastricht. There is no need to discuss here the reasons why. What is important is that Hubertus may have spent most of his time in Liège. This means that most of his entourage will have been in Liège too. He may not have transferred the seat officially but he may have done so in practice. This would have meant a serious blow to Maastricht as a centre. A community of clerics moved elsewhere, the artisans probably followed, as well as a part of the trade and the collection of agricultural products. The decline started early in the eight century and it is thus conceivable that already under Hubertus the seat of the bishop was *de facto* in Liège. What remained was the *basilica* of Saint-Servatius to which probably a community of clerics was attached but probably without much status at that time. The episcopal community around the church of Our Lady and in the *castrum* shrunk to insignificance and became a relatively isolated spot in the landscape compared to the Merovingian period. In Merovingian times most attention was centred on the episcopal church in the royal *castrum*. Parallel to the decline of the episcopal church and related community in Maastricht the importance of the Saint-Servatius cult place grew in the eighth century. It developed into an abbey under the control of Charles Martel and the Carolingians.[127] The cult place was taken over by the Pippinids/Carolingians and became for that reason a royal abbey.[128] The eighth century may thus have seen a change in the relative status of both churches in favour of the abbey of Saint-Servatius.

This explanation for the decline (and archaeological invisibility) of Carolingian Maastricht implies that it went through a period of decline in the eighth and ninth centuries because the bishops turned their back on the 'town' and the Pippinids were not able, or more likely, did not want to develop a former episcopal centre that resisted their power for such a long time.[129] They turned to the Servatius cult place and to Liège. Was the growing interest of the bishops, especially that of Hubertus in Liège the only blow to Maastricht? What about the people of the king and the representatives of the king? They do not seem to move. Were there not other more structural processes responsible for its decline?

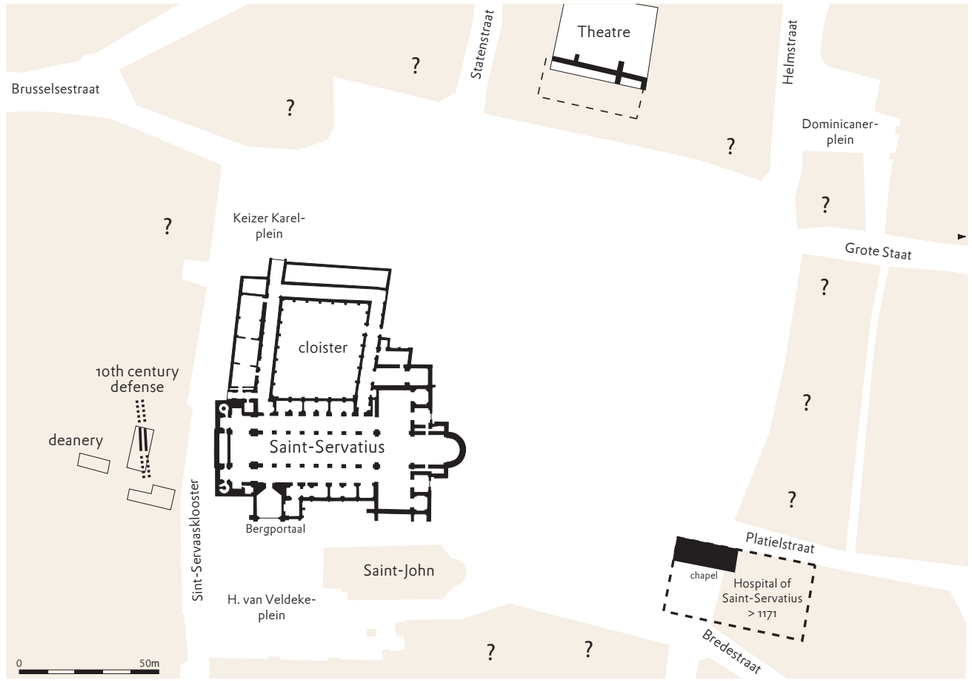
The answer is probably in the affirmative because it was not only Maastricht that went through a period of decline in the eight and ninth centuries. All the Merovingian *vici* along the Meuse seem to have gone through such a period of decline (or at least for the moment a period of archaeological invisibility).[130] Verhulst and others stress the minor importance of the Meuse valley for international trade in this period. The 'towns' of the Meuse valley were in their view mainly dependent on regional trade and 'town' hinterland relations. The archaeological evidence from these towns seem to substantiate this model although a serious analysis of Carolingian international trade on the basis of archaeological finds has not been carried out up till now. If all the centres along the Meuse River suffered from structural decline the move of the episcopal court from Maastricht to Liège, until then only a villa, must have hit the 'town' twice as hard. Maybe it was for that reason why it took Maastricht so much time to recover. As far as we can see now this took more time than in the other centres along the Meuse.

Maastricht in the tenth to twelfth centuries

The urbanisation of Maastricht in the Central Middle Ages (900-1200) seems to take place at a very slow pace. The archaeological remains of the urban fabric are almost as rare for the tenth and eleventh century as they are for the Carolingian age, with the exception of the area around the abbey of Saint-Servatius where a number of prestigious buildings appeared (fig. 14.8). Archaeological remains of the urban fabric of Maastricht in the present centre of the 'town' have not been uncovered on a large scale. There are snippets of information from a small number of sites. The finds we have (see below) suggest that the starting point for the development of Maastricht as a medieval town is not a settlement on the west bank of the Meuse river but the abbey of Saint-Servatius that was turned into a fortress in the ninth century. This is also the reason why Servatius is considered the mythical founder of the town. So the model that Maastricht as a town developed continuously and in a linear, evolutionary way with the Roman fortress as focus point must be discarded.[131] At the Sint-Servaasklooster site the remains of a new tenth century double wall were discovered that could be an element of new defensive structures.[132] By the time the urban fabric of Maastricht started to develop on the west bank of the Meuse River the Roman *castellum* walls must have been in ruins. The abbey of Saint-Servatius is not a peripheral outlying element to a town that developed along the riverbank, on the contrary it is its starting point. How Maastricht developed into the thriving town of the thirteenth century,[133] how its patterns of

(120) Van Ommeren 1992, nrs 41, 46, 60, 61. (121) Panhuysen 1984, 73-76. Unfortunately there is not much further information on these layers yet. (122) Before we can interpret these finds a detailed examination of the excavation data is necessary. (123) See Kupper 1984a, 1990. (124) Kupper 1984a, 24. (125) Van Berkum 1986. (126) Kupper 1984a, 1990; Theuws 2001a. (127) That Charles Martel controlled the cult place can be deduced from the fact that he sent Wando in exile to it (see chapter 1). Deeters 1970; Hackeng 2006. (128) There is no need to suggest an exchange between the king and the bishop to explain the royal nature of the abbey in the Carolingian period (Leupen 1997). The idea still has its adherents (Panhuysen 2011, 2013) but is (correctly in my view) discarded by other historians (the most outspoken: Dierkens 2000). Moreover this would imply that an episcopal church in the *castrum* only came into being in the very late seventh or early eighth century (under Pippin II). Such a late date is highly unlikely. There is no problem with an episcopal church in a former Roman *castrum* under the control of the king. The *basilica* of Saint-Servatius might not be an 'episcopal church' in a strict formal sense but under the control of powerful families of which a member could be bishop. The Pippinids would be the next in line to control the cult place. (129) Theuws 2001a. (130) Verhulst 1999, 47-51; Theuws 2007a. (131) See also Theuws 2005. (132) Verduin 2008. Maybe they are related to a more or less circular fortress as was suggested by me in 2005. At the time of my suggestion the existence of this wall was forgotten although it had been excavated in 1980! If there was already a Carolingian *castrum* this stone wall might have replaced an earthen wall. See Panhuysen 2013, Farbabb. 36 for a very hypothetical suggestion of the course of the tenth century wall, which follows more or less the western halve of the fortress as I suggested. (133) G. Panhuysen 1933.

Fig. 14.8
Buildings dated to the tenth to twelfth centuries in the Vrijthof area.



streets came about and how the religious infrastructure developed is difficult to follow.

In some excavations structures from this period have been discovered (see fig.14.9). The locations indicated on figure 14.9 do not all contain elements from the entire Central Middle Ages or represent equal types of structures.[134] Some represent buildings, others layers, pits, wells and ditches.

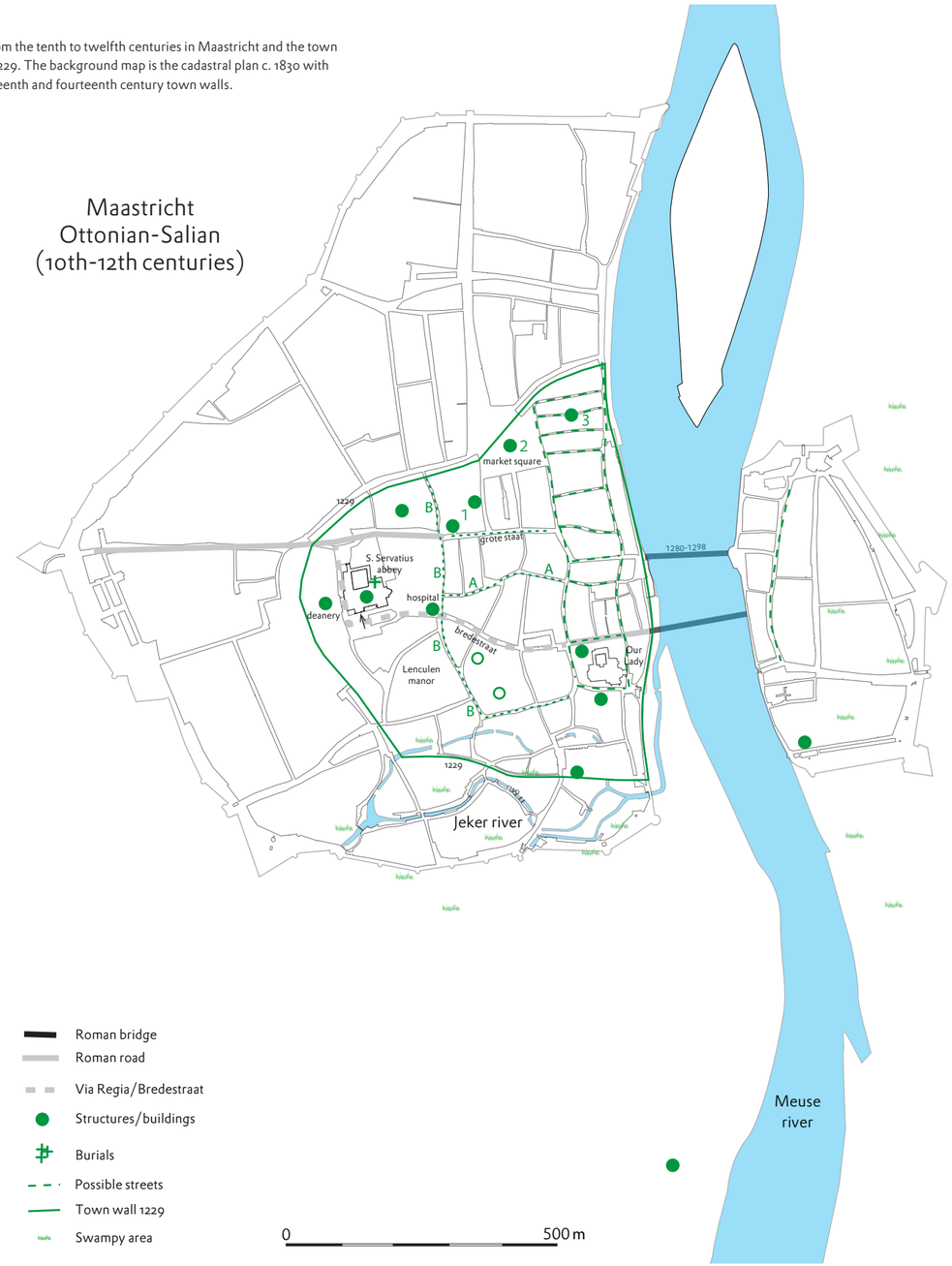
Important building activities took place around the *basilica* of Saint-Servatius (see chapter 5). First of all the grandiose extant *basilica* was built.[135] To the north of the Vrijthof square and the Roman road a majestic building appeared. Its construction is dated to the early eleventh century.[136] In the south-east corner the hospital of Saint-Servatius appeared and to the west of it buildings of the deanery.[137] In the course of the tenth-eleventh century a truly prestigious quarter was created around the basilica.

New building activities took place in the quarter of the church of Our Lady too. First of all a new large Romanesque church was built, the one that still stands.[138] An important part of it dates to the first half of the eleventh century. North and south of it building activities took place. These might be related directly to the church of Our Lady like a part of the building activities around Saint-Servatius were related to the abbey.

Of great interest are features dating to the tenth and eleventh centuries in the Entre Deux excavations (fig. 14.9, nr 1), the find of a well at the Market Square (2) and traces of habitation in the Marktmaas excavation (3).[139] They seem to form a band of habitation traces stretching from the northeastern corner of the Vrijthof Square to the point where the 'town' wall of 1229 reaches the Meuse in the north. These are features related to the early urban fabric and not, as far as we can see now, to church complexes. They include remains of buildings, cellars, pits, wells and ditches. In the Marktmaas excavation this habitation seems to start already before the end of the ninth century. This is thus one of the earliest habitation cores in Maastricht in the post-Carolingian era.[140] Features dating to the late tenth and early eleventh century are relatively rare, but then in the course of the eleventh and twelfth centuries habitation features were distributed everywhere between the Market Square and the Meuse river except in the areas

(134) It is not intended here to give a detailed overview of all individual structures. It is not possible since for most excavations only short notices exist. My only purpose is to sketch the further general development of the town. (135) Panhuysen 1990, 1991. (136) Hulst 1994. (137) For the hospital see chapter 2. For the buildings of the deanery: Verduin 2008. (138) Bosman 1990. (139) The Marktmaas excavations have not yet been published but Thomas Spitzers allowed me to have a look at their summarizing chapter (Jansen/Spitzers in prep.). (140) We will have to await the final (upcoming) publication of the site to see what its character was.

Fig. 14.9
Finds from the tenth to twelfth centuries in Maastricht and the town wall of 1229. The background map is the cadastral plan c. 1830 with the thirteenth and fourteenth century town walls.



close to the Market Square and the Meuse river themselves. On the basis of this early archaeological evidence one is temped to equate the Market Square with the *forum* mentioned in a written text of the second half of the tenth century.[141] However, it cannot be excluded that there was more than one market, one related to the king, one to the abbey of Saint-Servatius, and possibly another one related to the bishop of Liège.[142]

A north-south oriented ditch was found not far from the Market Square. The excavators interpreted it as the western boundary of the settlement in the late eleventh and first halve of the twelfth century. This information would fit in quite well with a suggestion made by me before.[143] Instead of supposing a development of the 'town' from the old Roman fortress in the direction of the Market Square, I suggested that the Market Square developed just outside the fortress in which the Saint-Servatius abbey was located. The new discoveries in the Entre Deux and Marktmaas excavations seem to indicate that habitation in that area developed in the second half of the ninth and tenth centuries. So this area developed in an early stage of the urbanisation process instead of being later than an area around the old Roman fortress and the church of Our Lady. Moreover I suggested that the two streets that run exactly parallel to each other on the west bank of the Meuse river were an important element in the structure of the early town.[144] Multiple narrow streets connected the two parallel streets (in figure 14.9 these streets are indicated with a big broken line).[145] The north-south oriented ditch observed by the excavators of the Marktmaas site is more or less at the location of the western north-south oriented street. In view of the early dating of the features in the northern part of the town centre one could suggest that the habitation along the Meuse River developed from north to south, that is from the habitation next to the Market Square to the complex around the church of Our Lady. It is also possible that it developed from both cores. When it was decided to create a town wall of which the construction started in 1229 it had to include the various parts developed in the late ninth to twelfth centuries. First of all the abbey of Saint-Servatius which was already fortified, next the complex around the church of Our Lady and possibly a quarter to the south of it, but also the Market Square and the habitation along the Meuse River next to it. This explains why the northern course of the new town wall made the strange curve to the north. It had to include an already existing settlement.

How the town developed further is difficult to say on the basis of archaeological evidence, although some guesses can be presented on the basis of the street plan. One old east-west connection between the Meuse River and the Servatius complex might already have existed since Carolingian times: the Bredestraat or Via Regia. A new one, today called Grote Staat was probably (re)created at the location of the old Roman road.[146] It connected the habitation along the river with the open area that is now the Vrijthof Square. So there might have been two important east-west connections: the old Bredestraat and Grote Staat. The map with the streets of 1832, which is the background map in figure 14.9, shows that the areas to the north and the south of each of these two streets are organised somewhat differently. There are a number of north-south oriented streets at right angles to the Grote Staat.[147] In a southern direction they end on another (more narrow and thus less important?) east-west oriented street (Platielstraat/Achter het Vleeshuis, fig. 14.9, A) which seems to be located where the areas associated to the Groote Staat and the Bredestraat meet each other.[148] There were less side streets in the southern part. The area is thus less accessible than the northern part. In 1832 the areas north and south of the Bredestraat were less densely occupied, which might reflect a different development of the urban tissue compared to the area around the Grote Staat (fig. 14.10). The two areas associated with the Grote Staat and the Bredestraat seem to form a large block of land between the habitation along the river on the one hand and the Saint-Servatius complex on the other. The whole block is bordered on the west by a long line of streets (on figure 14.9 this line is indicated with B). This area might have been filled up with habitation in the tenth-thirteenth centuries (or later). The area to the west of this line B could have been entirely reserved for royal, ducal and ecclesiastical facilities. The excavations, however, did not provide evidence for the suggestion that the Vrijthof square was a tenth/eleventh century majestic creation connecting religious and royal power whereby it was raised several meters.[149] The Vrijthof square was only raised in late medieval and modern times. No indications for a planned lay out were found. Several prestigious buildings were constructed around the Saint-Servatius abbey at different times. Their floor levels cannot have been at the present level, so substantial archaeological remains of these medieval buildings may very well have been preserved below the present buildings, even in the presence of their cellars. It is uncertain to what extent the open space east of the abbey was conceived as a 'square'. That people gathered in this area is however plausible.

If this model is correct the central medieval town that developed since the late ninth century consisted of three elements. First there is a zone along the Meuse where trade and production might have been the dominant activities. The church of Our Lady is at the southern end of this zone. The written sources of the time show an active interest of the bishop in these activities. The church of Our Lady might next to being a religious institution also have been a focus of commercial and market activities. It might be a significant fact that next to the street leading down to the old Roman bridge, and thus in close proximity of the church of Our Lady, a church was built with Saint-Nicolas as patron saint. This patron saint is often associated with merchants.[150] It was dedicated in 1343,[151] which is a late dedication of a Saint-Nicolas church in northwestern Europe. At that time the old Roman bridge was no longer in use. It will have been this bridge which collapsed in 1275 and was replaced by the Saint-Servatius bridge, somewhat more to the north, in the years 1280-1298.[152] The combination of a Saint-Nicolas church and a river crossing is a regular phenomenon since 1087 when the saint became popular.[153] In the Maastricht case it is strange that a Nicolas church was created at the 'model location' but at a time that the Roman bridge had already collapsed and the route directly north of the church of Our Lady must have serious declined in importance. Nevertheless the (late) creation of a Nicolas church might still be an indication of the presence of a merchants quarter that was much older and related to the older bridge before it collapsed.

Second there is the habitation area with the Bredestraat and the Grote Staat as important axes which seems to have two parts, a northern one in which the Grote Staat and Market Square are situated and a southern one with the Bredestraat. Habitation and craft production might have been the dominant focus in this zone. The development of habitation in this zone might not have de-



Fig. 14.10
Maastricht c. 1830. Cadastral map. In red religious institutions dating to the Merovingian/Carolingian period. The buildings indicated are of a younger date. In blue religious institutions dating to the thirteenth century. 1. Parish church of Saint-John; 2. Franciscan monastery; 3. Dominican monastery; 4. Witte Vrouwen monastery; 5. Beguines; 6. Parish church of Saint-Matthias; 7. Saint-Joris chapel; 8. Saint-Hillary chapel; 9. Saint-Vincent chapel; 10. Augustinian monastery; 11. Saint- Amor chapel?; 12. Saint-Jacob chapel?

(141) Van Ommeren 1991, 44, nr 97 (*Miracula Eugenii*, see Dierkens 1985, 200-206). (142) Deeters 1970, 106-107. (143) Theuws 2005, 115-117. (144) Van Nispen tot Sevenaer already drew attention to this configuration of streets (Van Nispen tot Sevenaer 1926a, 23-24). (145) Even the bends in the streets run parallel. (146) This is not to say that the old Roman road remained in use continuously since late Merovingian times. The Bredestraat may have eclipsed this street in Carolingian times. (147) The presence of the Dominican monastery on the Entre Deux complex (nr 1) will have prevented the further fragmentation of that block. (148) I wonder why this street shows a curve instead of being more or less straight. Could it be that it had to be led around an existing structure? (149) See Panhuysen/Leupen 1990; Panhuysen 2013, 383. (150) Blaschke 2012. (151) Panhuysen 1984, 41. (152) De La Haye 1984, 17-21. (153) Blaschke 2012; Blaschke/Jäschke 2013.

veloped from two directions with the Saint-Servatius church and the church of Our Lady as starting points but might have known a development of its own, although there will certainly have been a relation with developments in the other zones.

Third there is the 'elite zone' further to the west where we find the abbey of Saint-Servatius, the royal manor (Lenculen) and the *palatium* although the location of the palace, which was according to written sources near the abbey of Saint-Servatius, has not yet been identified with certainty.

Finally there is another zone in the delta of the Jeker River to the south of these three zones. This zone is characterised by craft activities as appears in 1096 when the bishop of Liège donates two mills (*super fluvium Jechoram*) to the church of Our Lady.[154]

At some point of time habitation developed to the north of the first town wall where the wood market was located and the parish church of Saint-Matthias was built in the thirteenth century.[155]

A final remark on the topography of the town concerns the north-south streets that depart from the corners of the Vrijthof Square. Such streets are present in all corners except the south-western one. This situation suggests that something prevented a street from being created there. I suggested before that the location of the Saint-Servatius cloisters to the north of the church (instead of to the south), the presence of the prestigious Bergportaal in the southern wall of the church (fig, 14.9, arrow) and the location of the Lenculen manor were all related to the presence of a prestigious complex of buildings, which was possibly a royal complex to the south of the church.[156] Moreover, the Via Regia (Bredestraat) might run from the church of Our Lady to such a complex. One can add now the absence of a north-south oriented street in that corner to those arguments.

This ends the overview of the (hypothetical) topographical development of the early town of Maastricht. Unfortunately lack of evidence makes it impossible to dwell on the development of the settlement on the east bank of the Meuse River. It is possible that a similar type of settlement developed there as it did on the west bank of the Meuse River.

Is it possible to relate this model of the topography to the information on the inhabitants of Maastricht and their lords in the written sources of the Central Middle Ages? In a much discussed pair of charters for the chapter of Liège and the abbey of Saint-Servatius in Maastricht from the early twelfth century, important terms related to the status of the inhabitants of Maastricht can be found. The Maastricht charter is a *falsum* and the Liège charter suspect, but both might relate to an example now lost.[157] In the Maastricht charter the *ius forense et civile* are mentioned as it is that these rights impinge on the rights of the abbey of Saint-Servatius. Deeters concludes that these rights, related to trade and the market, tend to change the juridical position of the dependent people of the abbey. He concludes that *ius forense* and *ius civile* are equated and that it is exactly the rights related to trade and the market which change the relations of dependency between the abbey and its *familia*.[158] One could, in order to create a vivid image of this process, suggest that a change of rights moved from the bank of the Meuse River to the abbey. Is it possible to relate this crucial societal process to the topography of the town? Deeters suggested that the dependants of various lords lived in a mixed way in the town. This suggests that there will not be a clear division visible in the topography of the town between the *homines imperii* and the *homines episcopi*. These terms relate to the juridical status of the persons themselves. The juridical status of the plots of land they lived on might be different. This is what one can learn from studies on Carolingian manorial organisation: the status of the land (*mansus*) might be different from the status of the dweller. Keeping that in mind one may ask whether there were zones in Maastricht with different juridical statuses. Basically Maastricht had two lords: the king and the bishop. The abbey of Saint-Servatius was part of the royal complex. This bipartite power structure in Maastricht might be related, but this is hypothetical too, to the division of the part of the central zone of the town. Is the northern part with the market 'royal', and the southern part (next to Our Lady) episcopal? It is curious that the zone along the Meuse River seems to have a similar division. If one extents line A to the east in the direction of the Meuse River one can see that the northern part has more small alleys at short distances to the river bank than the southern part with the church of Our Lady. The *ius forense* and *ius civile* will have been developed most strongly in the first riverine zone, then in the second zone and finally in the elite zone. Could it be that the first zone along the Meuse developed exactly because of the process of change from a manorial directed exchange to a rather commercial exchange? Could it be that the trade moved (back) from the east bank to the west bank in order to escape the manorial directed trade on the east bank, controlled by the king and the bishop? This process might be enhanced by the 'strangers' (merchants?) who wanted to settle in Maastricht and who fell under jurisdiction of the king and had to become *homines imperii*. In this model there are also elements that are difficult to explain. Could there be variations in royal and episcopal control, for instance a difference in control in various parts of the 'town' (east and west bank)? Urbanisation does not seem to be a straightforward and transparent development. In spite of this suggested division of the land (and thus rents) the central zone is most likely a zone with a juridical mixed population: the *homines imperii*, the *homines episcopi* and even members of the *familia Sancti-Servati* might have lived there. Members of these communities could certainly also be found in the third zone. In this zone however they might have lived somewhat more separated in the immunity of the abbey and on the Lenculen manor. The number of *homines episcopi* will have been small in this area. This suggested relation between the topographical development of Maastricht in the Carolingian period and the Central Middle Ages, the lords of the land and the juridical status of the dwellers is of course hypothetical as is the reconstruction of the topographical development itself. It is however in my opinion a good model to think with and has the capacity to trigger a debate and new problem-oriented archaeological research in the town. It is also a good way of realising what the immense potential is of all the archaeological datasets produced during the past decades of town archaeology in Maastricht but which are now hidden in the store rooms. The datasets can provide us with information on the most crucial processes that shaped medieval and modern society: Christianisation, urbanisation, commercialisation of exchange, and social differentiation and emancipation of the mass of the population.

What did the Vrijthof excavations contribute to the understanding of the early town?

First they informed us on the complicated burial landscape of an early 'town' in Merovingian and Carolingian times. Moreover it triggered a debate on the social organisation of an early 'town' in the Merovingian and Carolingian periods and to what extent power relations and the urban fabric were interrelated aspects of 'town' development.

Secondly it drew our attention to the Carolingian problem Maastricht has. Even an area so close to the abbey of Saint-Servatius did not yield much evidence for the Carolingian period. This would not be a problem keeping in mind that it might have been an open site. However, the Vrijthof excavations underlined the image we already had on the basis of other excavations: Carolingian Maastricht is archaeologically quite invisible. This invisibility of Carolingian Maastricht remains a serious research problem. On the other hand it makes us realize that 'town' development is not a straightforward linear evolutionist or transparent affair. The core of urban activities might have shifted to the east bank of the river. This adds to our image a 'town' that might still wander in the landscape and that the fixation process, producing the structure of the town as we know it today, only starts in the eleventh century.

Third they have provided an insight into the features of a temporary settlement that might be related to the building of the Carolingian *basilica* of Saint-Servatius.

Fourth they drew our attention to the meaning of open spaces and temporary gatherings for the development of an early town. These ephemeral features might be as important to early towns as the built environment was.

Fifth it triggered a debate on the relation between the social status of the inhabitants, trade and markets, the lords of the land and the topography of the town in the Central Middle Ages.

These conclusions mark the end of this chapter but not the end of the search for early Maastricht. There are still many excavations of which the results have to be studied and published. When this gigantic work has been done Maastricht will beyond doubt be one of the best examples of how a 'town'/town developed from late Roman times to the present.

(154) Deeters 1970, 94-95. **(155)** The church was mentioned for the first time in 1298. **(156)** Theuws 2005, 93-95, see also chapter 5. **(157)** See the discussion in Deeters 1970, 61-64. **(158)** This development in Maastricht is part of a general development in Europe related to the creation of communes (Verhulst 1999, 119-131; Künzl 1997, 149-224). There are as far as I know yet no indications in Maastricht for the presence of a *coniuratio* in the eleventh/early twelfth century.

PART 2

CATALOGUE

15 Catalogue of contexts and finds

The catalogue printed below contains short descriptions of all numbered contexts, their associated finds, and finds without contexts that are related to burials discovered during the ROB excavations on the Vrijthof square in 1969 and 1970.

The information presented summarizes a larger set of data that was transferred into databases created especially for dealing with early medieval cemeteries. They are a context database, a grave finds database and a skeletal remains database. These databases can be consulted for more information. They are archived in the E-Depot Nederlandse Archeologie, or EDNA (the electronic depot of Dutch archaeology), and can be consulted at www.edna.nl.

This archive also contains the contents of this book's catalogue, consisting of the catalogue text (PDF), grave drawings (PDF or Adobe Illustrator CS5.1), scans of the find drawings (TIFF format), and find photographs (TIFF format). Moreover it contains scans of the original documentation and the digitized field drawings we made in the context of this project (Autocad). Finally some additional information created by us during the analyses of the burials, is added such as lists of persons present at the excavation, comments on photographs taken during the excavation etc. A manual with proper information is provided in the EDNA archive of this project.

The catalogue contains per grave the following standard list of fields. If no evidence is available, the field is omitted.

CONTEXT NUMBER
This is the number assigned to a context as defined by us.

CONTEXT TYPE
This indicates the presumed nature of the context, since not all contexts are graves.

TRENCH
This is the number of the trench in which the context was found.

BURIAL TYPE
This indicates the grave's type, most of them are inhumation graves.

GRAVE TYPE
This indicates the grave's construction type (see chapter 7).

GRAVE PIT LENGTH
This indicates the burial pit's greatest length.
In the database this field is called 'Exterior length'.

GRAVE PIT WIDTH
This indicates the burial pit's greatest width.
In the database this field is called 'Exterior width'.

ELEVATION BOTTOM
This indicates the absolute height (NAP) of the burial pit's lowest level.

ORIENTATION
This indicated the orientation of the grave (zero is to the east)

STRATIGRAPHIC RELATION
This lists stratigraphic relations between contexts.

DESCRIPTION
This discusses the observations made by Theuws and Smal when reconstructing the lay out of graves and the finds associated to graves on the basis of field drawings. It also contains arguments why a certain feature was included in this context as well as problems with the reconstruction. It also contains observations made on the position of skeletal remains.

PHYSICAL ANTHROPOLOGY
This summarizes information of osteoarchaeological research on human remains present in the find numbers allocated to this context. Moreover it is based on the content of the boxes with these find numbers. Sub find numbers for skeletal remains (for instance 1677-1 and 1677-2) have been assigned by the physical anthropologists in those cases where the remains of more than one individual was present in the find number. This was done independent of the archaeologists working on the finds and structures. During the excavation a general find number was usually given to a grave used to register all skeletal remains (often of more than one individual) and all pottery shards and other intrusions. Individual bones were not numbered. It is thus possible that different teams gave identical sub find numbers to skeletal remains and other finds (usually insignificant intrusions in the fill of the grave).
'Indeterminate' means that skeletal remains are present but they do not allow an identification of the sex of the deceased person.
'Indifferent' means that the sex identification is situated in the range between 'male' and 'female'.

FINDS
These are short descriptions of the objects found in the grave or assigned to the grave on the basis of the available documentation. More elaborate descriptions, including measurements and context data, can be found in the archived database. The capital letter before the description of the find is indicated on the plan of the grave.
For each find the following fields are given (from a large number of fields in the database):
- *Description of the object* (subclass in database terms) and material of which it is made;
- *Find number* (original find number to which we added sub numbers in those cases where more than one object belonged to a single find number);
- *Condition* (state of preservation, degree of fragmentation or missing);
- *Various measurements* (length, width, diameter) in millimetres;
- *Type:* typological identification according to a specified typo-chronological system (mostly Siegmund 1989 (abbreviated S, Franken AG (abbreviated FAG), Legoux/Périn/Vallet 2004 (abbreviated L/P/V) or various other publications);
- *Phase:* the phase and date of phase according to the typological system used;
- *Alternative type:* typological identification according to another typo-chronological system.

Maastricht date
The presumed date of the grave according to the general phasing system for Merovingian burials in Maastricht, which is more or less identical to that of the Franken AG. The methodology of the dating of individual finds and complete object assemblages from graves on the basis of these individual find dates is discussed in chapter 9. In short the following is relevant for understanding the catalogue:

The graves will be dated in Maastricht phases on the basis of the dates of their individual contents as follows:
- The date of the grave does not have to cover the complete date range of the objects, although this date range on the basis of the individual objects offers interesting research possibilities. A shorter time span than this complete range is aimed at, in order to gain some insights in the topo-chronological development of the cemetery, but only one that can be reasoned.
- This date should preferably correspond with the phase(s) to which the majority of the objects are dated.
- When a shorter time-span cannot be reasoned the complete date-range covered by the types is assigned to a grave.
- The date-range of the youngest type does not have to be indicative for the dating of the grave; but the youngest type can never fall outside the Maastricht phase(s) to which the grave is assigned; exceptions can be types of which the dating is questionable/insignificant/less reliable than the other dates.
- The most reliable dates are those of types, which already know a thorough research history. These are belts, brooches, and weapons.
- The majority of the pottery and glass vessels are supposed to be more subject to local production preferences than the other categories; their dates (which are based on borrowed typologies) have less influence on the final date of the grave.
- The object-types with a long date-range (types of which it is claimed that the chronological significance is not established yet, for example knives) have less influence on the final dating of the grave, but if these are the only objects in the grave, then the grave is dated according to this long date-range.
- If the date-ranges of de various object types are consecutive but do not overlap, than the last phase of the oldest object type will be incorporated in the final date of the grave.
- If the oldest type has a date-range which does not show an overlap, and neither falls in a phase just before the second oldest type (there is no connection between the phases), than it is considered to be a Merovingian antique. The date of this type has no influence on the final date of the grave.
- The beads do not have a strong influence on the final dating of a grave, only when they are the only find from the grave (most of the production is supposed to be locally organised, and the reliability of the dating method for the complete strings is delicate).

Finds without contexts
These are short descriptions of objects without contexts. They are enumerated after the numbered contexts.

Finds ascribed to the Vrijthof square excavation
Finds acquired by private persons which have been reported to archaeologists and that are told to originate from the spoil heaps of the Vrijthof square excavation.

Illustrations
Individual grave drawings are at scale 1:40. Traces or outlines of wooden containers or traces interpreted by us as such are indicated with a brown colour. Human remains are indicated with a grey colour. More or less complete grave finds are indicated in solid black, fragments of objects are indicated with a small circle, and beads are indicated with a small dot.
The majority of the finds are illustrated at scale 1:2, unless indicated otherwise. Coins are at a scale of 1:1. Complete pottery and glass vessels, weapons and knives are illustrated at scale 1:4. Photographs and drawings of pottery fragments are at scale 1:2 to show the character of the fabric and surface treatment.

Comments on some terms used
'Under conservation' means that before we took over the finds from the Bonefanten Museum these objects were brought to a laboratory for further treatment at an indeterminate moment in the past. We were not able to find out where the objects were. These objects could thus not be studied. We consider these objects as lost.
'Indeterminate' means that the object is present but cannot be identified.
'Unidentifiable' means that the object is not present anymore and can thus not be identified.

Beads
The beads were studied before we developed the description system for beads in Merovingian cemeteries in the Netherlands (Theuws/Van Haperen 2012). Most beads were identified on the basis of the classification by Siegmund (1998). The S in the type identification stands for 'Siegmund'. Beads have been given individual dates, the string ensembles have been given a Maastricht date on the basis of the dating of the individual beads.

1
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.94
Orientation	3

DESCRIPTION
Only a complete articulated skeleton is indicated on the drawing, no outline of a grave pit. On the field drawing the skeleton is placed at the extreme limit of the paper. It is not certain whether the grave was exactly found in that location or further south, that is off the limits of the paper.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

2
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.94
Orientation	4

DESCRIPTION
Only a complete articulated skeleton is indicated on the drawing, no outline of a grave pit. On the field drawing the skeleton is placed at the extreme limit of the paper. It is not certain whether the grave was exactly found in that location or further south, that is off the limits of the paper.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

3
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.94
Orientation	0

DESCRIPTION
Only a complete articulated skeleton is indicated on the drawing, no outline of a grave pit. On the field drawing the skeleton is placed at the extreme limit of the paper. It is not certain whether the grave was exactly found in that location or further south, that is off the limits of the paper.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Vessel (pottery)
Find number: 1714.1
Condition: missing

4
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	163 cm
Grave pit width	83 cm
Elevation bottom	47.94
Orientation	7
Stratigraphic relation	above context 5

DESCRIPTION
Only the outline of a grave pit, observed at one level only.

5
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	222 cm
Grave pit width	97 cm
Elevation bottom	47.94
Orientation	7
Stratigraphic relation	below context 4

DESCRIPTION
Only the outline of a grave pit, observed at one level only.

6
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	300 cm
Grave pit width	93 cm
Elevation bottom	47.94
Orientation	5

DESCRIPTION
Only the outline of a grave pit, observed at one level only.

7
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	247 cm
Grave pit width	115 cm
Elevation bottom	47.94
Orientation	4
Stratigraphic relation	below context 8

DESCRIPTION
Outline of a pit observed at one level only. Complete skeleton indicated, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1667.1
Sex WEA	male
Age in years	57-63

8
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	263 cm
Grave pit width	88 cm
Elevation bottom	47.94
Orientation	9
Stratigraphic relation	above context 7

DESCRIPTION
Only the outline of a grave pit, observed at one level only.

9
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	197 cm
Grave pit width	90 cm
Elevation bottom	47.94
Orientation	1

DESCRIPTION
Only the outline of a grave pit, observed at one level only.

10
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	209 cm
Grave pit width	81 cm
Elevation bottom	47.94
Orientation	8
Stratigraphic relation	below context 408 (408 might be located inside 10, indeterminate relation, see context 407)

DESCRIPTION
Only the outline of a grave pit, observed at one level only.

11
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	211 cm
Grave pit width	97 cm
Elevation bottom	47.94
Orientation	8

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated.

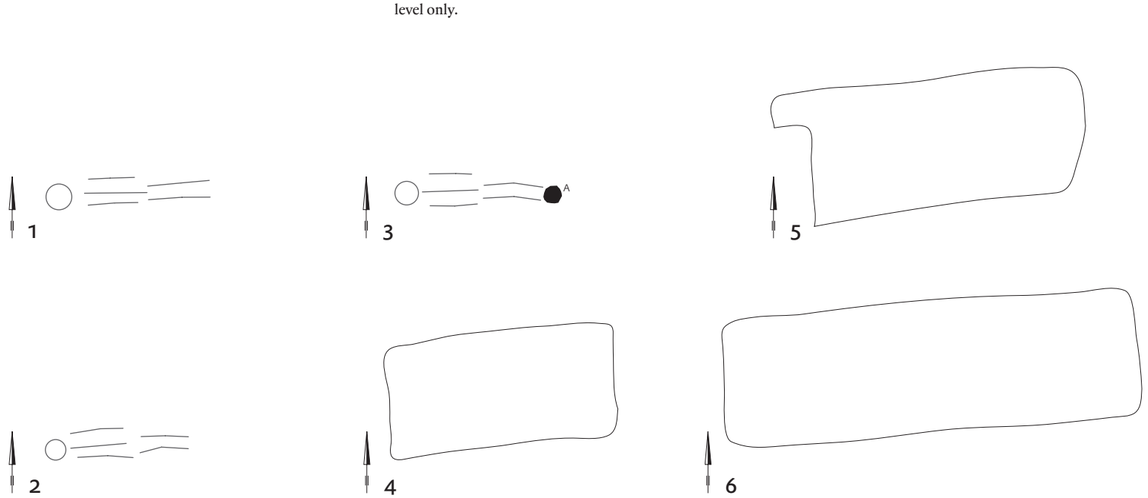
PHYSICAL ANTHROPOLOGY

Find number	1663.1 (articulated skeleton)
Sex WEA	male
Age in years	37 - 46
Male stature in cm	174.1

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Plate buckle (seax related?): copper alloy, triangular plate and shield tongue
Find number: 1664.1
Condition: complete
Type: FAG Spa 1d?
Loop length: 26 mm
Plate length: 34 mm
FAG phase: 7-8
FAG date: 585-640
Maastricht date: F-G (580/90-640/50)

B Seax: iron, incised lines on one side of the blade
Find number: 1665.5
Condition: complete
Type: FAG Sax 2.2
Blade length: 370 mm
Grip length: 171 mm



FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

C Rivet (seax scabbard): copper alloy with cast animal style decoration
Find number: 1665.1
Condition: complete
Type: FAG Sax 4.3B
Diameter: 22 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 71 (MR2: 630/40-660/70)
Maastricht date: G-H (610/20-670/80)

D Rivet (seax scabbard): copper alloy with cast animal style decoration
Find number: 1665.2
Condition: complete
Type: FAG Sax 4.3B
Diameter: 22 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 71 (MR2: 630/40-660/70)
Maastricht date: G-H (610/20-670/80)

E Scabbard entrance support (seax scabbard): copper alloy with engraved decoration
Find number: 1665.3
Condition: part missing
Type: FAG S-Sax 4.5
Length: 45 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

F Mount (seax scabbard): copper alloy fragments with copper alloy nails
Find number: 1665.4
Condition: very fragmented
Type: FAG S-Sax 4.5
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

G Scabbard nails
Find number: 1665.7
Number: 23

H Seax scabbard mount?
Find number: 1665.6
Condition: broken and parts missing
Type: FAG S-Sax 4.5
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

I Biconical pot (pottery): oxidized, roulette stamp decoration
Find number: 1666.1
Condition: complete
Type: Siegmund Kwt 3.13.
Maximum height: 97 mm
Rhineland phase: 6-7
Rhineland date: 570-610
Alternative type: L/P/V 415 (MA2-MR1: 520/30-630/40)
Maastricht date: E-F (565-610/20)

J Shards (pottery)
Find number: 1665.8-9
Condition: 2 fragments
Maastricht date: Roman

12
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	193 cm
Grave pit width	75 cm
Elevation bottom	47.94
Orientation	11
Stratigraphic relation	below context 40, indeterminate (see context 407)

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated.

PHYSICAL ANTHROPOLOGY

Find number	1674.1
Sex WEA	indeterminate (non-adult)
Age in years	12 - 14

DATE (FINDS)
D-G (510/20-640/50)

FINDS
A Glass beads: opaque red, undecorated
Find number: 1673.1
Condition: complete
Type: S-35.4
Shape: globular, compressed
Number of beads: 17
Combination group: D-G
Rhineland date: 530-640
Maastricht date: D-G (510/20-640/50)

B Glass beads: opaque green, undecorated
Find number: 1673.2
Condition: complete
Shape: globular, compressed
Number of beads: 12
Maastricht date: D-G (510/20-640/50)

C Glass bead: opaque black, undecorated.
Find number: 1673.3
Condition: complete
Type: S-31.1
Shape: globular, compressed
Number of beads: 1
Combination group: C-D
Rhineland date: 485-585
Alternative type: FAG c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: D-G (510/20-640/50)

13
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	250 cm
Grave pit width	125 cm
Elevation bottom	47.94
Orientation	3

DESCRIPTION
Outline of a pit observed at one level only. The grave pit is relatively large, two persons could have been buried in it. Complete articulated skeleton (1676) indicated. It is situated in the southern part of the pit. In the grave pit another skull (1677) is indicated. However in grave 14 a skull was found that was also given find number 1677. It is not possible to determine which of the skulls in find number 1677 came from grave 13 or from grave 14. Both skulls are of men.

PHYSICAL ANTHROPOLOGY
Bones of three individuals were found in find number 1676. Only the complete skeleton was recorded in detail in the human remains form.

-	Find number	1676.1
	Sex WEA	male
	Age in years	20 - 80
-	Find number	1676.2 (articulated skeleton)
	Sex WEA	female
	Age in years	18 - 25
	Female stature in cm	171.9
-	Find number	1676.3
	Sex WEA	indeterminate
	Age in years	14 - 80

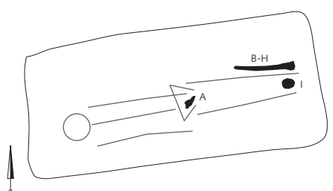
DATE (FINDS)
C-F (460/80-610)

FINDS
A Arrow head: iron
Find number: 1680.3
Condition: complete
Type: L/P/V 26
Blade length: 152 mm
L/P/V phase: MA1-MA3
L/P/V date: 470/80-600/10
Maastricht date: C-F (460/80-610)

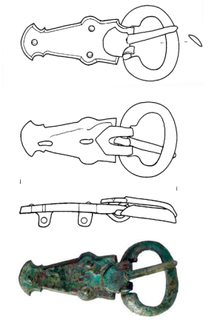
B Fire steel: iron
Find number: 1680.2
Condition: one end missing
Type: Siegmund Ger 5
Length: 89 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

C Knife: iron
Find number: 1680.1
Condition: complete
Grip length: 49 mm
Blade length: 106 mm

D Pottery: reduced
Find number: 1675.1
Condition: missing



11

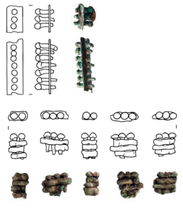

A


B (SCALE 1:4)


C, D

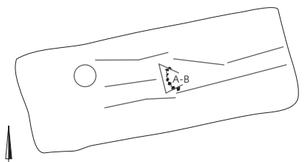
E


F


G

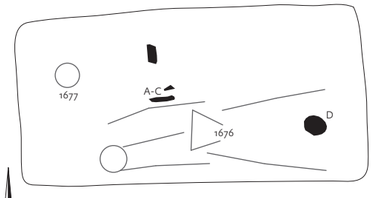

H


I



12


A-C



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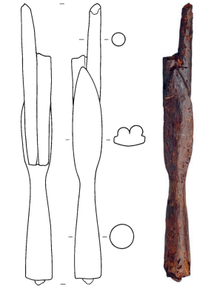
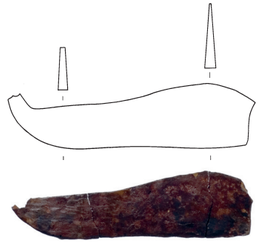

A


B


C

14
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation bottom	47.94

DESCRIPTION
Stray find of a skull west of context 13. In grave 14 a skull was found that was given find number 1677. In grave 13 a skull was found that was given the same find number. It is not possible to determine which of the skulls in find number 1677 came from grave 13 or from grave 14. Both skulls are of men.

PHYSICAL ANTHROPOLOGY
-	Find number	1677.1
	Sex WEA	male
	Age in years	40 – 80
-	Find number	1677.2
	Sex WEA	male
	Age in years	30 - 60

15
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	215 cm
Grave pit width	84 cm
Elevation bottom	47.94
Orientation	13

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, left arm and left leg. There seems to be one iron object more than there are find numbers.

PHYSICAL ANTHROPOLOGY
Find number	1668.1
Sex WEA	indeterminate
Age in years	40 - 70

DATE (FINDS)
H (640/50-670/80)

FINDS
A Plate buckle: iron, parabola shaped plate with bichrome animal style inlays
Find number: 1670.1
Condition: complete
Type: Siegmund Gür 4.7
Loop length: 52 mm
Plate length: 65 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: FAG Gür 4.8 (8: 640/50-670/80)
Maastricht date: H (640/50-670/80)

B Counter plate: iron, parabola shaped plate with bichrome animal style inlays
Find number: 1671.1
Condition: complete
Type: Siegmund Gür 4.7
Plate length: 69 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: FAG Gür 4.8 (8: 640/50-670/80)
Maastricht date: H (640/50-670/80)

C Seax: iron
Find number: 1670.3
Condition: restored
Type: FAG Sax 2.1
Blade length: 334 mm
Grip length: 121 mm
FAG phase: 6-7
FAG date: 580/90-640/50
Maastricht date: F-G (580/90-640/50)

D Scabbard edge reinforcement (seax scabbard): copper alloy
Find number: 1670.4
Condition: broken and parts missing
Type: FAG S-Sax 4.5
Length: 76 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

E Scabbard mount (seax scabbard): copper alloy
Find number: 1669.1
Condition: fragmented
Type: FAG S-Sax 4.5
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

F Axe: iron
Find number: 1670.2
Condition: restored
Type: Siegmund FBA. 2.1
Blade length: 236 mm
Rhineland phase: 6-7
Rhineland date: 570-610
Alternative type: L/P/V 4 (MA2-MA3: 520/30-600/10)
Maastricht date: E-F (565-610)

G Rod with loop: iron
Find number: 1671.2
Condition: broken, piece missing
Type: L/P/V 353
L/P/V phase: MA2-MR3
L/P/V date: 520/30-700/10
Maastricht date: D-I (510/20-725)

H Indeterminate metal fragment
Find number: 1670.5

16
GRAVE

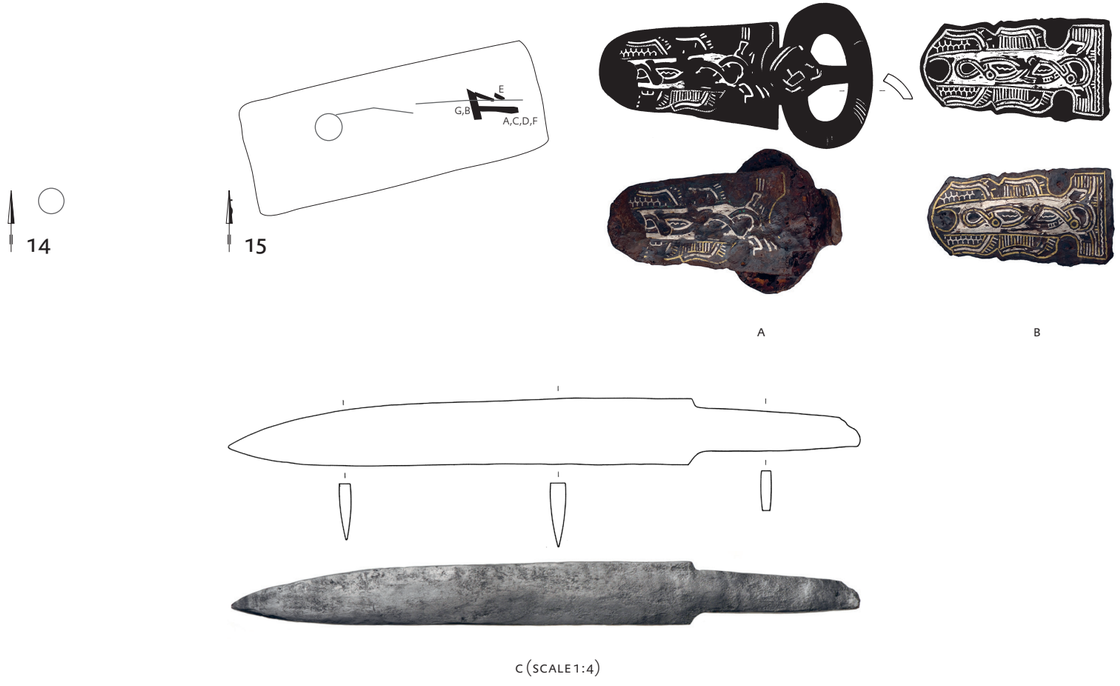
Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	215 cm
Grave pit width	84 cm
Elevation bottom	47.94
Orientation	2
Stratigraphic relation	below context 17

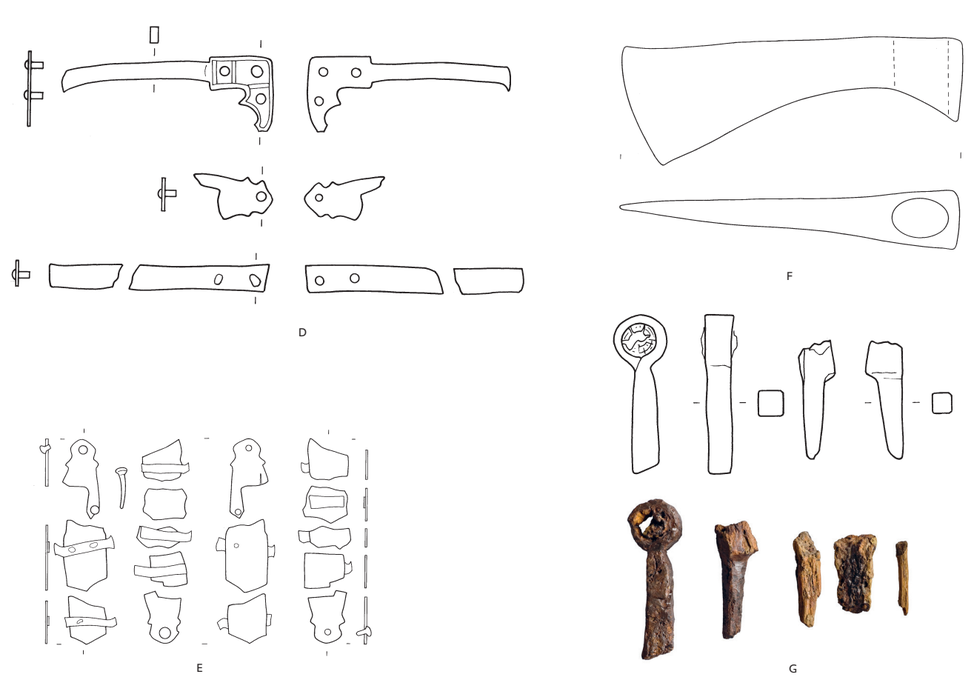
DESCRIPTION
Outline of a pit observed at one level only. Skull, left arm and both legs indicated, articulated, although the legs seem to have been moved a bit in relation to the skull and the arm. This might relate to the anomaly between the sex identification (female) and the presence of a seax, normally associated with men.

PHYSICAL ANTHROPOLOGY
Find number	1678.1
Sex WEA	female
Age in years	52 - 61

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Seax: iron, incised lines
Find number: 1679.3
Condition: complete, grip broken
Type: Siegmund Sax 2.1.
Blade length: 313 mm
Grip length: 137 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Alternative type: L/P/V 61 (MR1-MR3: 600/10-700/10)
Maastricht date: G-H (610/20-670/80)





B Seax: iron
Find number: 1679.4
Condition: complete
Type: FAG Sax 2.1
Blade length: 324 mm
Grip length: 141 mm
FAG phase: 6-7
FAG date: 580/90-640/50
Maastricht date: F-G (580/90-640/50)

C Rivet (seax scabbard): copper alloy with cast decoration.
Find number: 1679.2
Condition: rim partly missing
Type: FAG Sax 4.3B
Diameter: 19 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 71 (MR2: 630/40-660/70)
Maastricht date: G-H (610/20-670/80)

D Rivet (seax scabbard): copper alloy with cast decoration.
Find number: 1679.1
Condition: complete
Type: FAG Sax 4.3B
Diameter: 19 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 71 (MR2: 630/40-660/70)
Maastricht date: G-H (610/20-670/80)

E Brick?
Find number: 1679.5
Condition: 1 fragment

17
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	319 cm
Grave pit width	112 cm
Elevation bottom	47.94
Orientation	2
Stratigraphic relation	above context 16

DESCRIPTION
Outline of a pit observed at one level only. The pit is relatively large, maybe it was not possible to observe the outline of the pit well.

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Disc brooch: round, copper alloy casing with garnets and glass inlays, 2 zones, cross motif.
Find number: 1681.1
Condition: fastener missing
Type: Siegmund Fib 1.3.
Diameter: 28 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz C3.14 (530/40-560/70)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: D-E (510/20-580/90)

B Glass beads: green, opaque, undecorated
Find number: 1681.2
Condition: complete
Shape: biconical, broad
Type: no type identification available
Number of beads: 3

18
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	192 cm
Grave pit width	89 cm
Elevation bottom	47.94
Orientation	5

DESCRIPTION
Outline of a pit observed at one level only. Almost complete skeleton indicated (right upper arm, vertebral column and ribs are lacking), articulated. The right leg is extended, the left leg is splayed. Left underarm can be characterized between splayed and extended.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were found in this find number.

- Find number	1660.1 (articulated skeleton)
Sex WEA	female
Age in years	40 - 80
- Find number	1660.2
Sex WEA	female
Age in years	30 - 50

DATE (FINDS)
D-G (510/20-640/60)

FINDS
A Dish (pottery): biconical, oxidized, undecorated
Find number: 1661.1
Condition: complete
Type: Siegmund Sha 2.21
Maximum height: 86 mm
Rhineland phase: 5-8
Rhineland date: 555-610/40
Alternative type: L/P/V 403 (second half MA2-MA3: 540/50-600/10)
Alternative type: FAG S-Sha 2.21 (4-7: 510/25-640/50)
Maastricht date: D-G (510/20-640/50)

B Trefoil jug (pottery): reduced, undecorated
Find number: 1662.1
Condition: complete
Type: Siegmund Kan 1.12
Maximum height: 85 mm
Rhineland phase: 2-4
Rhineland date: 440-555
Alternative type: L/P/V 402 (MA1-MR1: 470/80-630/40)
Alternative type: FAG Kan 1.1/2 (2-4: 400-565)
Maastricht date: B-D (400-565)

19
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	215 cm
Grave pit width	80 cm
Elevation bottom	47.94
Orientation	11

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The lower legs bend slightly to the south and are close together.
Two nails were found in the south-east corner (without find number) of the pit.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were found in this find number.

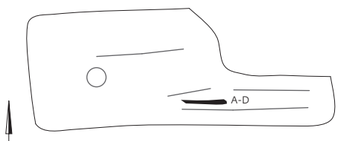
- Find number	1604.1
Sex WEA	male
Age in years	50 – 60
- Find number	1604.2
Sex WEA	indeterminate
Age in years	30 - 60

DATE (FINDS)
F-G (580/90-640/50)

FINDS
A Seax?: iron
Find number: 1605.1
Condition: missing

B Biconical pot: reduced, undecorated
Find number: 1607.1
Condition: renovated (glued)
Type: Siegmund Kwt 2.42.
Maximum height: 76 mm
Rhineland phase: 7 (late)-8B
Rhineland date: 585-640
Alternative type: L/P/V 392 (MA3-MR2: 560/70-660/70)
Maastricht date: F-G (580/90-640/50)

C Dish (pottery): oxidized, undecorated
Find number: 1606.1
Condition: complete
Type: Siegmund Sha 2.21
Maximum height: 60 mm
Rhineland phase: 5-8
Rhineland date: 555-610/40
Alternative type: L/P/V 403 (second half MA2-MA3: 540/50-600/10)
Alternative type: FAG S-Sha 2.21 (4-7: 510/25-640/50)
Maastricht date: D-G (510/20-640/50)



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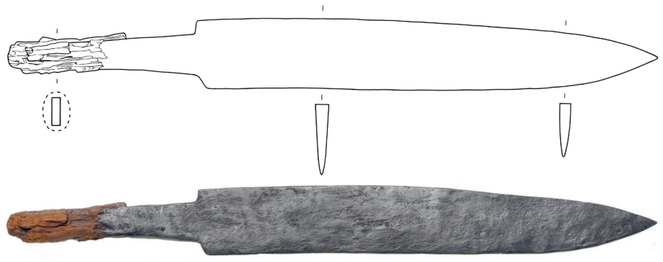
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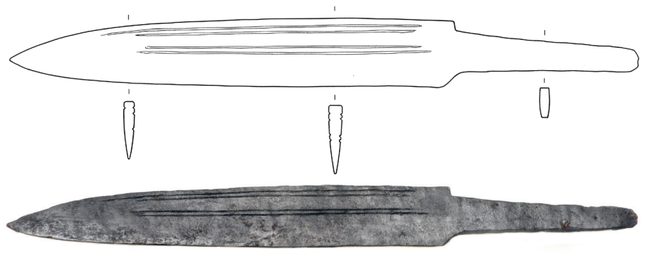
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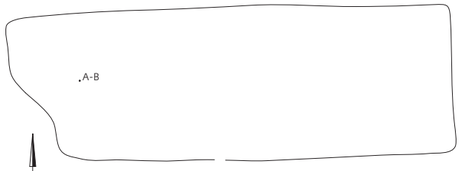

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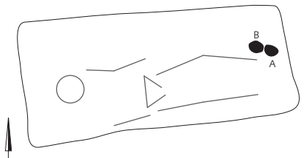

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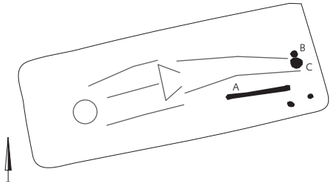

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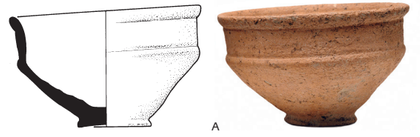
A


B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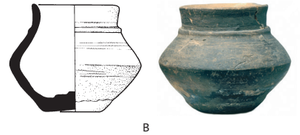
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C

20
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	226 cm
Grave pit width	86 cm
Elevation bottom	47.92
Orientation	15
Stratigraphic relation	below context 22 and 23

DESCRIPTION
Outline of a pit observed at one level only. Three long bones indicated, probably disarticulate, no find number. Only the left tibia and the right tibia and fibula where preserved, these seem to be lying in their original position in the southern half of the burial pit. A stone has been found, which might be an indication of the presence of a coffin, no find number. Human remains not recovered?

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

21
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	237 cm
Grave pit width	75 cm
Elevation top	47.99
Elevation bottom	47.92
Orientation	13
Stratigraphic relation	below context 24, 25 and 32

DESCRIPTION
Outline of the pit observed at two levels, the outline of level 4 has been used in the drawing.

DATE (FINDS)
D-H (510/20-670/80)

FINDS
A Glass globular beaker: green, undecorated
Find number: 1619.1
Condition: broken
Type: FAG S-Gla 3.2.
Maximum height: 106 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

22
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.35
Stratigraphic relation	above context 20

DESCRIPTION
Stray find of a skull south of context 21.

PHYSICAL ANTHROPOLOGY

Find number	1445.1
Sex WEA	female
Age in years	18 - 34

23
FIND

Trench	5
Elevation bottom	48.35
Stratigraphic relation	above context 20

DESCRIPTION
Stray find of a stone south of context 21. No find number.

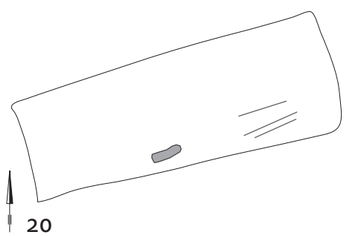
24
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	155 cm
Grave pit width	61 cm
Elevation bottom	48.40
Orientation	27
Stratigraphic relation	above context 21 and 30; below context 27 and 32

DESCRIPTION
The outline of a grave pit has been observed at one level only. Articulated skeleton indicated except skull, left arm and right under arm. The west end of the grave pit as indicated on the field drawing is probably not correct. There is insufficient room for a skull in the west end of the grave. The person buried in the grave is longer than the pit.

PHYSICAL ANTHROPOLOGY

Find number	1446.1
Sex WEA	female
Age in years	50 - 60
Female stature in cm	169.4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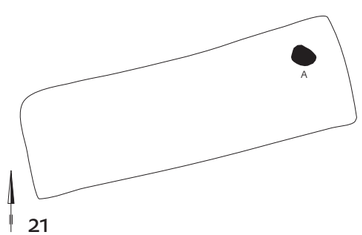

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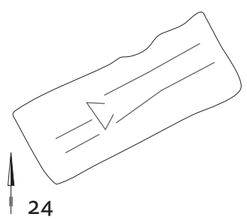

24


A


25


26

25
PIT

Trench	5
Context type	pit
Elevation bottom	48.40
Stratigraphic relation	above context 21; below context 32

DESCRIPTION
Outline of a pit observed at one level only, west of context 24.

26
PIT

Trench	5
Context type	pit
Elevation bottom	48.40
Stratigraphic relation	above context 125 and 126; below context 32

DESCRIPTION
Outline of a pit observed at one level only, east of context 24.

27
PIT

Trench	5
Context type	pit
Elevation bottom	48.40
Stratigraphic relation	above context 24, 29 and 31; below context 32 and 34

DESCRIPTION
Outline of a pit observed at one level only, north of context 24.

28
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	81
Elevation bottom	48.42
Orientation	0

DESCRIPTION
Outline of a pit observed at one level only. Possibly it is a part of a grave of which only the eastern end has been observed in trench 5.

29
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	260 cm
Grave pit width	88 cm
Elevation bottom	47.92
Orientation	7
Stratigraphic relation	below context 27, 31, 32 and 34

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated. Outlines of wood indicated.

FINDS
A Knife
Find number: 1629.1
Condition: missing

30
FIND

Trench	5
Elevation bottom	47.92
Stratigraphic relation	below context 24 and 32

DESCRIPTION
Seax found to the north of context 21. It lies parallel to context 21 and may have been part of that grave.

DATE (FINDS)
G-H (610/20-670/80)

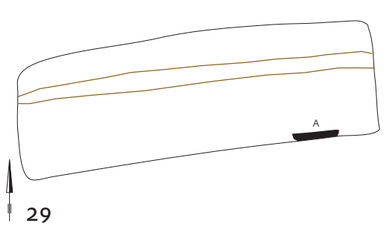
FINDS
A Plate buckle: copper alloy
Find number: 1630.1
Condition: tongue missing, plate missing
Loop length: 19 mm
Plate length: 14 mm

B Strap end: copper alloy
Find number: 1630.2
Condition: complete
Type: L/P/V 199
Plate length: 41 mm
L/P/V phase: MA1-MR1
L/P/V date: 470/80-630/40
Maastricht date: C-G (460/80-640/50)

C Seax?: iron
Find number: 1630.9
Condition: under conservation


27


28



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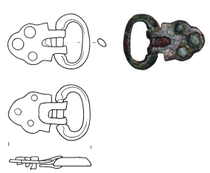
30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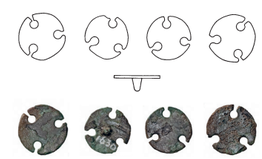
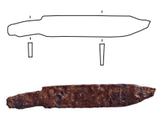

D-G


B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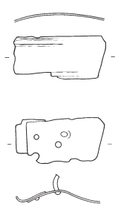

H

D Rivet (seax scabbard): copper alloy, perforated
Find number: 1630.3
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 15 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

E Rivet (seax scabbard): copper alloy, perforated
Find number: 1630.6
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 17 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

F Rivet (seax scabbard): copper alloy, perforated
Find number: 1630.5
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 16 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

G Rivet (seax scabbard): copper alloy, perforated
Find number: 1630.4
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 15 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

H Metal object: scabbard mount?
Find number: 1630.8
Type: FAG S-Sax 4.5?
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

I Knife: iron
Find number: 1630.7
Condition: tip missing, little piece of grip missing?
Grip length: 26 mm
Blade length: 79 mm

31
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	197 cm
Grave pit width	101 cm
Elevation bottom	47.99
Elevation top skull	48.10
Elevation top post cranial	48.05
Orientation	22
Stratigraphic relation	above context 29; below context 27, 32, 33 and 34

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The knees of this skeleton are slightly splayed. The grave pit is larger on the south than what is probably the fill of a 'coffin'. The fill is described as dirty-green. It is not entirely certain whether the southern part with the green fill is part of the grave pit.

PHYSICAL ANTHROPOLOGY

Find number	1559.1
Sex WEA	female
Age in years	35 – 55
Female stature in cm	161.1

32
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	265 cm
Grave pit width	93 cm
Elevation bottom	48.42
Orientation	5
Stratigraphic relation	above context 21, 24, 25, 26, 27, 29, 30, 31, 34, 125 and 126

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated.

33
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	175 cm
Grave pit width	80 cm
Elevation top	48.42
Elevation top post cranial	48.25
Orientation	10
Stratigraphic relation	above context 34, 35 and 37

DESCRIPTION
The plan of the grave has been reconstructed on the basis of observations at levels 1 and 2. Complete articulated skeleton indicated. A stone was present at level 2 without find number.

PHYSICAL ANTHROPOLOGY

Find number	1448.1
Sex WEA	male
Age in years	25 - 40
Male stature in cm	176.4

^{14}C-DATE
GrA-32713: 1225 + 30 BP
1 sigma: 710-750 (12.3%) 760-870 (55.9%)
2 sigma: 680-750 (25.5%) 760-890 (69.9%)

34
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	192 cm
Elevation bottom	48.42
Stratigraphic relation	above context 27, 29 and 31; below context 32 and 33

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated.

35
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	236 cm
Grave pit width	90 cm
Elevation bottom	47.94
Orientation	4
Stratigraphic relation	below context 33, 37 and 41; above context 36

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated.

36
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	227 cm
Grave pit width	105 cm
Elevation bottom	47.94
Orientation	14
Stratigraphic relation	below context 35, 37, 40, 42, 47 and 49

DESCRIPTION
Outline of a pit observed at one level only. A line in the southern part of the pit seems to indicate the division between the fill of the pit and the fill of a coffin. No remains of a skeleton indicated. Two vessels are at the extreme east end of the pit.

DATE (FINDS)
G-H (610/20-670/80)

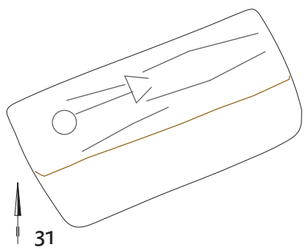
FINDS
A Glass palm cup: green, undecorated
Find number: 1623.1
Condition: broken, parts missing
Type: Siegmund Gla 2.2
Maximum height: 51 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: Maul 2002, B2a (630/40-670/80)
Alternative type: Feyeux 2003, 60.0 (650-725)
Alternative type: FAG S-Gla 2.2 (7-8: 610/20-670/80)
Maastricht date: G-H (610/20-670/80)

B Globular pot (pottery): reduced, undecorated
Find number: 1622.1
Condition: complete
Type: L/P/V 404?
Maximum height: 122 mm
L/P/V phase: PM-MR1?
L/P/V date: 440/50-630/40?
Maastricht date: B-G (400-640/50)

37
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave
Grave pit width	110
Elevation bottom	48.16
Orientation	13
Stratigraphic relation	above context 35 and 36; below context 33, 40, 41, 45, 47; below context 39 and 42 (relation uncertain)

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated. In the northern part of the grave pit a dark rectangular discoloration of the soil is indicated. It could be the outline of (the fill of) a coffin.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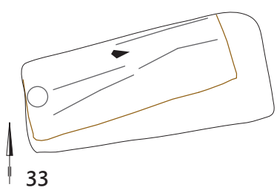
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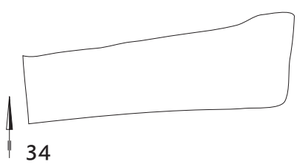
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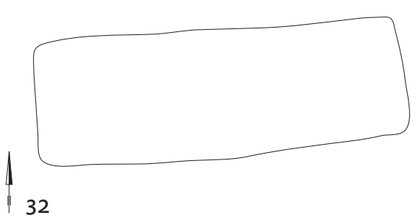
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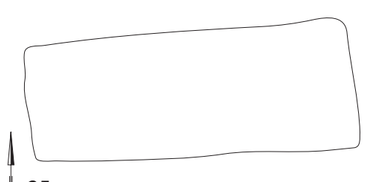
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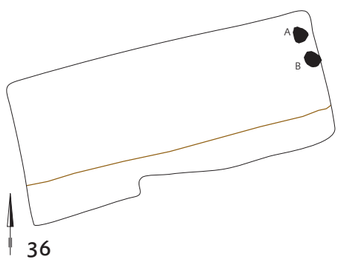
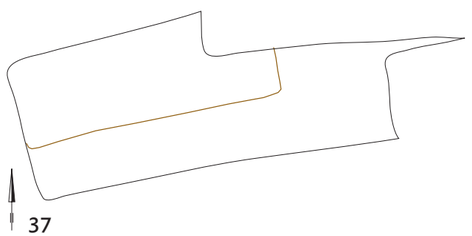


36


A




B


37

38
DISCARDED CONTEXT

39
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden coffin grave with stones outside
Grave pit length	241 cm
Grave pit width	93 cm
Elevation top	48.16
Elevation bottom	47.94
Orientation	10
Stratigraphic relation	below context 122, 123 and 150; above context 37 relation uncertain

DESCRIPTION
Outline of a pit observed at two levels. Skull, left collarbone, left arm, right upper arm and both legs indicated, articulated. The finds were found at two different levels. The glass vessel has been found at level 3 in the easternmost part of the grave pit. At level 4 a seax and copper alloy remains south of the right leg. A stone is placed west of the head.

PHYSICAL ANTHROPOLOGY
Find number	1602.1
Sex WEA	male
Age in years	30 - 60

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Seax?
Find number: 1603.6
Condition: missing

B Rivet (seax scabbard): copper alloy with cast decoration.
Find number: 1603.1
Condition: complete
Type: FAG Sax 4.3B
Diameter: 20 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 71 (MR2: 630/40-660/70)
Maastricht date: G-H (610/20-670/80)

C Rivet (seax scabbard): copper alloy with cast decoration.
Find number: 1603.2
Condition: complete
Type: FAG Sax 4.3B
Diameter: 20 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 71 (MR2: 630/40-660/70)
Maastricht date: G-H (610/20-670/80)

D Seax scabbard mount: copper alloy, L-shaped
Find number: 1603.3
Condition: part missing
Type: FAG S-Sax 4.5
Length: 63 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

E Glass globular shaped beaker: blue
Find number: 1574.1
Condition: broken, pieces missing
Type: FAG S-Gla 3.2
Maximum height: 109 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

F Slotted plate: copper alloy
Find number: 1603.4
Condition: complete
Type: no type identification available
Length: 25 mm

G Rivet/mount: copper alloy
Find number: 1603.5
Condition: complete
Type: no type identification available
Length: 17 mm

40
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	stone built grave
Grave pit length	197 cm
Grave pit width	93 cm
Elevation bottom	48.20
Orientation	4
Stratigraphic relation	above context 36 and 37; below context 47 and 44 (uncertain relation)

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated. The wall of the pit is lined with stones. On the west side some stones are lacking, perhaps some of the stones in the pit have been moved. Two stones, observed at level 2, may belong to this context (see context 44).

41
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation top skull	48.27
Stratigraphic relation	above context 35 and 37

DESCRIPTION
Stray find of a skull and two pieces of long bone, which cannot be attributed to a grave.

PHYSICAL ANTHROPOLOGY
Find number	1449.1
Sex WEA	male
Age in years	25 – 40
Male stature in cm	175.3

42
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation top skull	48.27
Stratigraphic relation	above context 36 and 37 (relation uncertain)

DESCRIPTION
On the field drawing a stray find of a skull is indicated. It cannot be attributed to a grave.

PHYSICAL ANTHROPOLOGY
- Find number	1444.1 (only skull)
Sex WEA	female
Age in years	30 - 60
- Find number	1444.2 (skull and post cranial)
Sex WEA	female
Age in years	20 - 25
Female stature in cm	164.3
- Find number	1444.3 (fragment of a skull)
Sex WEA	indeterminate
Age in years	indeterminate
- Find number	1444.4 (fragment of left fibula)
Sex WEA	indeterminate
Age in years	indeterminate

43
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Grave type	unknown
Elevation top post cranial	48.30
Stratigraphic relation	above context 48 and 49

DESCRIPTION
Stray find of skeletal remains ad levels 1 and 2, which cannot be attributed to a specific grave. The remains at level 2 seem to be in an articulated position. It is difficult to identify the long bones as those of individual left or right arms and legs.

PHYSICAL ANTHROPOLOGY
The bones are damaged and it is difficult to establish whether they are of a single person.
Find number	1443.1
Sex WEA	male
Age in years	30 - 60

44
FIND

Trench	5
Context type	stone fragment
Elevation top	48.30
Stratigraphic relation	above context 40 (possibly an element of context 40)

DESCRIPTION
Two flat stones put in an upright position in such a way that they form an angle. Perhaps the corner of a stone wall of a grave. In that case the grave is situated to the west. The skeletal remains context 41 may relate to these stones. Perhaps the stones are related to grave context 4 but that grave was only observed at level 3.

45
FIND

Trench	5
Context type	stone fragment
Elevation bottom	48.37
Stratigraphic relation	above context 37

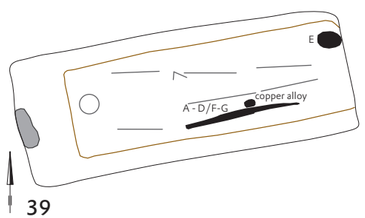
DESCRIPTION
Two flat stones put in an upright position. Perhaps there is a relation with the skeletal remains of context 41.

46
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top post cranial	48.24
Orientation	6
Stratigraphic relation	below context 47

DESCRIPTION
Only a skeleton is indicated on the drawing, no outline of a grave pit. Articulated skeletal remains indicated: vertebral column, pelvis, both upper arms, both legs. Skull and lower arms seem to be missing.

PHYSICAL ANTHROPOLOGY
Find number	1560.1
Sex WEA	female
Age in years	20 - 80
Female stature in cm	163.2



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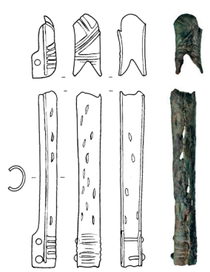
B, C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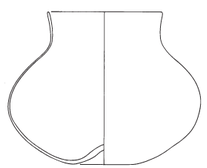
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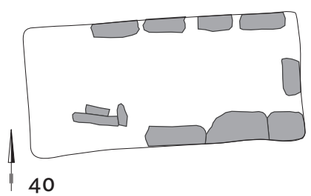
F


G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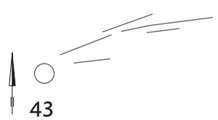
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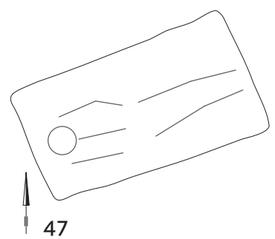
45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41


44


46

47
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	167 cm
Grave pit width	91 cm
Elevation bottom	48.27
Orientation	19
Stratigraphic relation	above context 36, 37, 40 and 46

DESCRIPTION
Outline of a pit observed at one level only. Almost complete skeleton indicated, articulated, no find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

48
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	231 cm
Grave pit width	71 cm
Elevation top	48.20
Elevation bottom	47.91
Orientation	19
Stratigraphic relation	below context 43, 51 and 52

DESCRIPTION
Outline of a pit observed at two levels. At level 3 the outline is somewhat larger on all sides, except the south-east side. Complete skeleton indicated at level 4, articulated. The dead person lies on her left side. The hands were probably placed on the pelvis. Traces of a coffin are observed in the eastern and northern parts of the pit.

PHYSICAL ANTHROPOLOGY
The remaining skeletal remains only consisted of remains of the feet with traces of copper alloy.

Find number	1585.1
Sex WEA	indeterminate
Age in years	indeterminate

DATE (FINDS)
E-G (565-640/50)

FINDS
A Plate buckle: copper alloy, triangular plate, stamped geometric decoration
Find number: 1592.1
Condition: complete
Type: Siegmund Gür 3.2.a
Loop length: 39 mm
Plate length: 58 mm
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: FAG Gür 3A (5: 565-580/90)
Maastricht date: E (565-580/90)

B Plate buckle with strap end (purse): copper alloy
Find number: 1590.1
Condition: broken
Type: Siegmund Sna 2.2
Loop length: 16 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Maastricht date: E-H (565-670/80)

C Strap end: copper alloy
Find number: 1592.2
Condition: complete
Type: Siegmund Gür 3.2.a
Plate length: 48 mm
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: FAG Gür 3A (5: 565-580/90)
Maastricht date: E (565-580/90)

D Belt part
Find number: 1589.1
Condition: missing and no find number on drawing.

E Rod with loop and rod
Find number: 1588.1
Condition: fragments

F Edge reinforcement: copper alloy
Find number: 1594.2
Type: L/P/V 362?
L/P/V phase: second half MA3-MR1
L/P/V date: c. 585-630/40
Maastricht date: F-G (580/90-640/50)

G Ring: fragment of copper alloy ring with a copper alloy thread twisted around
Find number: 1586.1
Condition: fragment
Type: indeterminate object

H Coin: pendant
Find number: 1586.3
Condition: corroded, suspension partly present
Diameter: 24 mm
Type: Dupondius/As: indeterminable
Date: 54-96

I Coin: pendant
Find number: 1586.2
Condition: complete, perforated
Diameter: 17 mm
Type: follis, Constantinus I (Trier)
Date: 330-334

J Finger ring: copper alloy
Find number: 1593.1
Condition: complete
Type: Siegmund Rng 3
Ring diameter: 22 mm

K Ring: iron
Find number: 1591.1
Ring diameter: 85 mm

L Chatelaine: chain, copper alloy rings and double rings
Find number: 1594.1
Condition: rings missing?
Type: Siegmund Ggh 6
Link number: 6
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: L/P/V 356 (MR2-MR3: 630/40-700/10)
Alternative type: FAG S-Ggh 6 (6-8: 580/90-670/80)
Maastricht date: F-H (580/90-670/80)

M Chain (chatelaine): copper alloy links with ring
Find number: 1593.2
Condition: links missing
Type: Siegmund Ggh 6
Link number: 3
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: L/P/V 356 (MR2-MR3: 630/40-700/10)
Alternative type: FAG S-Ggh6 (6-8: 580/90-670/80)
Maastricht date: F-H (580/90-670/80)

N Plate: copper alloy
Find number: 1587.11

O Large iron fragment
Find number: 1588.2

P Indeterminate metal fragment
Find number: 1594.3

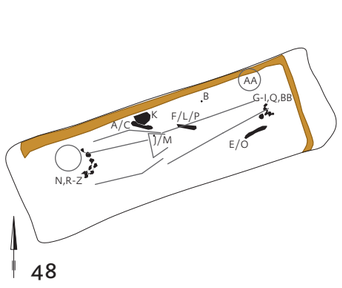
Q Beads
Find number: 1586.5
Condition: very corroded
Material: unknown

R Glass bead: opaque white, undecorated
Find number: 1587.6
Condition: broken, piece missing?
Shape: cylinder, long
Number of beads: 1
Maastricht date: E-G (565-640/50)

S Amethyst beads: transparent, polished/cut
Find number: 1587.1
Condition: complete
Type: S-5.2
Shape: Almond
Number of beads: 9
Combination group: H
Rhineland date: 610-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-G (565-640/50)

T Glass bead: silver-in -bead, transparent
Find number: 1587.10
Type: S-40.1
Shape: Double/multiple, segmented
Number of beads: 1
Combination group: C-E
Rhineland date: 485-585
Alternative type: FAG Per.40 c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: E-G (565-640/50)

U Glass beads: transparent green, undecorated
Find number: 1587.3
Condition: complete
Shape: cylinder, short
Number of beads: 23
Maastricht date: E-G (565-640/50)



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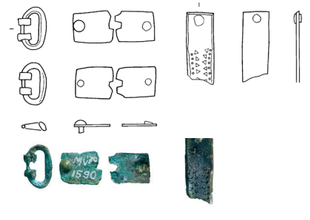
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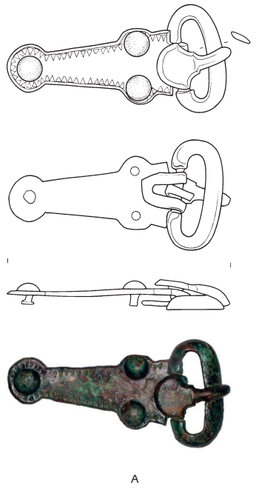
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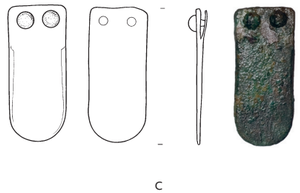
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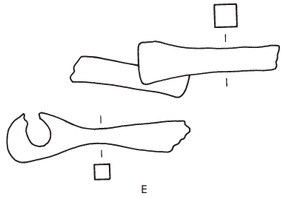
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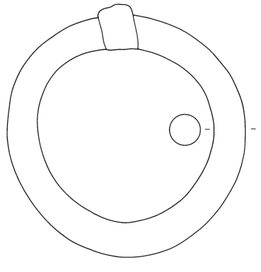
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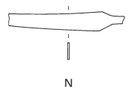
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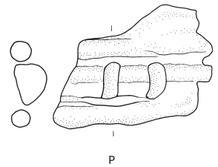
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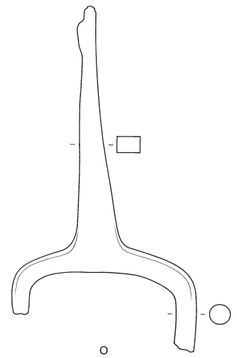
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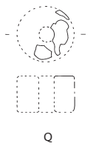
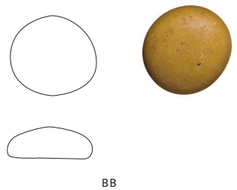

Q


R, T-Z


S


BB

V Glass bead: opaque white, decorated
Find number: 1587.7
Condition: complete
Type: Koch 1977, 21.5
Shape: biconical, broad
Number of beads: 1
Koch phase: Stufen 3-4
Koch date: 565-620/30
Maastricht date: E-G (565-640/50)

W Glass bead: opaque orange, undecorated
Find number: 1587.5
Condition: Corroded
Type: S-34.1
Shape: barrel
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Maastricht date: E-G (565-640/50)

X Glass bead: transparent white, undecorated
Find number: 1587.8
Condition: complete
Shape: cylinder, short
Number of beads: 1
Maastricht date: E-G (565-640/50)

Y Glass bead: opaque, undecorated
Find number: 1587.9
Condition: corroded.
Base colour: unknown
Shape: cylinder, square
Number of beads: 1
Maastricht date: E-G (565-640/50)

Z Glass bead: opaque blue, undecorated
Find number: 1587.4
Condition: complete
Type: Siegmund-group 37 (1-2)
Shape: globular
Number of beads: 1
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: E-G (565-640/50)

AA Glass vessel: fragment
Find number: 1567.1
Condition: missing

BB Stone: natural, yellow
Find number: 1586.4

49
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	100 cm
Elevation top post cranial	48.21
Orientation	16
Stratigraphic relation	above context 36; below context 43 and 51

DESCRIPTION
Outline of a pit observed at one level only. Parts of a skeleton indicated: vertebral column (?), right arm, left upper arm, pelvis, right upper leg. The skeleton does not fit into the pit indicated. At the west (head) end there is extra space, while at the east end (legs) there is not enough space to bury the person with stretched legs. No observation allows the conclusion that the person was buried with lifted legs. Probably this plan of the grave is a result of insufficient possibilities for the observation of the size of the pit at the time of the excavation.

PHYSICAL ANTHROPOLOGY
Find number	1563.1
Sex WEA	female
Age in years	34 - 43
Female stature in cm	158.5

50
DISCARDED CONTEXT

51
GRAVE

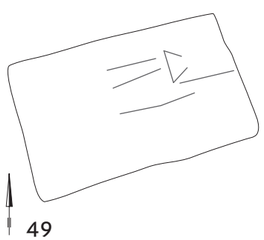
Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit width	115 cm
Elevation top	48.42
Elevation top post cranial	48.35
Orientation	10
Stratigraphic relation	above context 48, 49, 52 and 63 (not in Harris matrix)

DESCRIPTION
Outline of a pit observed at two levels. At level 1 a relatively large outline of a pit has been drawn without skeletal material being indicated, except for some disarticulate bones in the southern part of the pit (no find number). At level 2 an almost complete articulated skeleton is indicated (without skull) in a narrow pit of which the outline fits within the limits of the pit outline at level 1. However, two vertebral columns are indicated. It cannot be excluded that the large outline at level 1 relates to a pit and the narrow outline at level 2 to a coffin. It is thus indicated in the plan of this grave. It cannot be excluded that it concerns two graves because two vertebral columns were indicated and disturbed bones were indicated at level 1. In the end it was decided to consider the whole as a single grave (the minimal option) to avoid the creation of 'ghost tombs'.

PHYSICAL ANTHROPOLOGY
Probably remains of two persons. The remains described in the database are those of the most complete skeleton. Of the other skeleton a trunk and long bone of the left arm are indicated. It cannot be established whether there is a relation between the skeletal remains from context 43 (1443) and those from context 51 (1440)?

- Find number 1440.1
Sex WEA female
Age in years 20 - 80
- Find number 1440.2
Sex WEA male
Age in years 35 – 55
Male stature in cm 171.2

FINDS
A Shards (pottery)
Find number: 1140.1-3
Condition: 3 fragments
Maastricht date: Roman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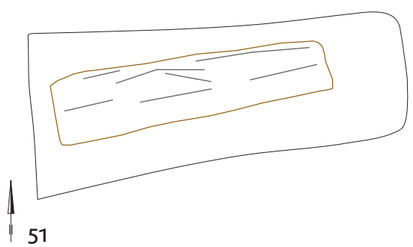
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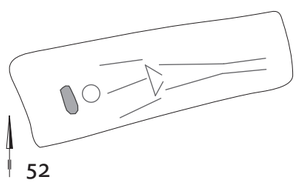
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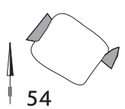

54

52
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	197 cm
Grave pit width	67 cm
Elevation top post cranial	48.33
Orientation	11
Stratigraphic relation	above context 48, 57 and 58 (not in Harris matrix); below context 61 and 51

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated, possibly lower arms missing. West of the head is a stone.

PHYSICAL ANTHROPOLOGY
Remains of four individuals were present in this find number.

- Find number 1436.1 (articulated skeleton)
Sex WEA female
Age in years 20 - 35
Female stature in cm 150.4
- Find number 1436.2
Sex WEA indeterminate
Age in years indeterminate
- Find number 1436.3
Sex WEA indeterminate
Age in years 20 - 80
- Find number 1436.4
Sex WEA indeterminate
Age in years 20 - 80

53
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.30
Stratigraphic relation	above context 48

DESCRIPTION
Stray find of two skulls. No find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

54
PIT

Trench	5
Context type	pit
Elevation bottom	48.30
Stratigraphic relation	above context 55, 56 and 58; below context 61

DESCRIPTION
Pit marked with stones, both on the north-western and south-eastern sides.

55
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	72
Elevation bottom	47.95
Orientation	22
Stratigraphic relation	below context 54 and 56; above context 58 and 63

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: two upper legs (no find number). On the basis of these two upper legs (level 4) it was decided to reconstruct context 55 as a separate grave instead of combining it with context 56 into one single grave. Context 56 consists also of two upper legs and other skeletal remains.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

56
GRAVE

Trench	4 and 5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	311 cm
Grave pit width	91 cm
Elevation bottom	48.03
Elevation top skull	48.27
Elevation top post cranial	48.09
Orientation	12
Stratigraphic relation	above context 55, 58, 60 and 63; below context 54

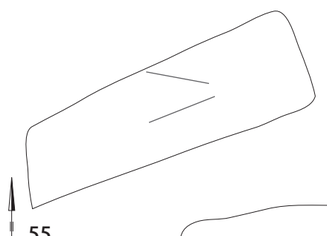
DESCRIPTION
Outline of a pit observed at one level only in both trenches. The grave pit is relatively large in the west end. Maybe two graves are combined in one. Complete skeleton indicated except for the skull in the east end. Maybe lower arms are missing. There are two skulls near the left upper leg, one of which may belong to the skeleton. Maybe two graves are involved.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number 1562.1
Sex WEA female
Age in years 40 - 80
Female stature in cm 160.2
- Find number 1562.2
Sex WEA male
Age in years 23 - 40

DATE (FINDS)
E-F (565-610/20)

FINDS
A Strap end: copper alloy, stamped dot-in-circle decoration
Find number: 0979.1
Condition: complete
Type: no type identification available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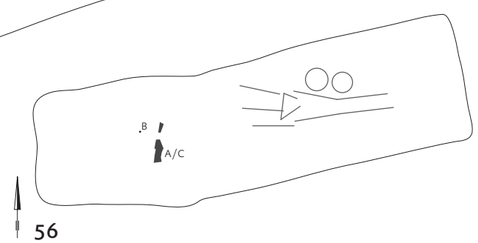


56


A


C

Plate length: 58 mm
General date: 565-610/20
Maastricht date: E-F (565-610)

B Shard (pottery)
Find number: 0966.1
Condition: missing

C Plate buckle: copper alloy?
Find number: 0979.2
Condition: missing (ancient photograph Ypey)
Type: no type identification available

57
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top skull	48.14
Orientation	13
Stratigraphic relation	below context 52 and 61

DESCRIPTION
Only a skeleton is indicated on the drawing, no outline of a grave pit. Almost complete articulated skeleton indicated: skull, left upper arm, left ribs, pelvis, both upper legs, right lower leg.

PHYSICAL ANTHROPOLOGY

Find number	1561.1
Sex WEA	female
Age in years	35 - 55

58
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	90 cm
Elevation bottom	47.95
Orientation	10
Stratigraphic relation	below context 52 (not in Harris matrix), 54, 55, 56, 60, 61 and 62

DESCRIPTION
Outline of a pit observed at one level only. Articulated human remains indicated: both legs, pelvis, left arm. One long bone is at the place of the chest. Situated immediately adjacent to grave 59. In this grave find number 1624 is indicated (pot). This find number is also found in context 110 with a remark 'gold'. Because there is a gold pendant (and beads) with that find number we accept that find number 1624 belongs to context 110. This means that we have no find number for the pot in this grave. The length of the pit has not been established because the length indicated on the field drawing cannot be correct in view of the location of the long bones of the legs in relation to the position of the eastern end of the burial pit. The west end of the grave seems to have been disturbed while digging a younger grave.

PHYSICAL ANTHROPOLOGY
Remains of five individuals were present in this find number.

- Find number	1620.1 (articulated skeleton)
Sex WEA	male
Age in years	35 - 55
- Find number	1620.2
Sex WEA	male
Age in years	40 - 60
- Find number	1620.3
Sex WEA	indeterminate
Age in years	18 - 80
- Find number	1620.4
Sex WEA	indeterminate
Age in years	18 - 80
- Find number	1620.5
Sex WEA	male
Age in years	20 - 40

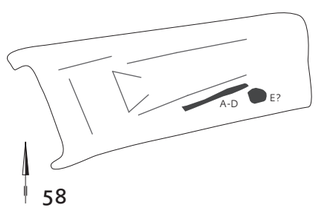
DATE (FINDS)
H (640/50-670/80)

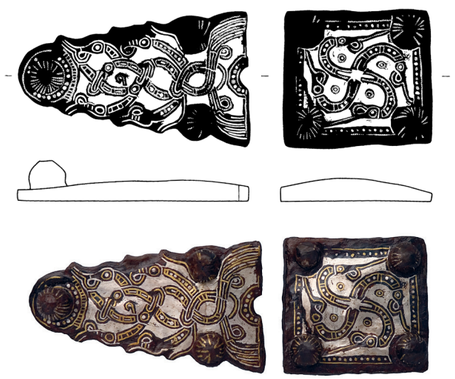
^{14}C DATE
GrA- 32717 + 30 BP
1 sigma: 580-640 (68.2%)
2 sigma: 550-650 (95.4 %)

FINDS
A Counter plate: iron, bichrome inlay in animal style
Find number: 1634.1
Condition: complete
Type: Siegmund Gür 4.7
Plate length: 52 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 188/189 (MR2-MR3: 630/40-700/10)
Alternative type: FAG S-Gür 4.7 (8: 640/50-670/80)
Maastricht date: H (640/50-670/80)

B Back plate: iron, bichrome inlay in animal style, 4 rivets with bichrome inlay
Find number: 1634.2
Condition: complete
Type: Siegmund Gür 4.7
Plate length: 52 mm
Plate width: 48 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 188/189 (MR2-MR3: 630/40-700/10)
Alternative type: FAG S-Gür 4.7 (8: 640/50-670/80)
Maastricht date: H (640/50-670/80)







A, B

C Seax: iron
Find number: 1634.3
Condition: complete
Type: FAG Sax 2.1
Blade length: 342 mm
Grip length: 165 mm
FAG phase: 6-7
FAG date: 580/90-640/50
Maastricht date: F-G (580/90-640/50)

D Knife: iron
Find number: 1634.4
Condition: grip partly missing
Grip length: 16 mm
Blade length: 137 mm

E Vessel (pottery)
Find number: 1634.1
Condition: missing

F Shards (pottery)
Find number: 1634.5
Condition: 1 fragment
Maastricht date: Roman

59
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave
Grave pit length	234 cm
Grave pit width	95 cm
Elevation bottom	47.95
Orientation	7
Stratigraphic relation	below context 60, 62, 65, 66, 67 and 71 (relation uncertain, not in Harris matrix)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. Immediately adjacent to context 58. In the grave pit the outline of the fill of a coffin has been observed. The north-western corner of the pit has not been drawn. The pit is probably intersected there by a pit (context 71) to the north of it. The stratigraphic relation may have been observed although both features may have been drawn at different heights.

FINDS
A Belt loop: copper alloy
Find number: 1595.1
Condition: complete

60
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave with stones outside
Grave pit length	207 cm
Grave pit width	123 cm
Elevation bottom	48.06
Orientation	16
Stratigraphic relation	above context 58 and 59; below context 56, 61, 62 and 66

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. Stones are observed in the north-eastern and south-eastern corners of the pit. Along the northern limit of the pit a strip (c. 25 cm wide) with a different fill than the rest of the pit is present. Perhaps this difference in fill indicates the presence of a coffin.

61
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	193 cm
Grave pit width	59 cm
Elevation bottom	48.42
Orientation	1
Stratigraphic relation	above context 52, 54, 57, 58 and 60

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. No further evidence.

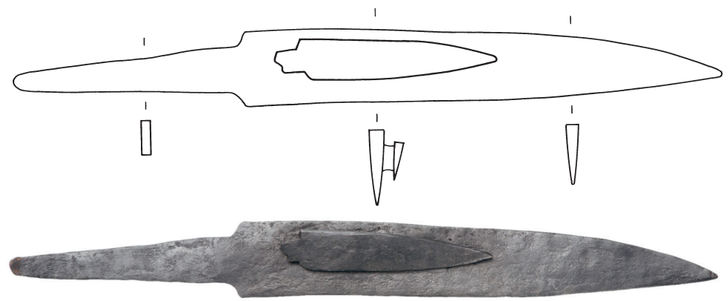
62
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	184 cm
Elevation top post cranial	48.40
Orientation	17
Stratigraphic relation	above context 58, 59, 60 and 66

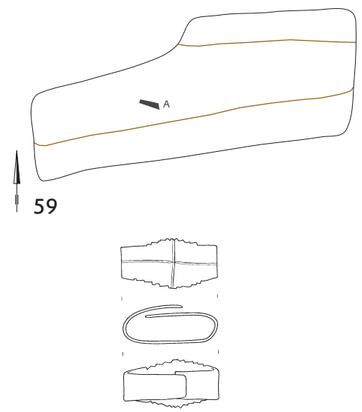
DESCRIPTION
Outline of a pit observed at one level only. Almost complete, articulated skeleton indicated except for the skull. In the north-western corner of the pit is a stone.

PHYSICAL ANTHROPOLOGY

Find number	1437.1
Sex WEA	indeterminate
Age in years	30 - 60



C, D



A

63
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Elevation bottom	47.95
Stratigraphic relation	below context 51 (not in Harris matrix), 55 and 56

DESCRIPTION
Outline of a pit observed at one level only. Only a small part of the grave has been preserved in trench 5.

64
POSSIBLE GRAVE

Trench	4 and 5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	232 cm
Grave pit width	89 cm
Elevation bottom	47.95
Orientation	8
Stratigraphic relation	below context 66 and 67

DESCRIPTION
Outline of a pit observed at one level only in both trenches 4 and 5. In trench 5 the size of the pit is somewhat smaller. This may be the result of a small difference in altitude of the levels at which the pit outlines were drawn in both trenches. No indication of skeletal remains.

DATE (FINDS)
C (460/80-510/25)

FINDS
A Glass beads: opaque green, undecorated
Find number: 0965.2
Condition: complete
Type: S-1.1
Shape: heart
Number of beads: 20
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: C (460/80-510/25)

B Glass beads: transparent blue, undecorated
Find number: 0965.1
Condition: complete
Type: S-group 47
Shape: irregular-shaped
Number of beads: 32
Combination group: A/F-I
Rhineland date: 485-555-570-705
Alternative type: FAG c. group I/IV-V (3: 460/80-510/25 / 5-10: 580/90-750)
Maastricht date: C (460/80-510/25)

C Unidentifiable object: copper alloy
Find number: 0965.3
Condition: missing

D Shards (pottery)
Find number: 1152.1-3
Condition: 8 fragments
Maastricht date: Roman

E Shards (pottery)
Find number: 0965.4-11
Condition: 17 fragments
Maastricht date: 10 Roman, 1 Merovingian (Mayen)

65
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains, no grave structure
Elevation top post cranial	48.40
Stratigraphic relation	above context 59

DESCRIPTION
Stray find of skeletal remains: two long bones in a parallel position and one long bone to the east of them.

PHYSICAL ANTHROPOLOGY

Find number	1439.1
Sex WEA	indeterminate
Age in years	20 - 80

66
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Elevation top post cranial	48.05
Orientation	5
Stratigraphic relation	above context 59, 60, 68 and 71; below context 62 and 67

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: pelvis and both legs, articulated, in the (wrong?) western part of the grave pit.
Possibly a corpse in decay has been moved once, but it is also possible that the outline of the grave pit has not been observed correctly.

PHYSICAL ANTHROPOLOGY

Find number	1512.1
Sex WEA	male
Age in years	20 - 30
Male stature in cm	171.2

DATE (FINDS)
B-D (400-565)

FINDS
A Bottle (glass): cylindrical
Find number: 1566.1
Condition: complete
Type: Feyeux 2003, 10.0
Maximum height: 304 mm
Feyeux date: 450-550
Alternative type: Koch 1987, 1F (450-550)
Alternative type: L/P/V 441 (PM-MA2 440/50-560/70)
Maastricht date: B-D (400-565)

67
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	54 cm
Elevation top post cranial	48.30
Orientation	19
Stratigraphic relation	above context 59, 64, 66, 68 and 71

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: both legs in an articulated position. The grave pit seems to be too small.

PHYSICAL ANTHROPOLOGY

Find number	1438.1
Sex WEA	male
Age in years	30 - 60

68
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden coffin grave with stones outside
Grave pit length	230 cm
Grave pit width	133 cm
Elevation bottom	48.02
Elevation top skull	47.94
Elevation top post cranial	47.85
Orientation	6
Stratigraphic relation	below context 66, 67, 70 and 72

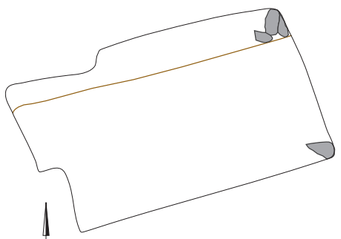
DESCRIPTION
Outline of a pit observed at one level only. The western half is situated in trench 4, the eastern half in trench 5. The outline of the pit in trench 4 was observed at level 7. Skeletal remains indicated: upper body in an articulated position (trench 4). In trench 5 no skeletal remains were observed. The relation between the outlines observed in trenches 4 and 5 is not optimal, but it seems clear that both halves belong to the same grave. The grave pit includes a stone on the northern side. At level 7b a rectangular feature is drawn in which the skeleton is situated, probably the outline of the fill of a coffin.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.
Find number 1159 (skeletal remains?) is probably lost.

DATE (FINDS)
D-F (510/20-610)

FINDS
A Buckle: copper alloy, simple tongue
Find number: 1149.1
Condition: complete
Type: Siegmund Gür 2.9
Loop length: 41 mm
Rhineland phase: 5-7
Rhineland date: 555-610
Alternative type: L/P/V 112 (PM-MA3: 440/50-600/10)
Maastricht date: D-F (510/20-610)

B Bow brooch: copper alloy
Find number: 1105.1
Condition: foot partly missing
Type: hinged brooch
Maastricht date: Roman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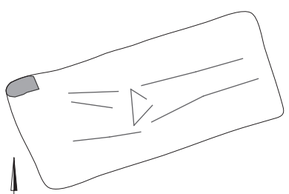
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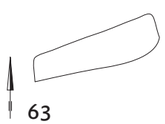
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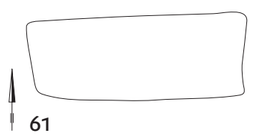
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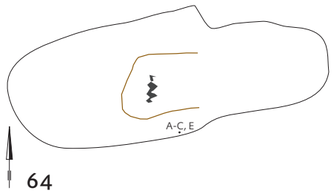
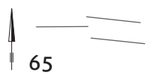


64


A, B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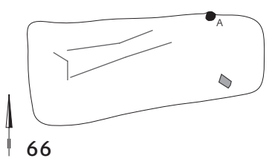

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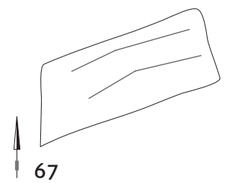
A


67

C Glass beads: opaque, decorated
Find number: 1149.2
Condition: complete
Type: S-2.13
Base colour: miscellaneous
Shape: globular, compressed
Number of beads: 2
Alternative type: Koch 1977, M33 (Stufe 3: 565-590/600)
Maastricht date: E-H (565-670/80)

D Glass beads: opaque green, undecorated
Find number: 1149.6
Condition: broken, pieces missing
Type: S-1.8
Shape: biconical, long
Number of beads: 3
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: E-H (565-670/80)

E Glass beads: transparent, silver-in bead
Find number: 1149.4
Condition: segments missing?
Type: S-40.1
Shape: double/multiple, segmented
Number of beads: 7
Combination group: C-E
Rhineland date: 485-585
Alternative type: FAG c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: E-H (565-670/80)

F Amber beads
Find number: 1149.10
Condition: complete
Shape: irregular-shaped
Transparency: transparent
Number of beads: 3
Maastricht date: E-H (565-670/80)

G Glass beads: opaque red, undecorated
Find number: 1149.9
Condition: complete
Type: S-35.4
Shape: globular, compressed
Number of beads: 2
Combination group: D-G
Rhineland date: 530-640
Maastricht date: E-H (565-670/80)

H Glass beads: opaque
Find number: 1149.12
Condition: corroded
Shape: unknown
Number of beads: 3
Maastricht date: E-H (565-670/80)

I Glass beads: transparent blue, undecorated
Find number: 1149.8
Condition: piece missing
Type: S-group 47
Shape: irregular-shaped
Number of beads: 2
Combination group: A/F-I
Rhineland date: 485-555 or 570-705
Alternative type: FAG c. group I/IV-V (3: 460/80-510/25 / 5-10: 580/90-750)
Maastricht date: E-H (565-670/80)

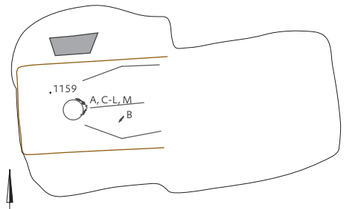
J Glass beads: opaque green, undecorated
Find number: 1149.7
Condition: complete
Type: S-1.6
Shape: Cube
Number of beads: 2
Combination group: H-I
Rhineland date: 610-705
Maastricht date: E-H (565-670/80)

K Glass beads: opaque white, undecorated
Find number: 1149.11
Shape: irregular-shaped
Number of beads: 3
Maastricht date: E-H (565-670/80)

L Glass beads: opaque yellow, undecorated
Find number: 1149.5
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 7
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: E-H (565-670/80)

M Coffin nail iron
Find number: 1149.3

N Shard (pottery)
Find number: 1149.13
Condition: 2 fragments
Maastricht date: Roman



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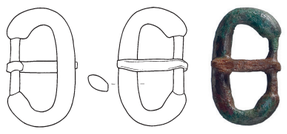
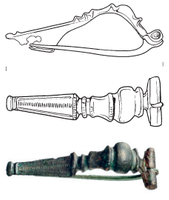

A


69A


B


C-L


M

69
FIND

Trench	5
Context type	find
Elevation bottom	48.35
Stratigraphic relation	above context 71

DESCRIPTION
Stray find of a bottle indicated at level 2.

CONTEXT DATE
I-J (670/80->725)

FINDS
A Glass bottle: unguentarium, green, undecorated
Find number: 1427.1
Condition: broken, pieces missing
Type: Isings 1957, 82b2 (variant)
Maximum height: 121 mm
Isings date: Roman
Alternative type: Pirling/Siepen 2006, 202/804 (100-350)
Maastricht date: Roman

70
FIND

Trench	5
Context type	find
Elevation bottom	48.35
Stratigraphic relation	above context 68 and 72

DESCRIPTION
Stray find of a fragment of iron indicated at level 2.

FINDS
A Seax: iron, with scabbard remains (leather and nails)
Find number: 1394.2
Condition: grip missing, blade partly missing
Type: FAG Sax 3
Blade length: 427 mm
FAG phase: 8-10
FAG date: 670/80-740
Maastricht date: I-J (670/80->725)

B Knife: iron
Find number: 1394.1
Condition: grip partly missing, tip missing, blade corroded
Grip length: 21 mm
Blade length: 129 mm

C Nails (seax scabbard): copper alloy
Find number: 1394.3
Condition: a number is missing
Number: 20

71
PIT

Trench	5
Context type	pit
Elevation bottom	48.02
Stratigraphic relation	below context 66, 67, 69 and 72; above context 59 (uncertain association not in Harris matrix)

DESCRIPTION
Pit observed at level 4. A part of grave context 59 has probably been dug away while digging this context. In that case this pit (context 71) intersects context 59. However, new graves have been dug through the fill of this pit. If this stratigraphic sequence is correct the pit must have been dug while the cemetery was in use.

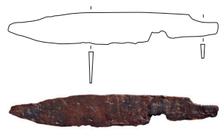
72
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	191
Grave pit width	77
Elevation bottom	48.07
Orientation	359
Stratigraphic relation	above context 68 and 71; below context 70 and 75

DESCRIPTION
Outline of a pit observed at one level only.
No skeletal remains indicated. Context 72 is immediately adjacent to context 73. On the field drawing the fill of the grave pit is characterized as (in translation): 'fire with burned mortar and loam'.



70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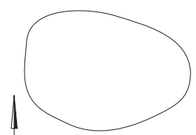
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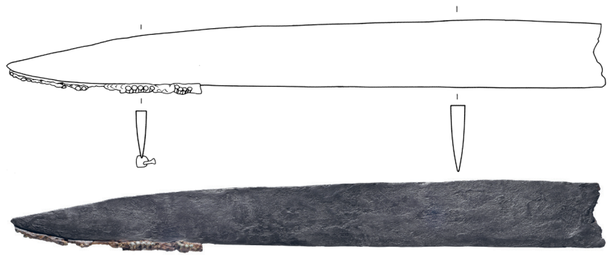
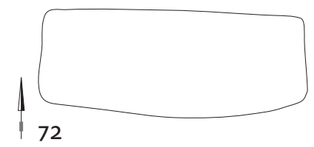

A, C


72

73
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	256 cm
Grave pit width	76 cm
Elevation top	48.07
Elevation bottom	47.93
Orientation	0
Stratigraphic relation	below context 75

DESCRIPTION
Outline of a pit has been observed at two levels. Skeletal remains indicated at level 4, the pit at level 3. The difference in height between the two levels is very small. The skeletal remains indicated are: skull, both clavicles (not digitized), left arm, left leg, upper right leg. At level 3 a coin is indicated without find number. Context 73 is immediately adjacent to context 72.

PHYSICAL ANTHROPOLOGY

Find number	1583.1
Sex WEA	male
Age in years	20 - 40

DATE (FINDS)
E (565-580/90)

FINDS
A Plate buckle: copper alloy, rectangular loop and triangular plate, inlays of copper alloy foil with dot-in-circle decoration
Find number: 1584.1
Condition: one round inlay missing
Type: no type identification available
Loop length: 29 mm
Plate length: 43 mm
General date: 550/60-580/600 (see chapter 11)
Maastricht date: E (565-580/90)

B Seax?
Find number: 1584.7
Condition: under conservation

C Knife: iron
Find number: 1584.5
Condition: tip missing?
Grip length: 52 mm
Blade length: 8 mm

D Band shaped ring (fragment): copper alloy
Find number: 1584.6
Condition: fragment
Type: no type identification available

E Rod (fragment): copper alloy
Find number: 1584.8
Condition: fragment
Type: no type identification available

F Firesteel: iron
Find number: 1584.3
Condition: ends partly missing?
Type: Siegmund Ger 5
Length: 117 mm
Alternative type: L/P/V 354? (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

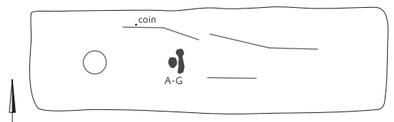
G Flint
Find number: 1584.4
Type: Siegmund Ger 6.
Length: 52 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

74
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure

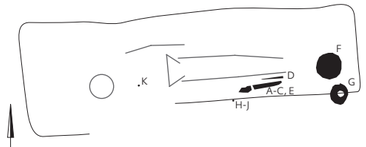
DESCRIPTION
Stray find of a skull without find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.



73


C



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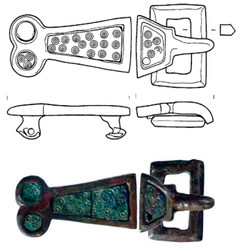
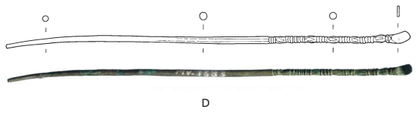

A

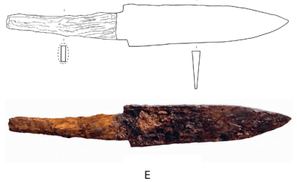

G


D


D


E


F


E

75
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	241 cm
Grave pit width	81 cm
Elevation top	48.37
Elevation bottom	48.33
Elevation top skull	48.39
Orientation	4
Stratigraphic relation	above context 72 and 73

DESCRIPTION
Outline of a pit has been observed at one level only. Grave pit was observed at level 1, skeleton and finds at level 2. The grave pit, as drawn at level 1 is narrower at the east end then at the west end. In view of the position of the pots in the pit at the east end, the width of the pit there has been drawn to narrow. Skeletal remains indicated: skull, left arm, pelvis, both legs. Find number 1424 is indicated as 'rest: unknown' under Finds. It turns out to be human remains.

PHYSICAL ANTHROPOLOGY
Remains of three individuals are present in find numbers 1396 and 1424.

- Find number	1396.1 (articulated skeleton)
Sex WEA	indeterminate
Age in years	12 - 18
- Find number	1424.1
Sex WEA	male
Age in years	40 - 80
- Find number	1424.2
Sex WEA	indeterminate
Age in years	12 - 14

DATE (FINDS)
E-F (565-610)

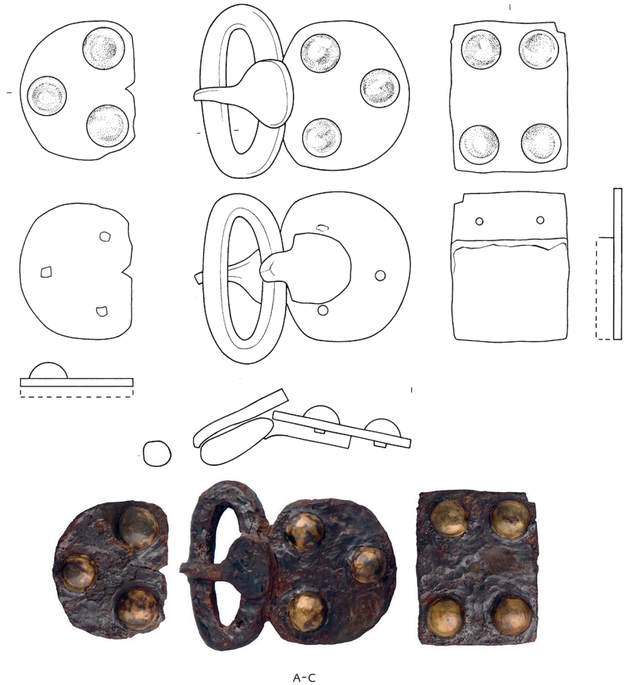
FINDS
A Plate buckle: iron, round plate with 3 copper alloy rivets
Find number: 1381.1
Condition: complete
Type: FAG Gür 4.1/2
Loop length: 60 mm
Plate length: 45 mm
FAG phase: 5-6
FAG date: 565-610/20
Alternative type: L/P/V 149 (MA3-MR1: 560/70-630/40)
Maastricht date: E-F (565-610)

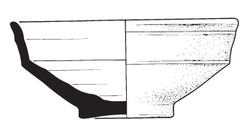
B Counter plate: iron, round plate with 3 copper alloy rivets
Find number: 1381.2
Condition: complete
Type: FAG Gür 4.1/2
Plate length: 410 mm
Rhineland phase: 5-6
Rhineland date: 565-610/20
Alternative type: L/P/V 149 (MA3-MR1: 560/70-630/40)
Maastricht date: E-F (565-610)

C Back plate: iron, rectangular plate with 3 copper alloy rivets
Find number: 1381.3
Condition: complete
Type: FAG Gür 4.1/2
Plate length: 54 mm
Plate width: 41 mm
FAG phase: 5-6
FAG date: 565-610/20
Alternative type: L/P/V 149 (MA3-MR1: 560/70-630/40)
Maastricht date: E-F (565-610)

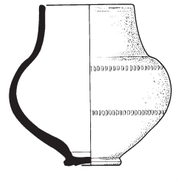
D Pin: copper alloy, spoon shaped head, decorated shank
Find number: 1383.1
Condition: complete
Type: Siegmund Nad 2.2
Length: 102 mm
Rhineland phase: 7
Rhineland date: 585-610
Alternative type: L/P/V 310 (MA1-MA3: 470/80-600/10)
Alternative type: FAG S-Nad 2.2 (5-7 565-640/50)
Alternative type: Roth/Theune 1988, 58 (phase 8: 610-670)
Maastricht date: E-G (565-640/50)

E Knife: iron
Find number: 1381.4
Condition: complete
Grip length: 89 mm
Blade length: 117 mm


A-C


F




G



F Dish (pottery): oxidized
Find number: 1378.1
Condition: complete
Type: Siegmund Sha 2.21
Maximum height: 74 mm
Rhineland phase: 5-8
Rhineland date: 555-610/40
Alternative type: L/P/V 403 (second half MA2-MA3: 540/50-600/10)
Alternative type: FAG S-Sha 2.21 (4-7: 510/25-640/50)
Maastricht date: D-G (510/20-640/50)

G Goblet (pottery)
Find number: 1377.1
Condition: complete, weathered
Type: Pirling/Siepen 2006, 363
Maximum height: 114 mm
Pirling/Siepen date: 200-250
Maastricht date: 200-250

H Indeterminate object (iron)
Find number: 1380.7
Condition: 1 fragment
Maastricht date: Roman?

I Shards (pottery)
Find number: 1380.1-5
Condition: fragments
Maastricht date: Roman

J Brick?
Find number: 1380.6
Condition: 1 fragment
Maastricht date: Roman

K Rest: unknown (human remains)
Find number: 1424.1

76
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	98
Elevation bottom	48.15
Orientation	2
Stratigraphic relation	below context 78, 77 and 79

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: both lower legs in an articulated position. The stratigraphic relation with context 73 is not clear.

PHYSICAL ANTHROPOLOGY
Only the lower legs and feet preserved.

Find number	1531.1
Sex WEA	indeterminate
Age in years	19 - 80

DATE (FINDS)
C-H (460/80-670/80)

FINDS
A Comb: antler, composite double
Find number: 1530.1
Condition: damaged, most of the teeth are missing
Type: Siegmund Ger 3.2
Length: 145 mm
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)
Alternative type: Dijkman/Ervynck 1998, 51 (600-700)
Maastricht date: G-H (610/20-670/80)

77
GRAVE

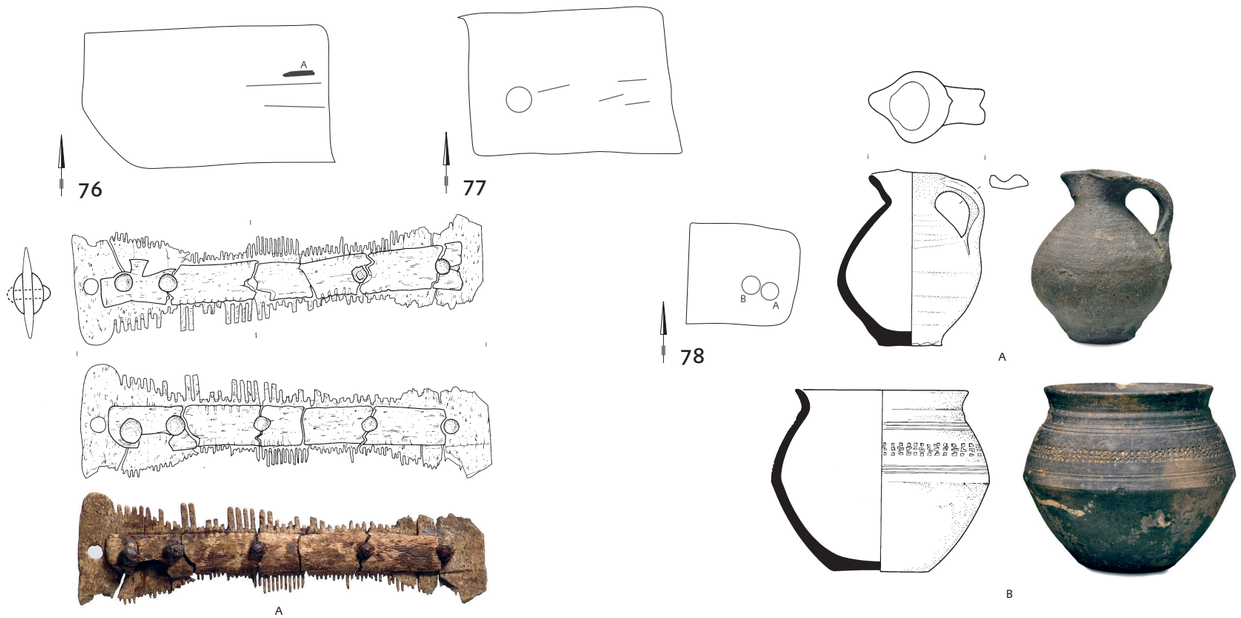
Trench	5
Burial type	inhumation grave
Grave type	trench grave
Elevation top skull	48.19
Orientation	3
Stratigraphic relation	below context 79; above context 76

DESCRIPTION
Outline of a pit observed at one level only. The fill of the pit is characterized as (in translation): 'yellow and fire'. Also black dots have been drawn to indicate charcoal and traces of fire. It is not clear what the relation of these traces of fire with the grave is. The stratigraphic relation with grave context 73 is not clear. Skeletal remains indicated on the field drawing: skull, four long bones, which are in an articulated position if it concerns a child.

PHYSICAL ANTHROPOLOGY
Available for inspection were: fragments of a skull, cervical vertebrae, the left clavicle and radius.

Find number	1517.1
Sex WEA	indeterminate
Age in years	12 – 18

FINDS
A Shards (pottery)
Find number: 1517.1-6
Condition: 11 fragments
Maastricht date: 10 Roman, 1 Merovingian



78
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	72 cm
Elevation top	48.35
Elevation bottom	48.15
Orientation	358
Stratigraphic relation	above context 73 and 76

DESCRIPTION
Outline of a pit observed at two levels. For the reconstruction the outline of level 2 has been chosen. The skulls indicated at level 3 have been placed in them. In view of the differences in height it is not clear whether this grave has to be combined with context 315. We decided not to do so.

DATE (FINDS)
E-G (565-640/50)

FINDS
A Trefoil jug (pottery): reduced
Find number: 1524.1
Condition: complete
Type: Siegmund Kan 1.2.
Maximum height: 124 mm
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: L/P/V 402 (MA1-MR1: 470/80-630/40)
Alternative type: FAG Kan 1.2 (5-7: 565-640/50)
Maastricht date: E?-G (565?-640/50)

B Biconical pot: reduced, roulette and groove decoration
Find number: 1525.1
Condition: complete
Type: Siegmund Kwt 3.12.
Maximum height: 132 mm
Rhineland phase: 6 (7)
Rhineland date: 570-585 (610)
Maastricht date: E-F (565-610/20)

79
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	79
Elevation top	48.40
Elevation top skull	48.33
Elevation top post cranial	48.37
Orientation	3
Stratigraphic relation	above context 76 and 77

DESCRIPTION
Outline of a pit observed at two levels. The iron object of level 2 (near the skull) possibly did not receive a find number or it has been recorded together with number 1389. A mixing up of find numbers probably took place. Find number 1389 is also indicated in context 86 (strap end copper alloy). The copper alloy object we have probably belongs to context 86. The skeletal material in this grave has find number 1397, which is also the find number of the fish hook, flint, knife and fire steel probably the contents of a purse. Find number 1397.1 thus occurs twice. This find number 1397 is however not related to a specific spot. It is possible that skeletal material and the contents of a purse were lifted as a single find number. Finally the position of the fragment of the glass bracelet (Iron Age) is not indicated on the field drawing. Skeletal remains indicated: skull, clavicles (not digitized), vertebral column, pelvis, both arms, left lower leg, right leg of which the lower leg seems to have been somewhat replaced. The right arm is splayed, the right hand rests on the pelvis.

PHYSICAL ANTHROPOLOGY

Find number	1397.1
Sex WEA	male
Age in years	37 - 46
Male stature in cm	167.8

DATE (FINDS)
E-F (565-610)

FINDS
A Plate buckle: copper alloy, round plate with engraved/stamped decoration
Find number: 1382.2
Condition: missing (ancient photograph Ypey)
Type: Siegmund Gür 3.2.b.
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: L/P/V 159 (MA3-MR1: 560/70-630/40)
Alternative type: FAG Gür 3c (5-6 565-610/20)
Maastricht date: E-F (565-610)

B Strap end: copper alloy (only bad photograph available)
Find number: 1382.3
Condition: missing (related to A)



C Fishhook
Find number: 1397.4

D Firesteel: iron
Find number: 1397.2
Condition: broken in two pieces
Type: Siegmund Ger 5
Length: 83 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

E Knife
Find number: 1397.1
Condition: under conservation

F Dish (pottery): reduced, on pedestal, decorated
Find number: 1420.1
Condition: complete
Type: no type identification available
Maximum height: 78 mm

G Flint
Find number: 1397.3
Type: Siegmund Ger 6.
Length: 28 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

H Indeterminate object: iron
Find number: 8888-79.1

I Shards (pottery)
Find number: 1385.1-10, 12
Condition: 218 fragments
Maastricht date: Roman

J Stone
Find number: 1385.11
Condition: 1 fragment

K Bracelet (glass)
Find number: 1492.13
Condition: 1 fragment
Maastricht date: Iron Age

L Coffin nail: iron
Find number: 1382.1

80
ROBBER TRENCH

Trench	5
Context type	robber trench

DESCRIPTION
Robber trench of one of the foundations of a Roman cellar. Not observed at level 4 anymore. This trench thus must have been less deep than the western part of the cellar. Maybe this feature is related to a stairs that led into the cellar (see also context 81 and 82).

81
ROBBER TRENCH

Trench	5
Context type	robber trench
Elevation bottom	48.14
Stratigraphic relation	below context 95

DESCRIPTION
Robber trench of one of the foundations of a Ro man cellar. Not observed at level 4 anymore. This trench must have been less deep than the western part of the cellar. Maybe this feature is related to a stairs that led into the cellar (see also context 80 and 82).

82
ROBBER TRENCH

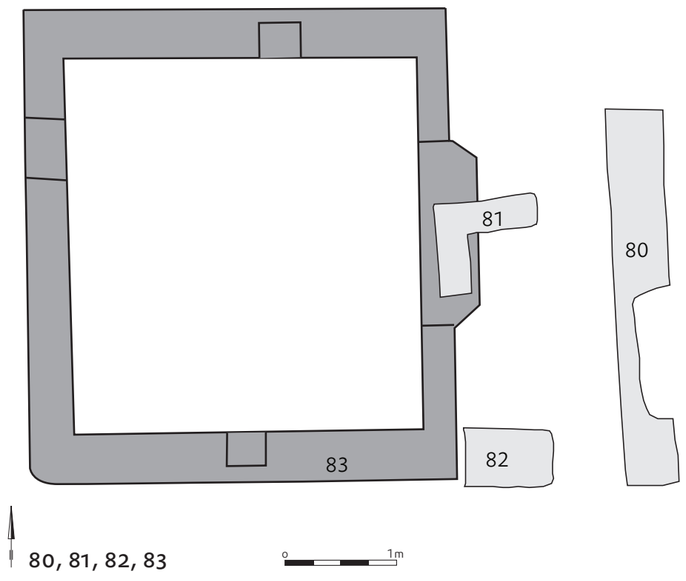
Trench	5
Context type	robber trench

DESCRIPTION
Robber trench of one of the foundations of a Roman cellar. Not observed at level 4 anymore. This trench thus must have been less deep than the western part of the cellar. Maybe this feature is related to a stairs that led into the cellar (see also context 80 and 81).

83
WALL

Trench	5
Context type	wall
Elevation top	48.35
Elevation bottom	47.90
Stratigraphic relation	below context 86, 94 and 95 (none of them in Harris Matrix)

DESCRIPTION
Eastern, southern, western and northern foundations and remains of walls of a Roman stone built cellar. In the southern wall is an alcove, the east wall changes its alignment, probably in relation to a flight of stairs. At right angles to the western wall is a small wall, maybe to create a corner for placing a hand mill. Fragments of a millstone were found there. The cellar has not been studied in detail in the context of this publication.



80, 81, 82, 83

84
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	245 cm
Grave pit width	107 cm
Elevation top	48.39
Elevation bottom	47.93
Orientation	1
Stratigraphic relation	below context 85

DESCRIPTION
Outline of a pit observed at four levels. On the composite drawing the situation at level 4 is indicated. The pot in the south-eastern part of the grave has been observed at level 2 which is c. 30/40 cm above level 4. It is not clear whether the pot belongs to this grave. At level 1 it is indicated that the fill contains brick, which will probably be of Roman origin. At level 3 there is a difference in the color of the soil of the fill in the southern (light) and northern (dark) parts of the pit. The northern dark fill may be that of a coffin. At level 4 the strip of dark soil is wider, this situation is reproduced in the composite drawing. Articulated skeletal remains indicated: skull, upper left arm, part of the pelvis (not digitized), both legs. On slide 21583 the pot (that is placed back for making the photograph) stands in the wrong place so that the impression is given that it belongs to grave context 79.

PHYSICAL ANTHROPOLOGY

Find number	1631.1
Sex WEA	male
Age in years	20 - 40

DATE (FINDS)
E-G (565-640/50)

FINDS
A Shards (pottery)
Find number: 1386.1-2
Condition: 2 fragments
Maastricht date: Roman

B Biconical pot: oxidized, roulette stamp decoration
Find number: 1379.1
Condition: complete
Type: Siegmund Kwt 4.11
Maximum height: 93 mm
Rhineland phase: 7 (end)-8A
Rhineland date: 585-610
Alternative type: FAG Kwt 5B (5-7: 565-640/50)
Alternative type: L/P/V 385 (MA1-MA2: 470/80-560/70)
Maastricht date: E-G (565-640/50)

85
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	212 cm
Grave pit width	82 cm
Elevation top	48.39
Elevation top skull	48.26
Orientation	4
Stratigraphic relation	above context 84

DESCRIPTION
Outline of a pit observed at two levels. In the reconstruction the outline of level 2 has been used, at level 1 the size of the grave pit is somewhat larger. The larger outline does not provide any stratigraphic information other than the outline of level 2. At level 1 there is a stone of which it is not clear whether it belongs to the grave. Because we used the outline of level 2 it seems that the stone is lying outside the outline of the grave pit. Skeletal remains indicated: only a skull at a place where it can be expected.

PHYSICAL ANTHROPOLOGY

Find number	1417.1
Sex WEA	female
Age in years	20 – 80

DATE (FINDS)
D-G (510/20-640/50)

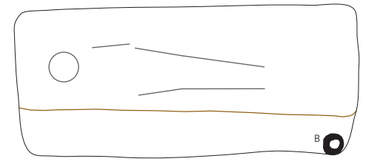
FINDS
A Bow brooch: copper alloy, glass inlays
Find number: 1419.1
Condition: inlays missing, central setting missing
Type: bow brooch (unique specimen?)

B Glass bead: opaque blue, undecorated
Find number: 1418.8
Condition: complete
Type: S-group 37 (1-2)
Shape: cylinder, short
Number of beads: 1
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-G (510/20-640/50)

C Glass bead: opaque red, undecorated
Find number: 1418.4
Condition: complete
Shape: cylinder, square
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

D Glass beads: opaque, undecorated
Find number: 1418.5
Condition: complete
Shape: barrel
Number of beads: 3
Maastricht date: D-G (510/20-640/50)





84



B

E Glass bead: transparent blue, undecorated
Find number: 1418.9
Condition: complete
Type: S-1.2
Shape: cylinder, long
Number of beads: 1
Combination group: B-C
Rhineland date: 440-555
Alternative type: FAG c. group II (2-5: 400-580/90)
Maastricht date: D-G (510/20-640/50)

F Glass bead: opaque, decorated
Find number: 1418.1
Condition: complete
Base colour: unknown
Shape: biconical, flat
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

G Glass bead: opaque red, decorated
Find number: 1418.7
Condition: complete
Type: S-2.4
Shape: cylinder, long
Number of beads: 1
Combination group: F-H
Rhineland date: 570-670
Alternative type: Koch 1977, 16.3 (Stufe 3: 565-590/600)
Maastricht date: D-G (510/20-640/50)

H Glass beads: transparent green, undecorated
Find number: 1418.6
Condition: complete
Type: S-group 46 (1-5)
Shape: globular, compressed
Number of beads: 3
Combination group: A/H-I
Rhineland date: 485-555-610-705
Maastricht date: D-G (510/20-640/50)

I Glass bead: transparent green, undecorated
Find number: 1418.10
Condition: broken, piece missing?
Shape: cylinder, short
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

J Amethyst beads, transparent
Find number: 1418.3
Condition: complete
Type: S-5.2
Shape: almond
Number of beads: 2
Combination group: H
Rhineland date: 610-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: D-G (510/20-640/50)

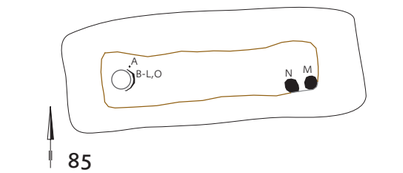
K Glass bead: opaque green, undecorated
Find number: 1418.12
Condition: complete
Shape: globular, compressed
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

L Amber bead: transparent
Find number: 1418.2
Condition: complete
Shape: irregular-shaped
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

M Glass globular beaker: green
Find number: 1422.1
Condition: broken, pieces missing
Type: FAG S-Gla 3.2.
Maximum height: 83 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

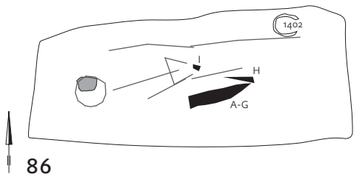
N Trefoil jug (pottery): reduced
Find number: 1421.1
Condition: complete
Type: Siegmund Kan 1.2.
Maximum height: 108 mm
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: L/P/V 402 (MA1-MR1: 470/80-630/40)
Alternative type: FAG Kan 1.2 (5-7: 565-640/50)
Maastricht date: E?-G (565-640/50)

O Coffin nail: iron
Find number: 1418.11

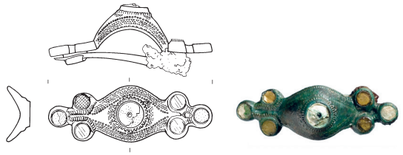


85


M



86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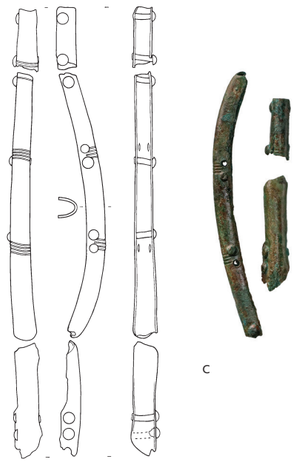
N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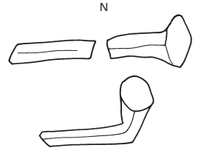
B-L


O

86
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	94
Elevation top	48.41
Elevation top skull	48.40
Elevation top post cranial	48.36
Orientation	3
Stratigraphic relation	above context 91 and 83 (last one not in Harris Matrix)

DESCRIPTION
Outline of a pit observed at two levels. In the reconstruction we used the indications of skeletal material from level 2 and the right leg at level 1. At level 1 there is a stone exactly on the location of the head at level 2. The outline of the grave pit is a combination of the outlines of levels 1 and 2. Adjustments have been made on the northern side and the north-eastern and north-western corner. Skeletal remains indicated: skull, left arm, lower right arm, vertebral column, ribs (not digitized), pelvis, left leg, upper right leg. Between the upper legs there is another long bone, near the left foot a skull (fragment) and a piece of long bone (not digitized). On the field drawing there is also find number 1402, which is not in the finds list. It is probably the fragment of a skull for which we have no physical anthropological information. It is probably missing.

PHYSICAL ANTHROPOLOGY

Find number	1398.1 (articulated skeleton)
Sex WEA	male
Age in years	49 - 55
Male stature in cm	170.6

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Plate buckle: iron, monochrome inlays, interlace geometric with animal heads, copper alloy rivets with brass inlays
Find number: 1387.1
Condition: complete
Type: no type identification available
Loop length: 66 mm
Plate length: 96 mm
Alternative type: comparable: Siegmund Gür 4.6 (8: 610-640)
Maastricht date: G (610/20-640/50)

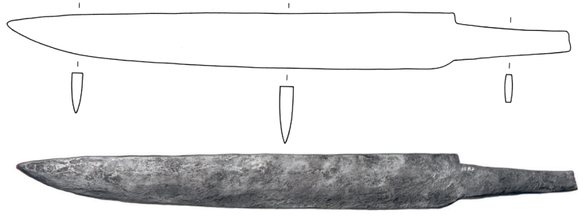
B Seax: iron
Find number: 1387.7
Condition: complete
Type: FAG Sax 2.2
Blade length: 318 mm
Grip length: 84 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

C Mount (seax scabbard): copper alloy
Find number: 1387.6
Condition: parts missing and broken
Type: FAG S-Sax 4.5
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

D Rivet (seax scabbard): copper alloy, perforated and stamped dot decoration
Find number: 1387.5
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 16 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

E Rivet (seax scabbard): copper alloy, perforated and stamped dot decoration
Find number: 1387.4
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 16 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

F Rivet (seax scabbard): copper alloy, perforated and stamped dot decoration
Find number: 1387.3
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 16 mm
FAG phase: 7-8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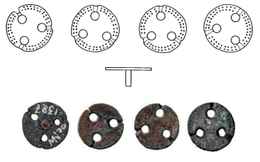
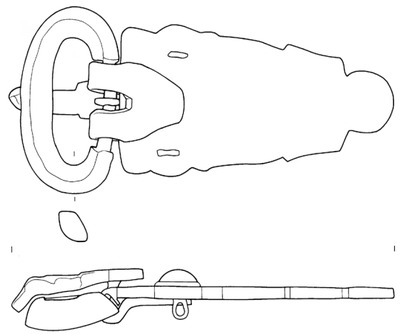

D-G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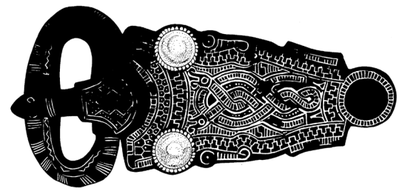
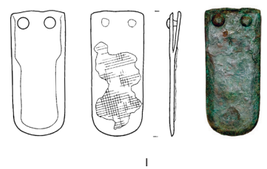





I

FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

G Rivet (seax scabbard): copper alloy, perforated and stamped dot decoration
Find number: 1387.2
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 16 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

H Knife?
Find number: 1388.1
Condition: missing

I Strap end (purse): copper alloy
Find number: 1389.1
Condition: complete
Type: L/P/V 199 (purse)
Plate length: 44 mm
L/P/V phase: MA1-MR1
L/P/V date: 470/80-630/40
Maastricht date: C-G (460/80-640/50)

87
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top post cranial	48.40
Orientation	6
Stratigraphic relation	below context 89 (pit not in Harris Matrix)

DESCRIPTION
No outline of a grave pit observed. A photograph (colour slide) has been made of this context (number 21584) on which a pair of legs can be seen. The remainder of the skeleton was destroyed when the large pit context 89 was dug. Skeletal remains indicated: both legs in an articulated position. See also context 401.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
F-G(H) (580/90-640/50)

FINDS
A Glass beaker: blue, palm cup
Find number: 1392.1
Condition: complete
Type: Siegmund Gla 2.1
Maximum height: 46 mm
Rhineland phase: 7
Rhineland date: 585-610
Alternative type: Feyeux 2003, 55.0 (550-625)
Alternative type: Koch 1987, VB (600-650)
Maastricht date: F-G (580/90-640/50)

B Goblet (pottery): reduced, ribbed wall
Find number: 1393.1
Condition: complete
Type: L/P/V 398
Maximum height: 133 mm
L/P/V phase: MR1-MR2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

C Shard (pottery)
Find number: 1391.1
Condition: 1 fragment, missing



87


A


B

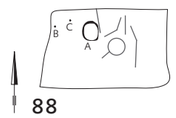
88
POSSIBLE GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.41
Stratigraphic relation	below context 89 (not in Harris Matrix)

DESCRIPTION
Outline of a grave pit observed at the southern side, other limits of the pit have disappeared as a consequence of the digging of younger pits. At level 2 there is a quantity of disarticulate bones. A glass bowl is indicated at two levels. The eastern limit of the pit is probably intersected by a large pit with a black fill in which a typical Merovingian black pot is indicated. The stratigraphic relation between the two features is, however, vaguely indicated.

PHYSICAL ANTHROPOLOGY
Skeletal remains of at least three individuals were in this find number.
- Find number 1400.1
Sex WEA male
Age in years 20 - 40
- Find number 1400.2
Sex WEA male
Age in years 21 - 24
Male stature in cm 180.0
- Find number 1400.3
Sex WEA female
Age in years 20 - 34

DATE (FINDS)
D-E (510/20-580/90)



88


A

FINDS
A Glass globular beaker: blue
Find number: 1390.1
Condition: broken, pieces missing
Type: FAG S-Gla 3.2
Maximum height: 94 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

B Biconical pot (pottery): reduced, roulette stamp decoration
Find number: 1395.1
Condition: complete, but renovated (missing parts filled up with plaster)
Type: Siegmund Kwt 3.12
Maximum height: 149 mm
Rhineland phase: 6-7
Rhineland date: 570-610
Alternative type: L/P/V 390 (MA2-MR1: 520/30-630/40)
Maastricht date: D-G (510/20-640/50)

C Biconical pot: reduced, single stamp? and groove decoration
Find number: 1416.1
Condition: complete
Type: Siegmund Kwt 2.12
Maximum height: 132 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Alternative type: FAG Kwt 2B (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)


B


C

89
PIT

Trench	5
Context type	pit
Elevation top	48.41
Elevation bottom	47.92
Stratigraphic relation	above context 87 and 88 (both not in Harris Matrix)

DESCRIPTION
Large pit, which intersects graves. Its length is c. 10,75 meters. A similar pit is present at another location on the Vrijthof square.

DATE (FINDS)
D-F (510/20-610)

FINDS
A Buckle: copper alloy, shield tongue, punched/engraved decoration
Find number: 1428.1
Condition: complete
Type: L/P/V 116
Loop length: 34 mm
L/P/V phase: MA 2-MA3
L/P/V date: 520/30-600/10
Alternative type: Böhner 1958, A6 (Stufe III: 525-600)
Maastricht date: D-F (510/20-610)

B Shard: pottery
Find number: 1368.1
Condition: 1 fragment
Maastricht date: Carolingian

90
FIND

Trench	5
Context type	find
Elevation bottom	48.41

DESCRIPTION
Stray find of a biconical pot. Found in a large, dark discoloration of the soil of which it is difficult to establish the date. It is not possible to associate the pot with a specific grave.

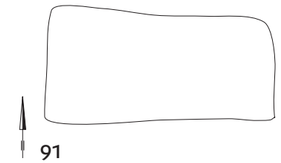
FINDS
A Biconical pot
Find number: 8888-90.1
Condition: missing

91
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	164 cm
Grave pit width	75 cm
Elevation bottom	48.22
Orientation	358
Stratigraphic relation	below context 86 and 92

DESCRIPTION
Outline of a pit observed at one level only. No remains of a skeleton indicated. It is not certain whether this context is a grave.


89A


91

92
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.30
Elevation top skull	48.39
Orientation	354
Stratigraphic relation	above context 91 and 95

DESCRIPTION
Outline of a pit not observed. Articulated skeletal remains indicated: skull, clavicles (not digitized), ribs (not digitized), vertebral column, left arm, lower right arm, both legs. The hands are placed on the pelvis. No find number for these skeletal remains. A not identified object is indicated near the left foot (no find number).

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
G (610/20-640/50)

FINDS
A Plate buckle: type Bülach, iron, silver inlays
Find number: 1403.1
Condition: loop partly missing
Type: Siegmund Gür 4.6.
Plate length: 70 mm
Rhineland phase: 8-8
Rhineland date: 610-640
Alternative type: FAG S-Gür 4.6 (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

B Copper alloy: slotted plate
Find number: 1403.3
Condition: complete
Type: Siegmund Gür 4.6
Rhineland phase: 8-8
Rhineland date: 610-640
Alternative type: FAG S-Gür 4.6 (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

C Copper alloy: slotted plate
Find number: 1403.4
Type: Siegmund Gür 4.6
Rhineland phase: 8-8
Rhineland date: 610 -640
Alternative type: FAG S-Gür 4.6 (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

D Buckle: copper alloy, simple copper alloy tongue
Find number: 1403.2
Condition: complete
Type: Siegmund Gür 2.8?
Loop length: 21 mm
Rhineland phase: 4
Rhineland date: 530-555
Maastricht date: D (510/20-565)

E Seax?
Find number: 1403.11
Condition: under conservation

F Rivet (seax scabbard): copper alloy, perforated
Find number: 1403.5
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 17 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

G Rivet (seax scabbard): copper alloy, perforated
Find number: 1403.7
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 17 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

H Rivet (seax scabbard): copper alloy, perforated
Find number: 1403.8
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 17 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

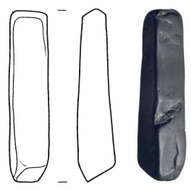
I Rivet (seax scabbard): copper alloy, perforated
Find number: 1403.9
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 15 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

J Rivet (seax scabbard): copper alloy, perforated
Find number: 1403.6
Condition: complete
Type: FAG S-Sax 4.1
Diameter: 17 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

K Touchstone: pyrite?
Find number: 1403.10
Length: 62 mm

L Rest: metal
Find number: 1403.12

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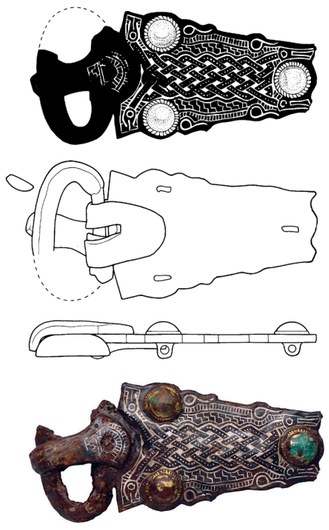
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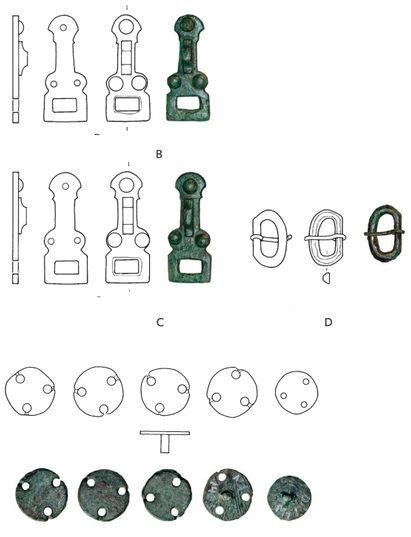
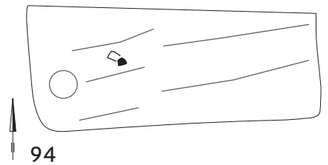


93
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation top skull	48.30

DESCRIPTION
Stray find of a skull indicated at level 2.

PHYSICAL ANTHROPOLOGY
Find number	1423.1
Sex WEA	female
Age in years	20 - 34



94
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	207
Elevation top	48.40
Elevation top skull	48.34
Elevation top post cranial	48.17
Orientation	3
Stratigraphic relation	above context 83 (not in Harris Matrix)

DESCRIPTION
Outline of a pit observed at one level only. At level 2 a 'marlstone floor' (*mergelvloertje*) is indicated that, for stratigraphic reasons cannot have been part of the Roman cellar. It will have been younger than the graves. Articulated skeletal remains indicated: skull, clavicles (not digitized), left arm, upper right arm, vertebral column, both legs.

PHYSICAL ANTHROPOLOGY
Find number	1486.1
Sex WEA	male
Age in years	47 - 63
Male stature in cm	179.4

FINDS
Unidentifiable object
Find number: 1486.1
Condition: missing

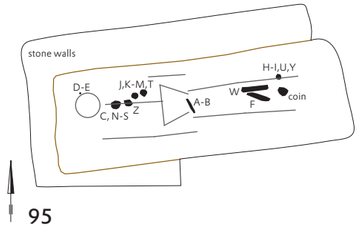
95
GRAVE

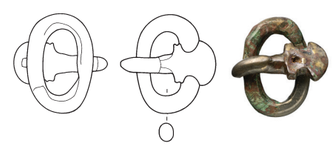
Trench	5
Burial type	inhumation grave
Grave type	stone built grave
Elevation top	48.45
Elevation top skull	48.27
Orientation	7
Stratigraphic relation	above context 81 and 83 (not in Harris Matrix); below context 92

DESCRIPTION
Outline of grave pit observed at one level. However on slide 21582 one can already see soil of a grave at this place at level 1 that will be the fill of this very grave. Moreover, an outline of a grave pit at level 1 corresponds with that of this context at level 3. On photograph H 641-8 it is clearly visible that it concerns a grave with stone walls. On the eastern side the stones have disappeared. Almost complete articulated skeleton indicated. Next to the two Roman coins in find number 1478 (H-I) a coin ('munt') is indicated between the feet, for which there is no further information.

PHYSICAL ANTHROPOLOGY
Find number	1477.1
Sex WEA	female
Age in years	30 - 36
Female stature in cm	164.2

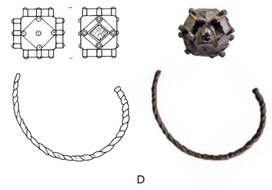
DATE (FINDS)
F-H (580/90-670/80)




A


B


C


D


E

FINDS

A Buckle: copper alloy with shield tongue
Find number: 1481.1
Condition: tongue detached
Type: FAG Gür 2.6/7C
Loop length: 35 mm
FAG phase: 4-4
FAG date: 510/25-565
Alternative type: L/P/V 118 (MA2-MA3: 470/80-600/10)
Maastricht date: D-E (510/20-580/90)

B Belt stud: copper alloy
Find number: 1481.2
Condition: eye partly missing
Type: Siegmund Gür 2.10
Plate length: 18 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Maastricht date: D (510/20-565)

C Disc brooch: rosette, one zone of garnets, silver middle field
Find number: 1484.1
Condition: fastener missing
Type: Siegmund Fib 1.3
Diameter: 18 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz 2003, D10.34? (480/500-600/10)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: C-F? (460/80-610?)

D Earring: silver, twisted ring with pendant
Find number: 1485.1
Condition: part of ring missing, pendant not attached to ring
Type: FAG Ohr 4B
Ring diameter: 40 mm
FAG phase: 6-8
FAG date: 580/90-670/80
Alternative type: Von Freeden 1979 (630/40-670/80)
Maastricht date: F-H (580/90-670/80)

E Earring: (copper alloy?) and silver, twisted ring, probably originally with pendant
Find number: 1485.2
Condition: broken in 4 fragments, pendant missing?
Type: FAG Ohr 4B
Ring diameter: 40 mm
FAG phase: 6-8
FAG date: 580/90-670/80
Alternative type: Von Freeden 1979 (630/40-670/80)
Maastricht date: F-H (580/90-670/80)

F Knife: iron
Find number: 1480.1
Condition: complete
Grip length: 43 mm
Blade length: 93 mm

G Ring
Find number: 1482.1
Condition: missing

H Coin: copper
Find number: 1478.4
Condition: corroded
Type: Antoninianus, barbarian imitation
Diameter: 14 mm
Date: 270-300

I Coin: copper
Find number: 1478.2
Condition: slightly corroded
Type: Antoninianus, Quitillus
Diameter: 20 mm
Date : 270

J Beads: millefiori, opaque glass, red bands with millefiori middle band.
Find number: 1482.2
Condition: complete
Type: S-2.13
Shape: barrel
Number of beads: 3
Alternative type: Koch: 1977, M25/27/52 (Stufe 2-4: 545/50-620/30)
Maastricht date: D-G (510/20-640/50)

K Glass bead: millefiori?, opaque
Find number: 1482.3
Condition: complete
Shape: barrel
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

L Glass bead: transparent blue, decorated
Find number: 1482.4
Condition: complete
Type: Koch 1977, M67/72
Shape: barrel
Number of beads: 1
Koch phase: Stufe 4
Koch date: 590/600-620/30
Maastricht date: D-G (510/20-640/50)

M Glass bead: opaque blue, undecorated
Find number: 1482.6
Condition: complete
Shape: barrel, melon (ripped)
Number of beads: 1
Rhineland phase: Roman
Maastricht date: D-G (510/20-640/50)

N Amber bead, transparent red
Find number: 1484.2
Condition: piece missing
Shape: almond
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

O Glass bead: opaque orange, undecorated
Find number: 1484.3
Condition: complete
Type: S-34.1
Shape: barrel
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Maastricht date: D-H (510/20-670/80)

P Glass bead: opaque red, undecorated
Find number: 1484.4
Condition: complete
Shape: cylinder, short
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

Q Glass bead: transparent blue, undecorated
Find number: 1484.5
Condition: complete
Type: S-47.1?
Shape: barrel
Number of beads: 1
Combination group: A?
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: D-H (510/20-670/80)

R Glass beads: opaque yellow, undecorated
Find number: 1484.6
Condition: complete, some weathered
Type: S-33.3
Shape: globular, compressed
Number of beads: 57
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

S Glass beads: transparent green, undecorated
Find number: 1484.7
Condition: complete
Type: S-group 46 (1-5)
Shape: globular, compressed
Number of beads: 38
Combination group: A/H-I
Rhineland date: 485-555-610-705
Maastricht date: D-H (510/20-670/80)

T Glass bead: opaque white, undecorated
Find number: 1482.5
Condition: piece missing
Shape: cylinder, short
Number of beads: 1
Maastricht date: D-G (510/20-640/50)

U Glass beads: opaque black, undecorated
Find number: 1478.1
Condition: complete
Type: S-31.1
Shape: globular, compressed
Number of beads: 62
Combination group: C-D
Rhineland date: 485-585
Alternative type: FAG c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: B-E (400-580/90)

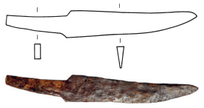
V Jug (pottery)
Find number: 1479.2
Condition: missing

W Comb: double sided composite
Find number: 1479.1
Condition: teeth missing
Type: Siegmund Ger 3.23.
Length: 91 mm
Rhineland phase: 4-7
Rhineland date: 530-610
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)
Alternative type: Dijkman/Ervynck 1998, 29b
Maastricht date: C-H (460/80-670/80)

X Comb case: antler
Find number: 1479.3
Condition: piece missing
Type: Siegmund Ger 3.23
Length: 121 mm
Rhineland phase: 4-7
Rhineland date: 530-610
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)
Alternative type: Dijkman/Ervynck 1998, 29a
Maastricht date: C-H (460/80-670/80)

Y La Tène bracelet: glass
Find number: 1478.3
Condition: fragment
Phase: Iron Age

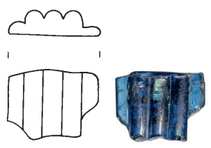
Z Unidentifiable object
Find number: 1483.1


F


H

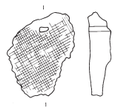

I


J, K-M, T


Y (SCALE 1:1)


N-S


U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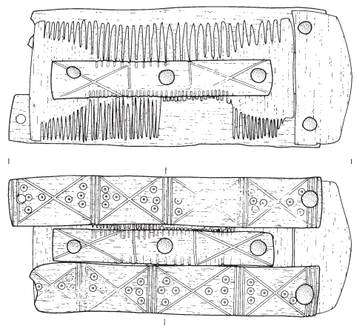

W-X



96
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	262 cm
Grave pit width	125 cm
Elevation top	48.45
Elevation top skull	48.20
Elevation top post cranial	47.98
Orientation	2
Stratigraphic relation	below context 99 (not in Harris Matrix); above context 97 (relation uncertain)

DESCRIPTION
The outline of the grave pit is most clearly visible at level 3. At levels 1 and 2 outlines of grave pits are indicated on the same spot. In spite of small differences we suppose that they are all of one single grave. The reconstruction is made on the basis of the evidence of levels 2 and 3. This implies that context 97 is intersected by grave context 96. A possible reconstruction of what happened is: the pit of grave 96 was dug to a depth at which the skeleton in context 97 lies. Then the pit of context 96 is made narrower so that the lower part of 96 lies next to 97. At level 3 a strip of dark soil was observed that could indicate the presence of a coffin in the southern part of the pit. Context 96 is situated against the wall of the Roman cellar (context 83). Complete articulated skeleton indicated.

PHYSICAL ANTHROPOLOGY

Find number	1527.1
Sex WEA	male
Age in years	40 - 80
Male stature in cm	167.2

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Back plate: copper alloy
Find number: 1528.2 (+3?)
Condition: centre is partly missing.
Type: no type identification available
Plate length: 28 mm
Plate width: 25 mm

B Buckle (purse): copper alloy, rectangular facetted loop
Find number: 1528.1
Condition: tongue missing
Type: Siegmund Sna 1.1
Loop length: 20 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: L/P/V 124 (MA1-MR1: 470/80-630/40)
Maastricht date: D-E (510/20-580/90)

C Fire steel: iron
Find number: 1529.2
Condition: complete, restored
Type: Siegmund Ger 5
Length: 112 mm

D Rod: iron
Find number: 1529.5

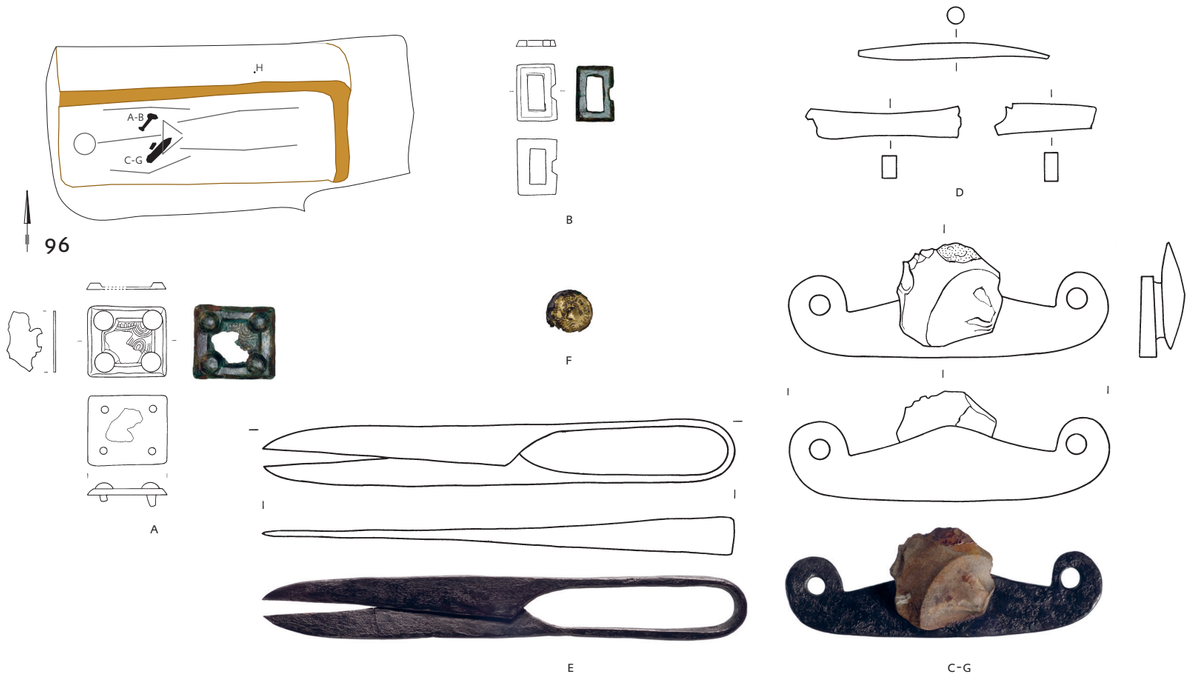
Knife: iron
Find number: 1529.3
Condition: under conservation

E Shear: iron
Find number: 1529.1
Condition: complete
Type: L/P/V 355
Length: 168 mm
L/P/V phase: MA 1-MR 3
L/P/V date: 470/80-700/10
Maastricht date: C-G (460/80-640/50)

F Coin
Find number: 1529.6
Type: imitation Justinian I
Date: 527-565

G Flint
Find number: 1529.4
Type: Siegmund Ger 6.
Length: 37 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

H Shards (pottery)
Find number: 1370.1
Condition: 1 fragment
Maastricht date: Roman



97
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	205 cm
Grave pit width	87 cm
Elevation top	48.44
Elevation top skull	48.29
Elevation top post cranial	48.19
Orientation	2
Stratigraphic relation	below context 98, 99

DESCRIPTION
Outline of a pit observed at one level only. This grave is situated immediately next to grave context 96. The stratigraphic relation between both graves could not be established. See context 96. In the composite drawing the situation at level 3 is represented. Complete articulated skeleton indicated. An unidentified object (a stone?) is present below the right leg. The pottery shards and skeletal material were recorded under the same find number. This indicated that find number 1476 contains material found over the entire grave.

PHYSICAL ANTHROPOLOGY

- Find number	1476.1 (articulated skeleton)
Sex WEA	indeterminate
Age in years	indeterminate
- Find number	1476.2
Sex WEA	female
Age in years	30 - 60
- Find number	1476.3
Sex WEA	indeterminate
Age in years	indeterminate
- Find number	1476.4
Sex WEA	indeterminate
Age in years	20 - 80
- Find number	1476.5
Sex WEA	indeterminate
Age in years	indeterminate
- Find number	1476.6
Sex WEA	indeterminate
Age in years	indeterminate
- Find number	1476.7
Sex WEA	indeterminate
Age in years	4 - 12

DATE (FINDS)
E (565-580/90)

FINDS
A Plate buckle: copper alloy
Find number: 1499.1
Condition: missing

B Ring (belt appendage): iron
Find number: 1474.1
Condition: additional pieces partly missing
Type: L/P/V 357
Ring diameter: 44 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

C Ring (belt appendage): iron
Find number: 1475.1
Condition: complete
Type: L/P/V 357
Ring diameter: 59 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

D Buckle (shoe): copper alloy, ribbed loop, punched dot-in-circle decoration
Find number: 1497.1
Condition: complete
Type: Siegmund Sna 1.2
Loop length: 23 mm
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: L/P/V 120 (MA3: 560/70-600/10)
Maastricht date: E (565-580/90)

E Strap end (shoe): copper alloy, punched dot-in-circle decoration
Find number: 1497.2
Condition: complete
Type: Siegmund Sna 1.2
Plate length: 48 mm
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: L/P/V 199 (MA1-MR1: 470/80-630/40)
Maastricht date: E (565-580/90)

F Buckle (shoe): copper alloy, punched dot-in-circle decoration, ribbed loop
Find number: 1496.1
Condition: missing



Type: Siegmund Sna 1.2
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: L/P/V 120 (MA3: 560/70-600/10)
Maastricht date: E (565-580/90)

G Strap end (shoe): copper alloy, engraved geometric decoration
Find number: 1496.2
Condition: missing
Type: Siegmund Sna 1.2
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: L/P/V 199 (MA1-MR1: 470/80-630/40)
Maastricht date: E (565-580/90)

H Comb: case connecting plate, antler, decorated
Find number: 1498.1
Condition: damaged, parts missing
Type: Siegmund Ger 3.23
Length: 100 mm
Rhineland phase: 4-7
Rhineland date: 530-610
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)
Alternative type: Dijkman/Ervynck 1998, 34
Maastricht date: C-H (460/80-670/80)

I Amulet: bone, Hercules-club
Find number: 1500.1
Condition: loop partly missing
Type: FAG S-Ggh 5
FAG date: 550-650
Alternative type L/P/V 344 (PM-MA1: 440/50-520/30)
Maastricht date: E-G (565-640/50)

J Amulet: animal tooth (2 fragments)
Find number: 1498.2
Condition: weathered
Type: L/P/V 343
L/P/V phase: MA 1-MA 3
L/P/V date: 470/80-600/10
Maastricht date: C-F (460/80-610)

K Shards (pottery)
Find number: 1476.1-4
Condition: 34 fragments
Maastricht date: Roman

98
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	201 cm
Grave pit width	58 cm
Elevation bottom	48.47
Orientation	3
Stratigraphic relation	above context 97

DESCRIPTION
Outline of a pit observed at one level only. Two skulls are probably present (no find number). An unidentified object (a stone?) is present along the north wall of the pit.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

99
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	210 cm
Grave pit width	80 cm
Elevation top skull	48.40
Orientation	10
Stratigraphic relation	above context 97 and 187 (seen on slide) and above context 96 (not in Harris matrix)

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull (possibly find number 1851?), bone material at the place of the pelvis, probably articulated, but severely decomposed (not digitized).

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
F-H (580/90-670/80)

FINDS
A Buckle: copper alloy, cast decoration, hinged construction
Find number: 1413.1
Condition: complete
Type: no type identification available (unique specimen?)
Loop length: 24 mm
Plate length: 32 mm
Alternative type: L/P/V 138 (MA3-MR2: 560/70-660/70)
Maastricht date: F-H (580/90-670/80)

B Strap end: copper alloy
Find number: 1413.2
Condition: complete
Type: no type identification available (unique specimen?)
Plate length: 54 mm
Alternative type: L/P/V 138 (MA3-MR2: 560/70-660/70)
Maastricht date: F-H (580/90-670/80)

C Rod: iron
Find number: 1426.1

D Key: copper alloy
Find number: 1413.4
Condition: complete
Type: L/P/V 350
Length: 58 mm
L/P/V phase: MA1-MA3
L/P/V date: 470/80-600/10
Maastricht date: C-F (460/80-610/20)

E Glass bottle: unguentarium, green, undecorated
Find number: 1853.1
Condition: rim partly missing
Type: Isings 1957, 82b2 (variant)
Maximum height: 140 mm
Isings date: Roman
Alternative type: Pirling/Siepen 2006, 202/804 (100-350)
Maastricht date: Roman

F Glass globular beaker: green
Find number: 1852.1
Condition: complete
Type: FAG S-Gla 3.2
Maximum height: 76 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

G Unidentifiable object
Find number: 1414.1
Condition: missing

H Coffin nail: iron
Find number: 1413.3

100
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	147 cm
Grave pit width	99 cm
Elevation top post cranial	48.18
Orientation	3
Stratigraphic relation	below context 101, 102 and 103

DESCRIPTION
Outline of a pit observed at two levels. The grave pit is relatively short, there does not seem to be much space to place the legs. It is also possible that the conditions for observing individual fills of pits were not good. Skeletal remains indicated: skull, both upper arms, lower left arm, pelvis (not digitized), upper body in an articulated position.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

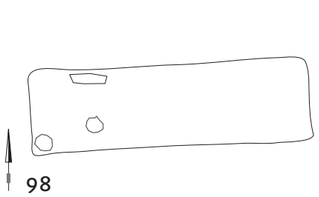
DATE (FINDS)
E-H (565-670/80)

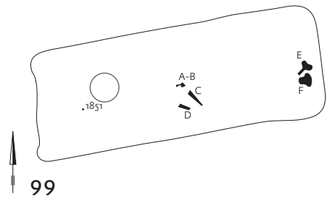
FINDS
A Umbo miniature: iron
Find number: 1435.3
Condition: complete, perforated
Type: no type identification available
Diameter: 35 mm

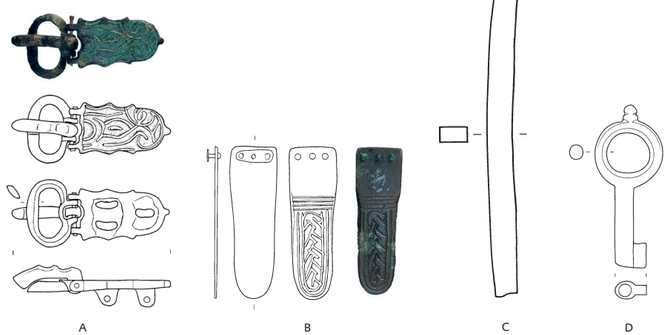
B Coin pendant: copper alloy
Find number: 1434.21
Condition: corroded
Type: Aes II, indeterminate
Diameter: 21 mm
Date: c. 346-423

C Plate buckle (shoe): copper alloy, punched dot decoration
Find number: 1495.1
Condition: tongue missing
Type: Siegmund Sna 2.2
Loop length: 17 mm
Plate length: 17 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: L/P/V 131 (MA3-MR2: 560/70-660/70)
Maastricht date: E-H (565-670/80)

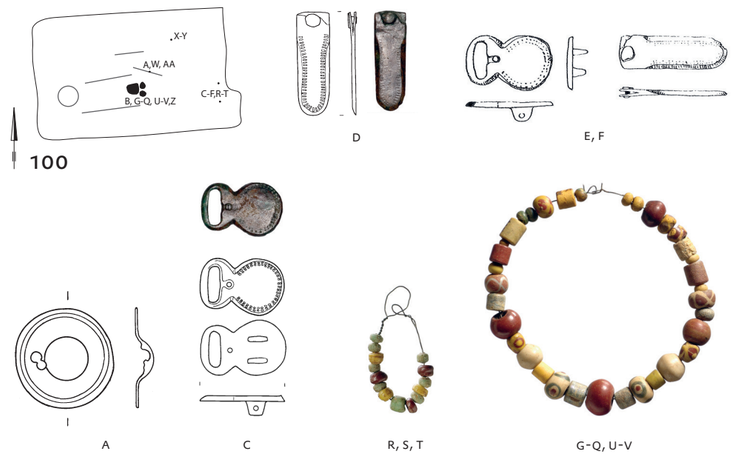
D Strap end (shoe): copper alloy, punched striped decoration
Find number: 1495.2
Condition: complete
Type: Siegmund Sna 2.2
Plate length: 37 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: L/P/V 131 (MA3-MR2: 560/70-660/70)
Maastricht date: E-H (565-670/80)











E Plate buckle (shoe): copper alloy, punched dot decoration
Find number: 1495.6
Condition: missing
Type: Siegmund Sna 2.2
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: L/P/V 131 (MA3-MR2: 560/70-660/70)
Maastricht date: E-H (565-670/80)

F Strap end (shoe): copper alloy, punched striped decoration
Find number: 1495.7
Condition: missing
Type: Siegmund Sna 2.2
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: L/P/V 131 (MA3-MR2: 560/70-660/70)
Maastricht date: E-H (565-670/80)

G Glass beads: opaque red, decorated
Find number: 1434.7
Condition: complete
Type: S-35.8
Shape: globular, compressed
Number of beads: 2
Combination group: F-H
Rhineland date: 570-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Alternative type: Koch 1977, 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: E-H (565-670/80)

H Glass beads: opaque yellow, undecorated
Find number: 1434.1
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 7
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: E-H (565-670/80)

I Glass beads: opaque white, undecorated
Find number: 1434.10
Condition: complete
Type: S-32.3
Shape: biconical
Number of beads: 2
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-H (565-670/80)

J Glass beads: opaque white, decorated
Find number: 1434.11
Condition: complete
Type: Koch 1977, 15.34
Shape: globular, compressed
Number of beads: 2
Koch phase: Stufe 4
Koch date: 590/600-620/30
Maastricht date: E-H (565-670/80)

K Glass beads: opaque red, decorated
Find number: 1434.5
Condition: complete
Type: S-35.12
Shape: globular, compressed
Number of beads: 2
Combination group: F-G
Rhineland date: 570-640
Alternative type: Koch 1977, 20.1 (Stufe 3-4: 565-620/30)
Maastricht date: E-H (565-670/80)

L Glass beads: opaque green, undecorated
Find number: 1434.4
Condition: segment missing?
Shape: globular, compressed
Number of beads: 2
Maastricht date: E-H (565-670/80)

M Glass beads: opaque red, decorated
Find number: 1434.3
Condition: complete
Type: S-35.11
Shape: globular, compressed
Number of beads: 2
Combination group: F-G
Rhineland date: 570-640
Alternative type: Koch 1977, group 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: E-H (565-670/80)

N Glass beads: opaque red, undecorated
Find number: 1434.9
Condition: complete
Type: S-35.6
Shape: biconical
Number of beads: 4
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-H (565-670/80)

O Glass beads: opaque red, undecorated
Find number: 1434.6
Condition: complete
Shape: cylinder, short
Number of beads: 2
Maastricht date: E-H (565-670/80)

P Glass bead: opaque, undecorated
Find number: 1434.12
Condition: corroded
Shape: globular, compressed
Number of beads: 1
Maastricht date: E-H (565-670/80)

Q Glass beads: opaque yellow, undecorated
Find number: 1434.2
Condition: complete
Type: S-33.1
Shape: cylinder, short
Number of beads: 4
Combination group: D-G
Rhineland date: 530-640
Alternative type: FAG c. group II-III (2-5: 400-580/90)
Maastricht date: E-H (565-670/80)

R Glass beads: opaque green, undecorated
Find number: 1495.3
Condition: complete
Shape: globular, compressed
Type: no type identification available
Number of beads: 9
Maastricht date: E-H (565-670/80)

S Glass beads: opaque red, undecorated
Find number: 1495.4
Condition: complete
Type: S-35.4
Shape: globular, compressed
Number of beads: 3
Combination group: D-G
Rhineland date: 530-640
Maastricht date: E-H (565-670/80)

T Glass beads: opaque yellow, undecorated
Find number: 1495.5
Condition: complete
Type: S-33.6
Shape: irregular-shaped
Number of beads: 3
Combination group: G-H
Rhineland date: 585-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-H (565-670/80)

U Glass bead: opaque red, decorated
Find number: 1434.13
Condition: complete
Type: Koch 1977, 35.2
Shape: globular, compressed
Number of beads: 1
Koch phase: no information
Koch date: no information
Maastricht date: E-H (565-670/80)

V Glass beads: opaque blue, undecorated
Find number: 1434.8
Condition: corroded
Type: S-group 37 (1-2)
Shape: cylinder, short
Number of beads: 4
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: E-H (565-670/80)

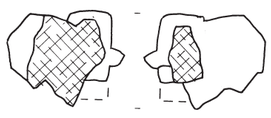
W Disc: antler/bone
Find number: 1435.1
Condition: partly decayed
Type: L/P/V 359
L/P/V phase: MA2-MA3
L/P/V date: 540/50-600/10
Maastricht date: D-F (510/20-610)

X Shards (pottery)
Find number: 1494.1-4
Condition: 6 fragments
Maastricht date: 5 Roman, 1 high medieval

Y Unidentifiable object
Find number: 1494.5
Condition: 1 fragment

Z Unidentifiable object (possibly plate buckle)
Find number: 1434.20

AA Three indeterminate objects: iron
Find number: 1435.1-2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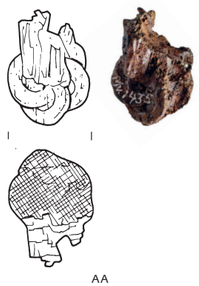
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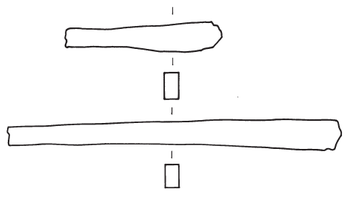

AA

101
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	204 cm
Grave pit width	85 cm
Elevation top	48.48
Elevation top skull	48.07
Elevation top post cranial	48.02
Orientation	2
Stratigraphic relation	above context 100, 183 (uncertain), 184 (uncertain); below context 102 and 182

DESCRIPTION
Outline of a pit observed at two levels. Almost complete articulated skeleton present except for lower right arm and pelvis. Stones have been found both inside and outside the grave pit.

PHYSICAL ANTHROPOLOGY

Find number	1492.1
Sex WEA	indifferent
Age in years	35 - 39

DATE (FINDS)
D (510/20-565)

FINDS
A Buckle: copper alloy
Find number: 1490.1
Condition: missing

B Buckle: copper alloy, oval loop with simple copper alloy tongue
Find number: 1493.3
Condition: complete
Type: Siegmund Sna 1.2
Loop length: 15 mm
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: L/P/V 126 (MA1-MR1: 470/80-630/40)
Maastricht date: E (565-580/90)

C Belt stud: copper alloy
Find number: 1493.1
Condition: eye partly missing
Type: Siegmund Gür 2.10
Plate length: 23 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Alternative type: L/P/V 193 (second half MA1-MA3: 495/505- 600/10)
Maastricht date: D (510/20-565)

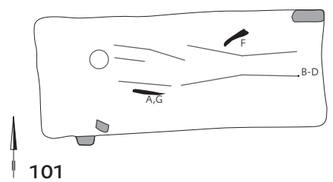
D Belt stud: copper alloy
Find number: 1493.2
Condition: eye partly missing
Type: Siegmund Gür 2.10
Plate length: 21 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Alternative type: L/P/V 193 (second half MA1-MA3: 495/505- 600/10)
Maastricht date: D (510/20-565)

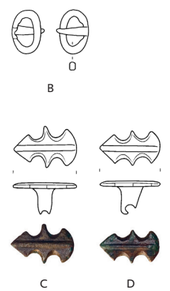
E Tweezers
Find number: 8888-101.1
Condition: missing
Length: 56 mm

F Knife: iron
Find number: 1491.1
Condition: complete
Grip length: 86 mm
Blade length: 89 mm

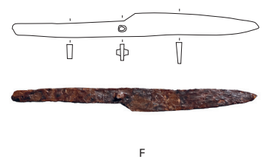
G Unidentifiable object: iron
Find number: 1490.2
Condition: missing

H Shards (pottery)
Find number: 1492.1-6
Condition: 11 fragments
Maastricht date: Roman






E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102
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.40
Orientation	0
Stratigraphic relation	above context 101 below context 103 (intercutting grave) and 182

DESCRIPTION
Outline of a pit or container observed at one level. A skull is indicated in the western end of the outline. No find number. No further evidence.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

103
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	49 cm
Elevation bottom	48.47
Elevation top post cranial	48.40
Orientation	359
Stratigraphic relation	above context 100 and 102; below context 182

DESCRIPTION
Outline of a pit observed at one level only. The grave pit is relatively narrow perhaps the conditions for making detailed observations on the outline of the pit were absent. Grave context 103 is one of the highest lying graves.
Almost complete articulated skeleton present, except for the skull, the upper right arm and lower right leg. It is also possible that the remains of two individuals were recorded. No find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

104
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	191 cm
Grave pit width	95 cm
Elevation bottom	47.93
Orientation	17
Stratigraphic relation	below context 105

DESCRIPTION
Outline of a pit observed at one level only. The outline of the fill of a coffin has been observed. Articulated skeletal remains indicated: left arm, both legs. At exactly the same spot lies grave context 105.

PHYSICAL ANTHROPOLOGY

Find number	1581.1
Sex WEA	male
Age in years	35 – 80

FINDS
A Axe/Francisca?
Find number: 1582.1
Condition: missing

B Shard (pottery)
Find number: 1582.2
Condition: 1 fragment
Maastricht date: Roman

^{14}C-DATE
GrA 32715 + 35 BP
1 sigma: 430-490 (35.5%) 500-570 (32.7%)
2 sigma: 420-600 (95.4%)

105
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	210 cm
Grave pit width	125 cm
Elevation top	48.37
Elevation top post cranial	48.04
Orientation	12
Stratigraphic relation	above context 104

DESCRIPTION
Outline of a pit observed at three levels. The size of the pit seems to change from level to level, probably as a result of bad conditions for observing the limits of the pit. Skeletal remains indicated: pelvis and both legs, articulated. There seems to be insufficient space in the pit for depositing the upper part of a body. The seax may originally have been located in the container. The bend line of the southern wall of the container seems to indicate that it collapsed inwards as a result of the pressure of the packing soil.

PHYSICAL ANTHROPOLOGY
Skeletal remains of two individuals were found in this find number. Of the adult individual only the lower legs and feet were available for examination, of the child only two bones of the lower right leg.

-	Find number	1511.1 (articulated skeleton)
	Sex WEA	indeterminate
	Age in years	19 - 80
-	Find number	1511.2
	Sex WEA	indeterminate
	Age in years	2 – 4

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Plate buckle: iron, bichrome inlays, paired
Find number: 1470.2
Condition: complete
Type: Siegmund Sna 2.5
Loop length: 27 mm
Plate length: 34 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 135? (MR1: 600/10-630/40)
Alternative type: FAG S-Sna 2.5 (7-8: 610/20-670/80)
Maastricht date: G-H (610/20-670/80)

B Plate buckle: iron, bichrome inlays, paired
Find number: 1470.1
Condition: complete
Type: Siegmund Sna 2.5
Loop length: 26 mm
Plate length: 33 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 135? (MR1: 600/10-630/40)
Alternative type: FAG S-Sna 2.5 (7-8: 610/20-670/80)
Maastricht date: G-H (610/20-670/80)

C Plate buckle: iron, bichrome 8-shaped inlay
Find number: 1473.1
Condition: tongue missing
Type: L/P/V 191
Loop length: 48 mm
Plate length: 60 mm
L/P/V phase: MR3
L/P/V date: 660/70-700/10
Alternative type: Böhner 1958, A3a/b (Stufe IV: 600-700)
Maastricht date: H-I (640/50-725)

D Counter plate: iron, bichrome 8-shaped inlay
Find number: 1473.2
Condition: complete
Type: L/P/V 191
Plate length: 64 mm
L/P/V phase: MR3
L/P/V date: 660/70-700/10
Alternative type: Böhner 1958, A3a/b (Stufe IV: 600-700)
Maastricht date: H-I (640/50-725)

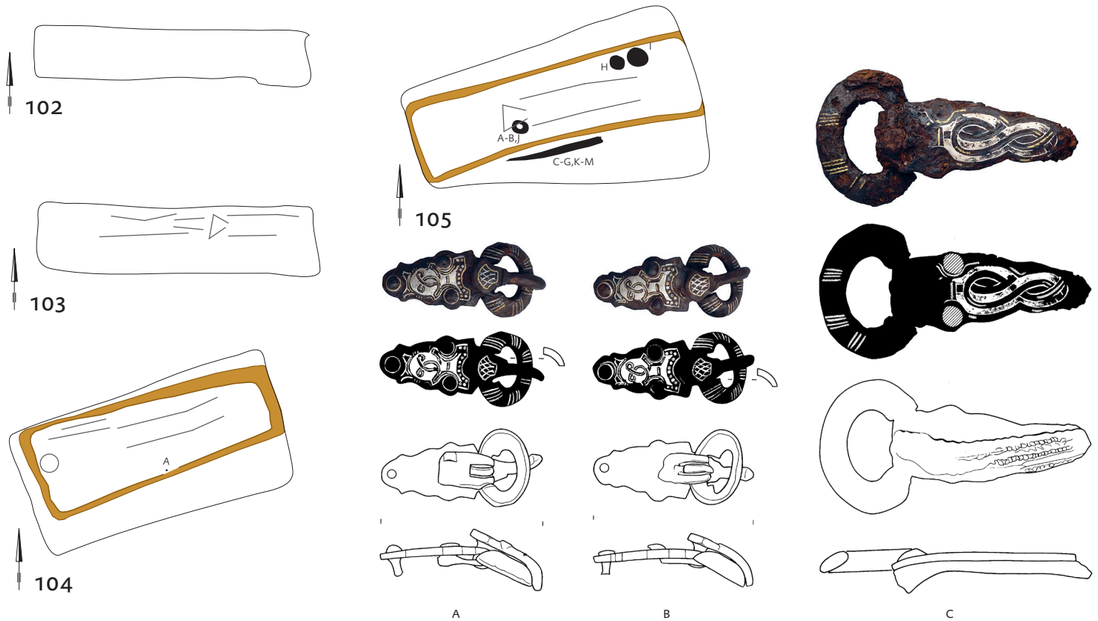
E Seax
Find number: 1473.8
Condition: under conservation

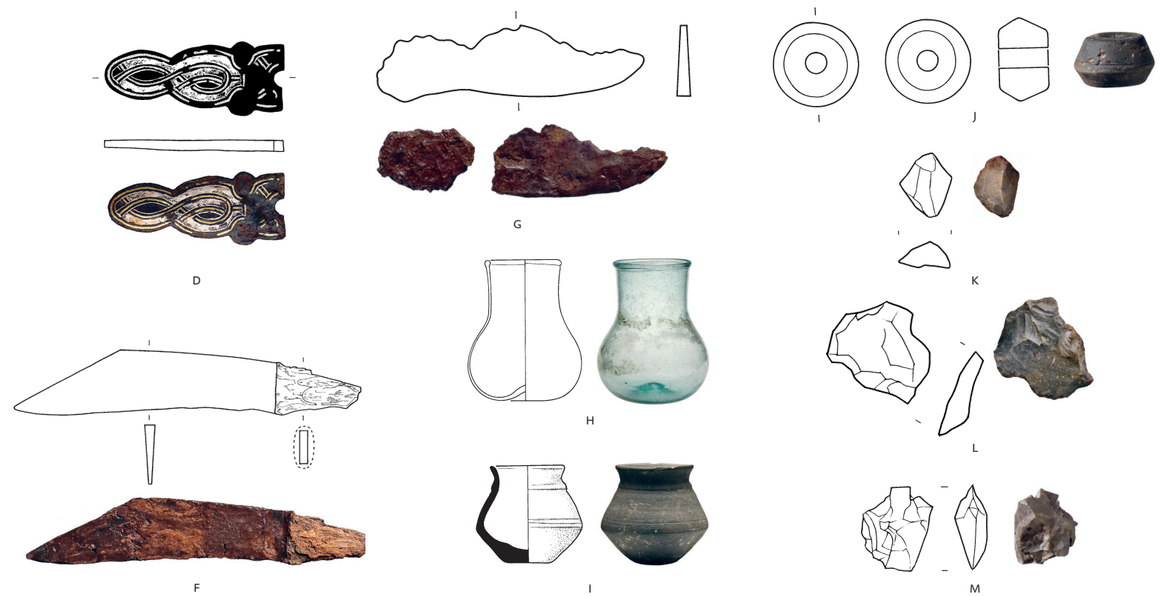
F Knife: iron, angled back
Find number: 1473.3
Condition: complete
Type: Siegmund Ger 1.2
Grip length: 30 mm
Blade length: 94 mm
Rhineland phase: 10-11
Rhineland date: 670-740
Maastricht date: H-J (640/50->725)

G Firesteel: iron
Find number: 1473.4
Condition: broken, corroded
Type: Siegmund Ger 5
Maastricht date: C-I (460/80-725)

H Glass globular beaker: blue
Find number: 1471.1
Type: FAG S-Gla 3.2
Maximum height: 100 mm
Rhineland phase: 4-8
Rhineland date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

I Biconical pot (pottery): reduced, undecorated
Find number: 1472.1
Condition: complete
Type: Siegmund Kwt 2.43
Maximum height: 68 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Alternative type: FAG S-Kwt 2.43 (6-8: 580/90-670/80)





Alternative type: L/P/V 392 (MA3-MR2: 560/70-660/70)
Maastricht date: F-H (580/90-670/80)

J Spindle whorl: pottery, undecorated
Find number: 1470.3
Condition: complete
Type: L/P/V 347
Shape: biconical, asymmetric
Decoration technique: undecorated
L/P/V phase: MA1-MR1
L/P/V date: 470/80-630/40
Maastricht date: C-G (460/80-640/50)

K Flint
Find number: 1473.7
Type: Siegmund Ger 6
Length: 38 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

L Flint
Find number: 1473.6
Type: Siegmund Ger 6
Length: 21 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

M Flint
Find number: 1473.5
Type: Siegmund Ger 6
Length: 28 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

N Shards (pottery)
Find number: 1473.9-11
Condition: 3 fragments
Maastricht date: Roman

106
DISCARDED CONTEXT

107
DISCARDED CONTEXT

108
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top post cranial	48.40
Orientation	352

DESCRIPTION
Outline of a pit not observed. Complete articulated skeleton present. The hands seem to have been positioned on the pelvis. It belongs to a group of high-lying skeletons and may have been one of the youngest burials on the site.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were found in this find number.

- Find number	1463.1 (articulated skeleton)
Sex WEA	female
Age in years	20 - 60
Female stature in cm	155.1
- Find number	1463.2
Sex WEA	male
Age in years	35 – 55
Male stature in cm	157.9

109
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	75 cm
Elevation top post cranial	48.40
Orientation	6
Stratigraphic relation	above context 110 and 112

DESCRIPTION
Outline of a pit observed at one level only. Western end intersected by a younger pit. Skeletal remains indicated: both arms, pelvis, both legs, articulated. The skull might have been dug away while digging the younger pit

PHYSICAL ANTHROPOLOGY
Remains of three individuals were present in this find number.

Find number	1462.1 (articulated skeleton)
Sex WEA	male
Age in years	40 - 60
Male stature in cm	160.1
Find number	1462.2
Sex WEA	indeterminate
Age in years	20 - 80

110
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave with stones within
Grave pit length	236 cm
Grave pit width	112 cm
Elevation bottom	47.85
Orientation	12
Stratigraphic relation	below context 109, 113 and 114

DESCRIPTION
Outline of a pit observed at two levels. Almost complete articulated skeleton indicated, lower arms are missing. In the grave is a second skull immediately east of the 'primary' skull. There are stones in the eastern and western ends of the coffin. We are not certain that this reconstruction is the correct one (see database for further considerations). We prefer this reconstruction over the one with two graves, that is one for level 3 and one for level 4. For the dating of the grave only those objects inside the coffin are used. It is possible that an older grave was cleared while making the grave with the articulated skeleton.

PHYSICAL ANTHROPOLOGY
Remains of three individuals were present in this find number.

- Find number	1625.1
Sex WEA	female
Age in years	23 - 40
- Find number	1625.2 (skull fragments)
Sex WEA	female
Age in years	18 - 80
- Find number	1625.3 (femur distal epiphysis and tibia proximal epiphysis of the right leg)
Sex WEA	indeterminate
Age in years	0 – 15

DATE (FINDS)
E-G (565-640/50)

FINDS
A Counter plate: copper alloy, hollow plate
Find number: 1596.1
Condition: rivets missing
Type: Siegmund Gür 3.3
Plate length: 61 mm
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: FAG Gür 3D (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

B Back plate: copper alloy, undecorated
Find number: 1553.1
Condition: rivets missing
Type: Siegmund Gür 3.3
Plate length: 35 mm
Plate width: 29 mm
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: FAG Gür 3D (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

C Slotted plate: copper alloy
Find number: 1553.2
Condition: complete
Type: Siegmund Gür 3.3
Length: 28 mm
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: FAG Gür 3D (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

D Slotted plate: copper alloy
Find number: 1596.2
Condition: complete
Type: Siegmund Gür 3.3
Length: 25 mm
Rhineland phase: 8
Rhineland date: 610-640
Alternative type: FAG Gür 3D (7: 610/20-640/50)
Maastricht date: G (610/20-640/50)

E Chatelaine remains/key remains
Find number: 1628.10
Condition: fragments

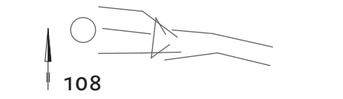
F Ring (belt appendage): copper alloy
Find number: 1628.1
Condition: complete, attached to ring 1628.12
Type: L/P/V 357
Ring diameter: 42 mm
L/P/V phase: MA2-MR1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

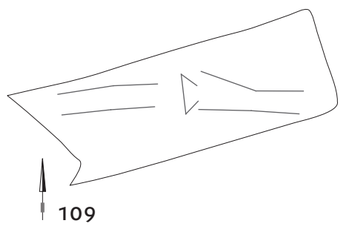
G Ring (belt appendage): iron
Find number: 1627.1
Condition: complete
Type: L/P/V 357
Ring diameter: 53 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

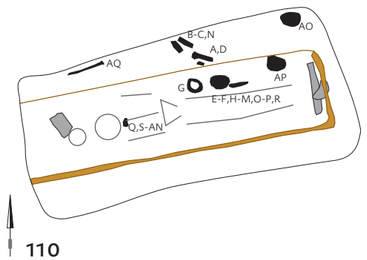
H Ring (belt appendage): copper alloy
Find number: 1628.4
Condition: complete
Ring diameter: 44 mm

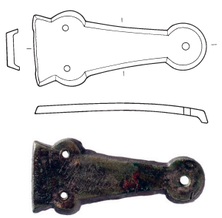
I Ring (belt appendage): iron
Find number: 1628.3
Condition: complete
Type: L/P/V 357
Ring diameter: 83 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Alternative type: Siemund Rng 2.1 (8: 610-640)
Maastricht date: D-G (510/20-640/50)

J Ring (belt appendage): copper alloy
Find number: 1628.2
Condition: complete
Type: copper alloy ring
Ring diameter: 84 mm





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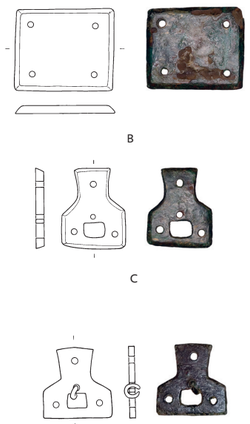

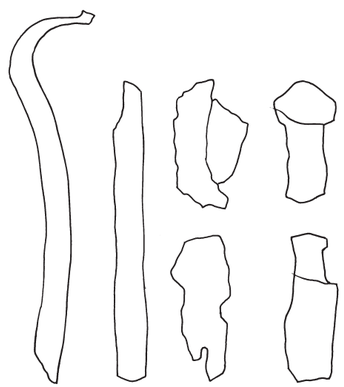
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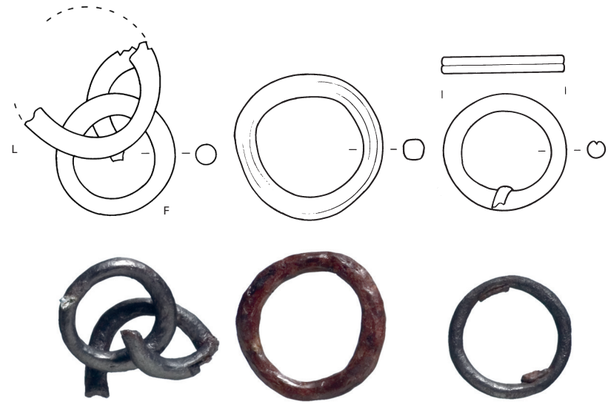


K Ring (belt appendage): copper alloy?
Find number: 1628.5
Condition: complete
Type: L/P/V 357
Ring diameter: 38 mm
L/P/V phase: MA2-MR1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

L Ring (belt appendage): iron
Find number: 1628.12
Condition: broken, piece missing, attached to ring 1628.1.
Type: L/P/V 357
Ring diameter: 54 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

M Pendant: bell, copper alloy
Find number: 1628.11
Condition: complete
Type: small bell
Alternative type: Koch 1977 (Stufe 4-5: 590/600-650/60))
Maastricht date: E-G (565-640/50)

N Knife: iron
Find number: 1553.3
Condition: complete
Grip length: 64 mm
Blade length: 117 mm
Plate: copper alloy (thin)
Find number: 1628.9

O Strap end (purse): copper alloy, stamped decoration.
Find number: 1628.8
Condition: complete
Type: Siegmund Sna 2.2
Plate length: 34 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Maastricht date: E-H (565-670/80)

P Plate buckle (purse): copper alloy, cast decoration
Find number: 1628.7
Condition: plate missing
Type: Siegmund Sna 2.2
Loop length: 20 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Maastricht date: E-H (565-670/80)

Q Pendant: gold, decorated with filigree
Find number: 1624.1
Condition: complete
Type: Siegmund Per. 6.1.
Diameter: 15 mm
Rhineland phase: 5-7
Rhineland date: 555-610

R Pendant: amber, opaque red
Find number: 1628.6
Shape: cone

S Glass bead: opaque red, undecorated
Find number: 1624-110.20
Condition: complete
Type: S-35.6
Shape: biconical
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: D-H (510/20-670/80)

T Glass bead: opaque green, undecorated
Find number: 1624-110.9
Condition: complete
Type: S-36.1
Shape: cylinder, short
Number of beads: 1
Combination group: C-G
Rhineland date: 485-640
Alternative type: FAG c. group II-III (2-5: 400-580/90)
Maastricht date: D-H (510/20-670/80)

U Glass beads: opaque yellow, undecorated
Find number: 1624-110.8
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 15
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

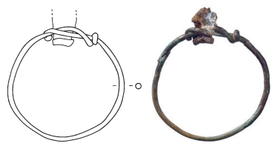
V Glass bead: transparent green, undecorated
Find number: 1624.7
Condition: complete
Type: S-46.2
Shape: cylinder, long
Number of beads: 1
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: D-H (510/20-670/80)

W Glass beads: opaque white, undecorated
Find number: 1624.6
Condition: complete
Shape: cylinder, short
Number of beads: 7
Maastricht date: D-H (510/20-670/80)

X Glass bead: opaque red, decorated
Find number: 1624.5
Condition: complete
Type: S-35.12
Shape: globular, compressed
Number of beads: 1
Combination group: F-G
Rhineland date: 570-640
Alternative type: Koch 1977, 20.1 (Stufe 3-4: 565-620/30)
Maastricht date: D-H (510/20-670/80)

Y Glass beads: opaque white, undecorated
Find number: 1624.4
Condition: complete
Shape: globular, compressed
Number of beads: 3
Maastricht date: D-H (510/20-670/80)


I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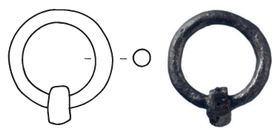
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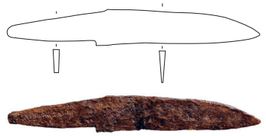

N


P

Z Glass beads: opaque white, decorated
Find number: 1624.3
Condition: complete
Type: Koch 2001, group 42
Shape: cylinder, short
Number of beads: 3
Koch phase: Pleidelsheim C-D (SD-Phase 6-9: 555-650)
Maastricht date: D-H (510/20-670/80)

AA Glass bead: transparent blue, decorated
Find number: 1624.26
Condition: complete
Type: Koch 1977, 4.6
Shape: cylinder, square
Decoration technique: raised dots
Number of beads: 1
Koch phase: Stufe 4
Koch date: 590/600-620/30
Maastricht date: D-H (510/20-670/80)

AB Amber bead: transparent red, polished/cut
Find number: 1624.25
Condition: complete
Shape: irregular-shaped,
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

AC Glass beads: opaque red, undecorated
Find number: 1624.24
Condition: broken, piece missing?
Type: S-35.4
Shape: globular, compressed
Number of beads: 2
Combination group: D-G
Rhineland date: 530-640
Maastricht date: D-H (510/20-670/80)

AD Amethyst beads
Find number: 1624.18
Condition: complete
Type: S-5.2
Shape: almond
Number of beads: 2
Combination group: H
Rhineland date: 610-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: D-H (510/20-670/80)

AE Glass bead: opaque white, decorated
Find number: 1624.21
Condition: decoration corroded
Type: S-32.7
Shape: globular, compressed
Number of beads: 1
Combination group: E-H
Rhineland date: 530-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Alternative type: Koch 1977, 34.4 - 34.5 (3: 565-590/600)
Maastricht date: D-H (510/20-670/80)

AF Glass beads: opaque yellow, decorated
Find number: 1624.2
Condition: complete
Type: S-33.7
Shape: globular, compressed
Number of beads: 2
Combination group: D-H
Rhineland date: 530-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Maastricht date: D-H (510/20-670/80)

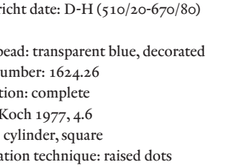
AG Glass beads: opaque red, undecorated
Find number: 1624.19
Condition: complete
Shape: cylinder, short
Number of beads: 4
Maastricht date: D-H (510/20-670/80)

AH Glass bead: transparent, undecorated
Find number: 1624.17
Condition: complete
Base colour: unknown
Shape: biconical
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

AI Glass bead: opaque white, decorated
Find number: 1624.15
Condition: complete
Type: Koch 1977, 21.5
Shape: biconical, broad
Number of beads: 1
Koch phase: Stufe 3-4
Koch date: 565-620/30
Maastricht date: D-H (510/20-670/80)

AJ Glass bead: opaque red, decorated
Find number: 1624.13
Condition: complete
Type: S-35.8
Shape: globular, compressed
Number of beads: 1
Combination group: F-H
Rhineland date: 570-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Alternative type: Koch 1977, 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: D-H (510/20-670/80)

AK Glass beads: opaque yellow, undecorated
Find number: 1624.12
Condition: piece missing
Type: S-33.1
Shape: cylinder, short
Number of beads: 2
Combination group: D-G
Rhineland date: 530-640
Alternative type: FAG c. group II-III (2-5: 400-580/90)
Maastricht date: D-H (510/20-670/80)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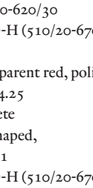
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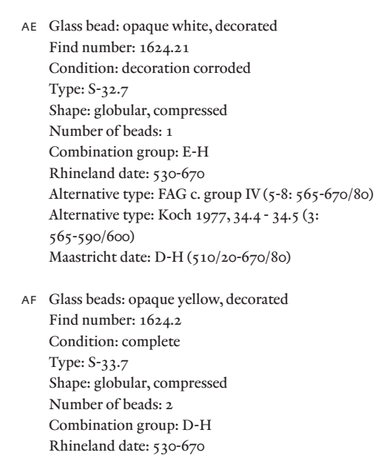
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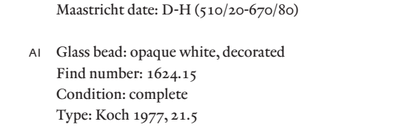
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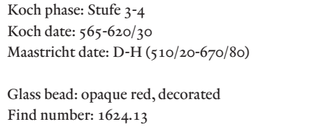
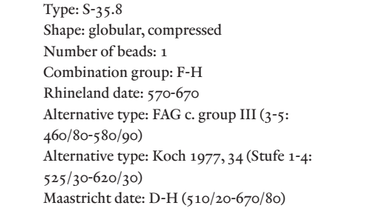

AP


AQ

AL Glass beads: opaque green, undecorated
Find number: 1624.11
Condition: complete
Type: S-1.1
Shape: heart
Number of beads: 2
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: D-H (510/20-670/80)

AM Glass beads: transparent green, undecorated
Find number: 1624.10
Condition: complete
Type: S-group 46 (1-5)
Shape: globular, compressed
Number of beads: 5
Combination group: A/H-I
Rhineland date: 485-555-610-705
Maastricht date: D-H (510/20-670/80)

AN Glass bead: opaque white, decorated
Find number: 1624.23
Condition: complete
Type: Koch 2001, group 20
Shape: cylinder
Number of beads: 1
Koch phase: Pleidelsheim C (SD-Phase 6-7: 555-600)
Maastricht date: D-H (510/20-670/80)

AO Dish (pottery): oxidized, roulette decoration, carination
Find number: 1541.1
Condition: complete
Type: Siegmund Sha 2.31
Maximum height: 73 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Alternative type: L/P/V 304 (MA3-second half MR2: 560/70-645/55)
Alternative type: FAG S-Sha 2.31 (3-5: 460/80-580/90)
Maastricht date: C-E (460/80-580/90)

AP Biconical pot (pottery): reduced, grooves
Find number: 1626.1
Condition: complete
Type: Siegmund Kwt 2.31
Maximum height: 75 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: FAG Kwt 3A (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)

AQ Pin: bone, engraved decoration
Find number: 1565.1
Condition: part of head missing
Length: 129 mm

AR Shard (pottery)
Find number: 1553.4
Condition: 1 fragment
Maastricht date: Roman

111
DISCARDED CONTEXT

112
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.00

DESCRIPTION
Stray find of a skull immediately next to the pit of grave context 110.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

113
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	274 cm
Grave pit width	65 cm
Elevation bottom	48.43
Orientation	7
Stratigraphic relation	above context 110 and 169

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The hands seem to be placed on the pelvis. The great length of the pit is remarkable as well as the position of the skeleton in the eastern part of it. The western part is thus empty. One wonders whether the conditions for making detailed observations on the outline of the pit were present.

PHYSICAL ANTHROPOLOGY

Find number	1464.1
Sex WEA	female
Age in years	20 - 34
Female stature in cm	162.5

114
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	220 cm
Grave pit width	93 cm
Elevation bottom	48.43
Orientation	3
Stratigraphic relation	above context 110 and 117; below context 150 and 151

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains present: both arms, both legs, articulated (no find number). The right hand was placed on the pelvis. The skeleton is situated in the southern part of the pit.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Seax
Find number: 1465.1
Condition: under conservation

115
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	249 cm
Grave pit width	75 cm
Elevation top	47.95
Elevation bottom	47.85
Orientation	7
Stratigraphic relation	above context 117; below context 116 (uncertain), 137, 149, 150 and 151

DESCRIPTION
Outline of a pit observed at two levels. The reconstruction of this grave is problematic. At level 3 a clear outline of a grave pit has been observed with stones (along the southern wall near the chest) and brick (at the head end). At level 4 a skeleton is indicated and the western part of a grave pit. Because the difference in height between levels 3 and 4 is not much and at level 3 a pit and at level 4 a skeleton has been drawn we concluded that they belong to a single grave. Complete articulated skeleton indicated. The hands are along the body.

PHYSICAL ANTHROPOLOGY

Find number	1613.1
Sex WEA	female
Age in years	20 - 40
Female stature in cm	166.5

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Seax: iron, wooden grip remains and iron hilt band
Find number: 1614.1
Condition: complete
Type: FAG Sax 1
Blade length: 254 mm
Grip length: 113 mm
FAG phase: 3-7
FAG date: 510/25-580/90
Maastricht date: D-E (510/20-580/90)

B Scabbard remains?
Find number: 1614.2

116
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	unknown
Elevation bottom	47.95
Stratigraphic relation	above context 115 (uncertain relation may be the reverse), 152; below context 137 and 149

DESCRIPTION
Outline of a pit observed at one level only. Only the eastern part of the pit has been observed. Skeletal material (long bone) indicated, disarticulate (find nr. 1571?). Possibly younger than context 115.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
F-H (580/90-670/80)

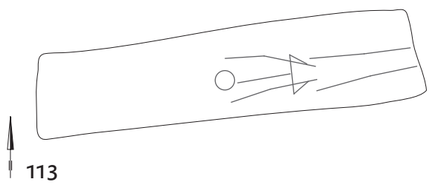
FINDS
A Plate buckle (shoe): copper alloy, hollow plate, fake rivets and loops.
Find number: 1569.1
Condition: 1 loop missing
Type: L/P/V 172
Loop length: 32 mm
Plate length: 44 mm
L/P/V phase: MR1-MR2
L/P/V date: 600/10-660/70
Maastricht date: F-H (580/90-670/80)

B Plate buckle (shoe): copper alloy, triangular hollow plate, fake rivets and loops.
Find number: 1568.1
Condition: missing
Type: L/P/V 172
Loop length: 32 mm
Plate length: 45 mm
L/P/V phase: MR1-MR2
L/P/V date: 600/10-660/70
Maastricht date: F-H (580/90-670/80)

C Glass globular beaker: green
Find number: 1564.1
Condition: broken
Type: FAG S-Gla 3.2
Maximum height: 106 mm
Rhineland phase: 4-8
Rhineland date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

D Glass globular beaker: green
Find number: 1564.2
Condition: complete
Type: FAG S-Gla 3.2
Maximum height: 89 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)

E Unidentifiable object
Find number: 1570.1
Condition: missing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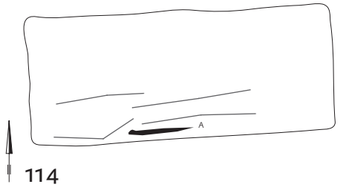

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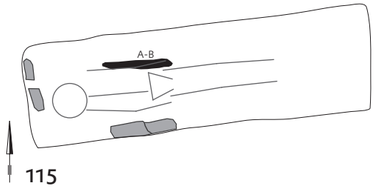

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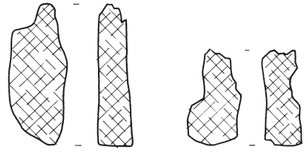
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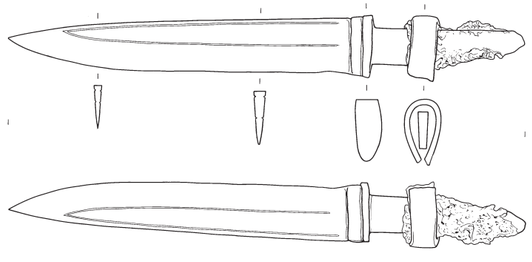

A



117
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	128 cm
Grave pit width	62 cm
Elevation bottom	47.85
Orientation	353
Stratigraphic relation	below context 115, 137 and 151

DESCRIPTION
(Grave?) pit located at the same location as context 115. The outline is rectangular and could have been of a child's grave. No skeletal remains indicated.

118
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation top skull	48.33

DESCRIPTION
Stray find of a skull and a long bone.

PHYSICAL ANTHROPOLOGY

Find number	1441.1
Sex WEA	indifferent
Age in years	30 - 60

119
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top skull	48.33
Orientation	4

DESCRIPTION
Articulated skeleton, no outline of a pit observed. North of the skeleton lies a stone (context 120), which may be related to this grave. Probably it is a child. Skeletal remains indicated: skull, both arms and legs, articulated. The hands may have been placed on the pelvis. Skeleton and finds were given the same find number.

PHYSICAL ANTHROPOLOGY

Find number	1554.1
Sex WEA	indeterminate
Age in years	9 – 12

FINDS
A Shard (pottery)
Find number: 1554.1
Condition: fragment

120
FIND

Trench	5
Context type	find (stone fragment)
Elevation bottom	47.95

DESCRIPTION
Stone, possibly related to grave context 119.

121
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top skull	48.15
Orientation	354

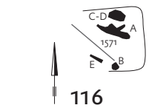
DESCRIPTION
Articulated skeleton, no outline of a pit observed. Probably a child. Skeletal remains indicated: skull, right clavicle, vertebral column, left ribs (not digitized), pelvis, both legs, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1555.1
Sex WEA	indeterminate
Age in years	4 - 5

FINDS
A Indeterminate object: iron
Find number: 1556.1
Condition: corroded

B Stone (pebble)
Find number: 1556.2



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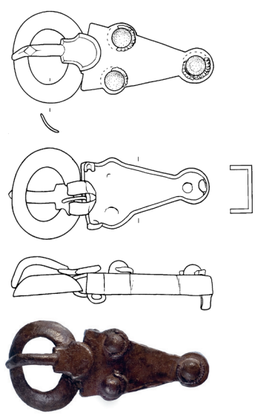
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C
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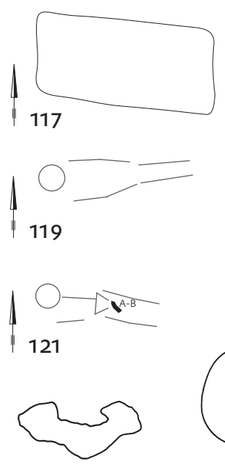


117
119
121
A
B

122
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Elevation bottom	48.40
Elevation top skull	48.33
Elevation top post cranial	48.23
Orientation	6
Stratigraphic relation	above context 39 and 124 (not in Harris matrix); below context 123 and 150

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated except the lower arms. A dark strip of soil has been observed around the skeleton of which the meaning is not clear. Perhaps it indicates the presence of a coffin (light colored soil) in a pit (the outer dark colored strip of soil?).

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1442.1 (articulated skeleton)
Sex WEA	female
Age in years	25 - 55
Female stature in cm	168.0
- Find number	1442.2
Sex WEA	indeterminate
Age in years	20 - 80

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, some vertebrae, part of the right upper arm?, articulated. Possibly the bone fragments in the eastern part of context 125 originate from this grave. On the field drawing find number 1608 is indicated, which seems to relate to skeletal remains. However no find number 1608 with skeletal remains is present. There is a find number 1609 with skeletal remains. Because the other finds also have find number 1609 it is supposed that the skeletal remains with find number 1609 belong to this grave.

PHYSICAL ANTHROPOLOGY

Find number	1609.1
Sex WEA	male
Age in years	34 - 43

DATE (FINDS)
D-H (510/20-670/80)

FINDS
A Glass beads: opaque white, decorated
Find number: 1609.4
Condition: complete
Type: Koch 2001, group 42
Shape: cylinder, short
Number of beads: 2
Koch phase: Pleidelsheim C-D (SD-Phase 6-9: 555-650)
Maastricht date: D-H (510/20-670/80)

B Glass beads: transparent blue, undecorated
Find number: 1609.3
Condition: some former multiple beads?
Type: S-47.1
Shape: globular, compressed
Number of beads: 29
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: D-H (510/20-670/80)

C Glass bead: opaque blue, decorated
Find number: 1609.2
Condition: decoration disappeared
Type: S-group 37 (3)
Shape: globular, compressed
Number of beads: 1
Combination group: B
Rhineland date: 440-485
Alternative type: Koch 1977, group 1 (Stufe 1-3: 525/30-590/600)
Maastricht date: D-H (510/20-670/80)

123
GRAVE

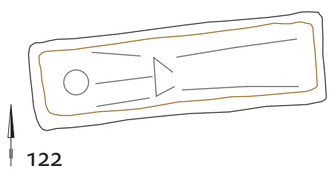
Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	183 cm
Grave pit width	91 cm
Elevation bottom	48.35
Orientation	6

DESCRIPTION
Outline of a pit observed at one level only. Skull indicated, in the western part of the pit (original position?). No find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

124
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	47.94
Orientation	356
Stratigraphic relation	below context 125 (intercutting grave), 122 (not in Harris matrix) and 126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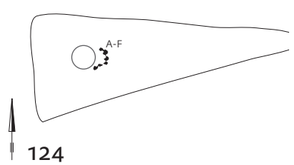

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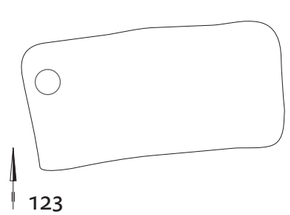

123


A-F

D Glass beads: opaque yellow, undecorated
Find number: 1609.6
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 24
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

E Glass beads: opaque red, undecorated
Find number: 1609.1
Condition: complete
Type: S-35.6
Shape: biconical
Number of beads: 3
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: D-H (510/20-670/80)

F Glass bead: opaque red, decorated
Find number: 1609.5
Condition: piece missing
Type: S-35.13
Shape: biconical
Number of beads: 1
Rhineland phase: D-H
Rhineland date: 530-670
Alternative type: Koch 1977, 42.9 (Stufe 3: 565-590/600)
Maastricht date: D-H (510/20-670/80)

125
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	244 cm
Grave pit width	74 cm
Elevation bottom	47.94
Orientation	16
Stratigraphic relation	below context 26, 32 and 126; above context 124

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, left clavicle (not digitized), left arm, both legs, articulated. In the eastern part of the pit the remains of a second person (long bones and skull fragment) are indicated. Are these the remains of the disturbed person in context 124? On the reconstruction drawing a complete skull has been indicated in order to meet the requirements of the GIS program. To the east of this bone material lies a stone. The amount of iron objects indicated, points to the grave of a man buried with weapons. The iron object besides the head may be a lance head. On photograph H643-8 a pot can be seen that disappeared completely from the administration. Stolen? Find number 1557 is also indicated in relation to grave 126. It rather belongs to that grave.

PHYSICAL ANTHROPOLOGY
The remains of three individuals were present in this find number.

- Find number	1597.1 (articulated skeleton)
Sex WEA	male
Age in years	35 – 45
Male stature in cm	168.9
- Find number	1597.2
Sex WEA	female (based on gracile femur APD 23.34 cm)
Age in years	20 - 80
- Find number	1597.3
Sex WEA	indeterminate
Age in years	10 - 12

DATE (FINDS)
H-I (640/50-725)

FINDS
A Plate buckle: iron, silver cross-shaped inlays on plate, mushroom shaped silver inlays on buckle loop, tongue with silver cross-shaped inlay and animal shaped extremity with silver inlays.
Find number: 1600.2
Condition: complete
Type: L/P/V 191
Loop length: 50 mm
Plate length: 60 mm
L/P/V phase: MR2-MR3
L/P/V date: 630/40-700/10
Maastricht date: H-I (640/50- 725)

B Counter plate: iron, silver cross-shaped inlays
Find number: 1598.2
Condition: missing
Type: L/P/V 191
Plate length: 73 mm
L/P/V phase: MR2-MR3
L/P/V date: 630/40-700/10
Maastricht date: H-I (640/50- 725)

C Plate: iron, silver cross-shaped inlay
Find number: 1599.1
Condition: missing (ancient photograph Ypey)
Type: L/P/V 191
Plate length: 30 mm
L/P/V phase: MR2-MR3
L/P/V date: 630/40-700/10
Maastricht date: H-I (640/50- 725)

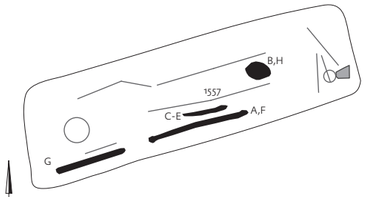
D Plate: iron, silver cross-shaped inlay
Find number: 1599.3
Condition: missing (ancient photograph Ypey)
Type: L/P/V 191
Plate length: 30 mm
L/P/V phase: MR2-MR3
L/P/V date: 630/40-700/10
Maastricht date: H-I (640/50- 725)

E Plate: iron, silver cross-shaped inlay
Find number: 1599.2
Condition: missing (ancient photograph Ypey)
Type: L/P/V 191
Plate length: 30 mm
L/P/V phase: MR2-MR3
L/P/V date: 630/40-700/10
Maastricht date: H-I (640/50- 725)

F Seax: iron
Find number: 1600.1
Condition: complete
Type: FAG Sax 3
Blade length: 423 mm
Grip length: 135 mm
FAG phase: 8-10
FAG date: 670/80-740
Maastricht date: I-J (670/80->725)

G Lance (head): iron, closed shaft
Find number: 1601.1
Condition: complete
Type: Siegmund Lan 2.4
Length: 356 mm
Rhineland phase: 8B-10
Rhineland date: 625-705
Alternative type: FAG S-Lan 2.4 (4-9: 510/25-710)
Maastricht date: D-I (510/20-725)

H Umbo: iron
Find number: 1598.1
Condition: complete
Type: Siegmund Sbu 6
Height: 82 mm
Diameter: 192 mm
Rhineland phase: 9-10
Rhineland date: 640-705
Alternative type: FAG S-Sbu 6 (7-9: 610/20-710)
Maastricht date: G (610/20-640/50)



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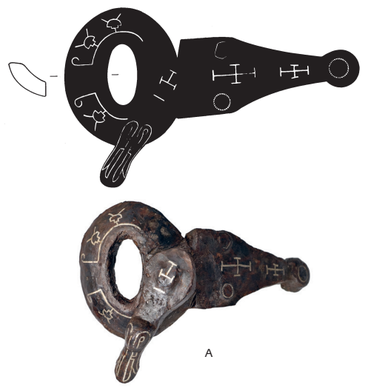

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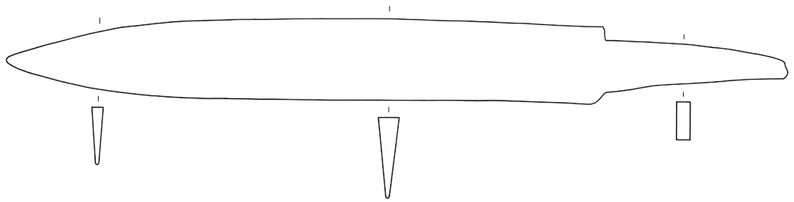
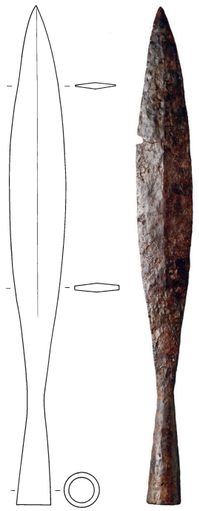


F



C-E



G

126
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	233 cm
Grave pit width	110 cm
Elevation top skull	48.11
Elevation top post cranial	48.09
Orientation	6
Stratigraphic relation	above context 124 and 125; below context 26 and 32

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The fill of a coffin can be distinguished of that of the fill of the pit. Is this the grave of a man with a spur at his left foot? Find number 1557 is indicated in relation to context 125. It must belong to context 126.

PHYSICAL ANTHROPOLOGY

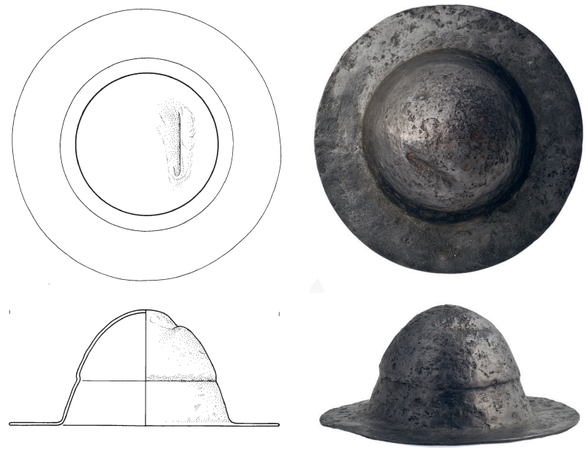
Find number	1557.1 (at the lateral distal end of tibia there is green discoloration of the bone (copper salt?).
Sex WEA	male
Age in years	33 - 45

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Strap end (shoe?): iron, monochrome or bichrome inlays in animal style
Find number: 1572.3
Condition: missing (ancient photograph Ypey)
Type: Siegmund Sna 2.5
Plate length: 86 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 201 (MR1-MR2: 600/10-660/70)
Alternative type: FAG S-Sna 2.5 (7-8: 610/20-670/80)
Maastricht date: G-H (610/20-670/80)

B Plate buckle (shoe?): iron, monochrome or bichrome inlays
Find number: 1572.2
Condition: missing (ancient photograph Ypey)
Type: Siegmund Sna 2.5
Loop length: 30 mm
Plate length: 34 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 135 (MR1: 600/10-630/40)
Alternative type: FAG S-Sna 2.5 (7-8: 610/20-670/80)
Maastricht date: G-H (610/20-670/80)

C Knife: iron
Find number: 1572.1
Condition: tip missing
Grip length: 38 mm
Blade length: 42 mm



H

D Glass bell beaker: green
Find number: 1573.1
Condition: broken, pieces missing
Type: FAG Gla 8B/C
Maximum height: 109 mm
FAG phase: 5
FAG date: 565-580/90
Alternative type: Feyeux 2003, 52.3L (530-570)
Maastricht date: E (565-580/90)

E Round iron object
Find number: 1572.4

127
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	226 cm
Grave pit width	70 cm
Elevation bottom	47.94
Orientation	3
Stratigraphic relation	above context 130; below context 128 and 129

DESCRIPTION
Outline of a pit observed at one level only. Disarticulate skeletal remains indicated in the north-eastern corner of the pit: skull, three long bones (no find number).

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

128
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	189 cm
Grave pit width	73 cm
Elevation top skull	48.05
Elevation top post cranial	47.96
Orientation	10
Stratigraphic relation	above context 127; below context 129

DESCRIPTION
Outline of a pit observed at one level only. Skeletal material indicated at level 3: skull, right arm, left upper arm, both legs, articulated. The skeleton lies in a somewhat flexed position.

PHYSICAL ANTHROPOLOGY

Find number	1558.1
Sex WEA	male
Age in years	40 - 80

129
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	219 cm
Grave pit width	72 cm
Elevation bottom	48.35
Orientation	7
Stratigraphic relation	above context 127, 128, 130 and 139

DESCRIPTION
Outline of a pit observed at one level only. No skeletal material indicated.

130
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	223 cm
Grave pit width	79 cm
Elevation bottom	47.94
Orientation	7
Stratigraphic relation	below context 128, 129, 132 and 134

DESCRIPTION
Outline of a pit observed at one level only. Almost complete skeleton indicated except left arm, articulated. The right hand was placed on the pelvis. In the pit a second skull is present.

PHYSICAL ANTHROPOLOGY
Remains of at least two individuals were present in this find number.

- Find number	1610.1 (skull with mandible and postcranial skeleton; most complete therefore assumed the main skeleton in this burial)
Sex WEA	female
Age in years	-49 - 55
Female stature in cm	158.6
- Find number	1610.2 (skull fragments of an adult male)
Sex WEA	male
Age in years	-23 - 40

131
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	15 cm
Grave pit width	68 cm
Elevation bottom	47.94
Orientation	7
Stratigraphic relation	below context 134; above context 136

DESCRIPTION
Outline of a pit observed at one level only. Skeletal material indicated: both legs, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1611.1
Sex WEA	indeterminate (only legs, femur APD indicates male sex)
Age in years	20 - 80

132
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	193 cm
Grave pit width	75 cm
Elevation bottom	47.94
Orientation	7
Stratigraphic relation	below context 133, 134 and 135; above context 130 and 136

DESCRIPTION
Outline of a pit observed at one level only. Complete skeleton indicated, however the skull is not in the proper position, but near the left foot. The rest of the skeleton articulated. The hands were placed alongside the body. A find of a copper alloy object, indicated on the field drawing has no find number.

PHYSICAL ANTHROPOLOGY

Find number	1612.1
Sex WEA	male
Age in years	39 - 45
Male stature in cm	177.1

133
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	156 cm
Grave pit width	79 cm
Elevation top skull	48.06
Elevation top post cranial	47.93
Orientation	1
Stratigraphic relation	above context 132 and 136; below context 134, 135 and 144

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The hands were placed alongside the body. A number of stones are situated near the head. One stone is located along the northern wall of the pit.

PHYSICAL ANTHROPOLOGY
The remains of three individuals were present in this find number.

- Find number	1549.1
Sex WEA	male
Age in years	50-70
Male stature in cm	173.8
- number	1549.2
Sex WEA	indeterminate
Age in years	20 – 80

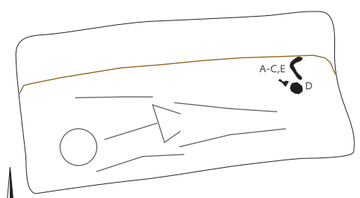
134
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	202 cm
Grave pit width	83 cm
Elevation bottom	48.30
Elevation top skull	48.34
Orientation	4
Stratigraphic relation	above context 130, 131, 132, 133 and 136; below context 135

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton present, except lower left arm. The skull is not situated at the proper place. In the grave are two skulls to the south of the right knee.

PHYSICAL ANTHROPOLOGY
Remains of at least three individuals were present in this find number.
The skeleton has find number 1468, remains of another individual were in this find number.
The skulls had find number 1469. Skull 1469.1 might belong to 1468.1, but they might as well be of different persons. There is no possibility to relate the skull to the skeleton with the help of the vertebrae.

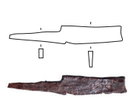
- Find number	1468.1 (multiple bones from the postcranial skeleton, fragment of the hyoid bone among these remains but no skull in anatomical position)
Sex WEA	male
Age in years	20 - 80
Male stature in cm	174.0
- Find number	1468.2 (femur fragment; phase II and an ulna fragment, possibly female)
Sex WEA	indeterminate
Age in years	35 – 55
- Find number	1469.1 (skull)
Sex WEA	male
Age in years	30 - 60
- Find number	1469.2
Sex WEA	female
Age in years	20 - 34



126


D


A-B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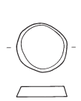
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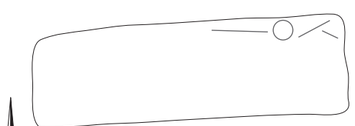
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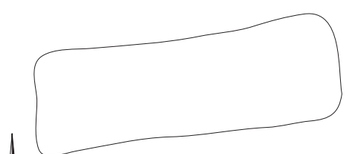
128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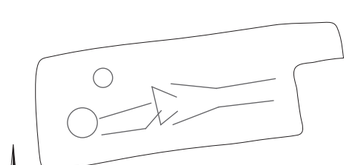
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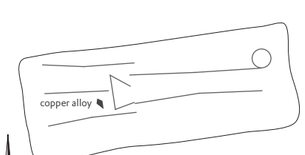
131



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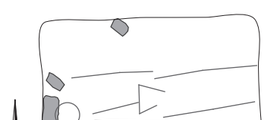
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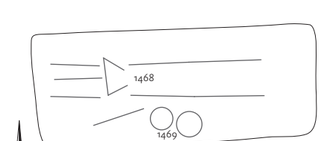


134

135
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	66
Elevation bottom	48.36
Orientation	6
Stratigraphic relation	above context 130, 132, 133, 134 and 140; below context 144 (intercutting context)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated.

136
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	47.94
Orientation	7
Stratigraphic relation	below context 133, 134; below context 131 and 132 (both intercutting contexts)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains observed. It is not clear whether this context is a grave.

137
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	188 cm
Grave pit width	83 cm
Elevation top	48.37
Orientation	19
Stratigraphic relation	above context 115, 116, 117, 138, 152; below context 148 and 149

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, vertebral column, both clavicles (not digitized), left ribs (not digitized), left arm, articulated. There are stones in the western part of the pit.

PHYSICAL ANTHROPOLOGY

Find number	1467.1
Sex WEA	female
Age in years	20 - 34
Female stature in cm	156.5

138
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	202 cm
Grave pit width	80 cm
Elevation top skull	48.10
Elevation top post cranial	47.95
Orientation	3
Stratigraphic relation	below context 137, 148, 149 and 139 (intercutting feature)

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The hands were placed alongside the body, or even somewhat apart from it.

PHYSICAL ANTHROPOLOGY

Find number	1550.1
Sex WEA	female
Age in years	23 - 40
Female stature in cm	167.0

DATE (FINDS)
F-H (580/90-670/80)

FINDS
A Chatelaine (element)
Find number: 1551.1 (ancient photograph Ypey)
Condition: missing
Type: no type identification available
Maastricht date: F-H (580/90-670/80)

139
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	stone built grave
Elevation top	48.35
Elevation bottom	47.94
Elevation top skull	48.01
Elevation top post cranial	47.94
Orientation	17
Stratigraphic relation	below context 129, 141, 147 and 148; above context 138 and 140

DESCRIPTION
Outline of a pit observed at levels 3 and 4. At level 3 a (dry?) stone walled chamber was observed. According to the drawing the stones were ashlars rather than irregular stones. On the slide it is visible that the inside of the chamber walls were relatively flat. The outside was more irregular. At level 4, at more or less the same spot, a grave pit is indicated with a central fill of light colored soil surrounded by a band of dark soil. The light soil will be the last remnants of the fill of the chamber, the stones were probably placed on top of the dark colored strip of soil. Complete articulated skeleton is present at level 3 (or lower arms are missing?). At level 2 scattered stones were observed on the same spot. They are probably the remains of the upper part of the stone chamber that was destroyed. On the drawing find number 1552 is indicated. This is clearly related to the skeleton, no other finds are indicated. In the find list it is indicated that number 1552 is a knife, and there is a find of an axe with number 1552. As said no find of an iron object is indicated on the drawing. We accept that find number 1552 is a skeleton. This means that we cannot locate the axe with the same number.

PHYSICAL ANTHROPOLOGY

Find number	1552.1
Sex WEA	female
Age in years	40 - 60

FINDS
Francisca/Axe: iron (does probably not belong to this grave)
Find number: 1552.1
Condition: under conservation

140
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	225 cm
Grave pit width	54 cm
Elevation top post cranial	48.00
Orientation	3
Stratigraphic relation	below context 135, 141, 143, 144, 146 and 139 (intercutting context)

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: both legs, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1546.1
Sex WEA	indeterminate
Age in years	20 – 80

DATE (FINDS)
E-H (565-670/80)

FINDS
A Plate buckle (shoe): copper alloy, engraved geometric decoration
Find number: 1547.1
Condition: missing
Type: Siegmund Sna 2.2
Plate length: 29 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: FAG Sna 2.2a (5-8: 565-670/80)
Alternative type: L/P/V 130 (MA2-MR1: 520/30-630/40)
Maastricht date: E-H (565-670/80)

141
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	200 cm
Grave pit width	81 cm
Elevation bottom	48.18
Orientation	14
Stratigraphic relation	above context 139, 140 and 153; below context 146, 148 and 158

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, right clavicle (not digitized), vertebral column, right arm, articulated. To the right of this skeleton four disarticulate long bones. To the left two skulls and three long bones, disarticulate. All have one find number.

PHYSICAL ANTHROPOLOGY
Remains of at least six persons were present in this find number.

- Find number	1461.1
Sex WEA	indifferent
Age in years	20 - 40
- Find number	1461.2
Sex WEA	indifferent
Age in years	30 - 60
- Find number	1461.3
Sex WEA	male
Age in years	20 - 80
- Find number	1461.4
Sex WEA	male
Age in years	30 - 60
- Find number	1461.5
Sex WEA	indeterminate
Age in years	20 - 40
- Find number	1461.6
Sex WEA	male
Age in years	35 – 55

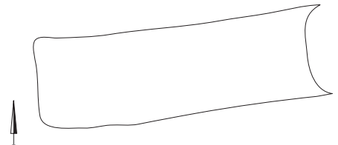
142
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Elevation top post cranial	48.13
Stratigraphic relation	below context 143, 144 and 145

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: left leg, right lower leg, articulated. The grave pit may have been drawn to small if the legs are in an articulated position. The legs seem to be those of a mature person, the size of the grave pit, however, points to the grave of a child.

PHYSICAL ANTHROPOLOGY

Find number	1548.1
Sex WEA	indeterminate
Age in years	35 – 55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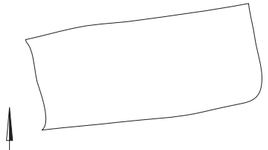
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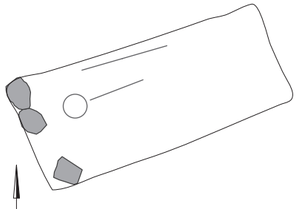
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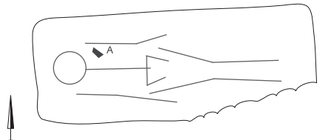
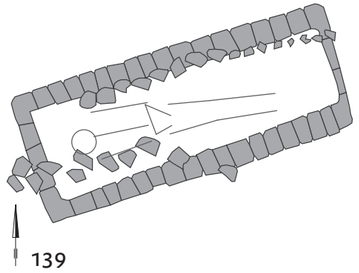


138



A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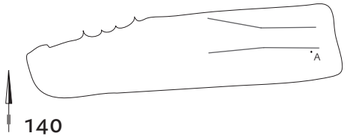

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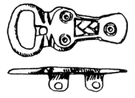
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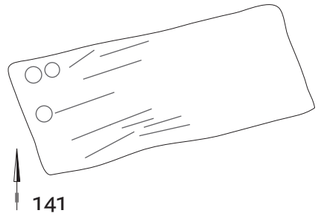
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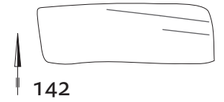
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143
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	63 cm
Elevation bottom	48.18
Elevation top skull	48.28
Orientation	2
Stratigraphic relation	above context 142, 248 and 251; below context 144 and 145

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: three skulls, long bone, left leg (?), long bone of a leg, the remains of the legs are perhaps articulated. There is a stone near the head. The reconstructed outline of the grave pit is long, the indicated skeletal remains divers. It is possible that two graves are involved that could not be distinguished in the field. The north-eastern skull and the legs may belong to a skeleton in articulated position in one grave and the remaining skeletal material and the stone in another located a bit more to the west. In that case the stratigraphic relation between both graves could not be observed.

PHYSICAL ANTHROPOLOGY
Remains of at least three individuals were present in this find number.

- Find number	1460.1
Sex WEA	female
Age in years	40 - 80
Female stature in cm	156.4
- Find number	1460.2
Sex WEA	male
Age in years	40 - 80
- Find number	1460.3
Sex WEA	indeterminate
Age in years	11 - 12

144
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	170 cm
Grave pit width	69 cm
Elevation bottom	48.27
Orientation	5
Stratigraphic relation	above context 133, 135, 140, 142 and 143

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated, no finds.

145
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	99 cm
Elevation bottom	48.27
Orientation	3
Stratigraphic relation	above context 140, 142, 143, 146, 248 and 251

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated, no finds.

146
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	60
Elevation bottom	48.27
Orientation	1
Stratigraphic relation	above context 140, 141, 145, 147, 153, 248 and 251

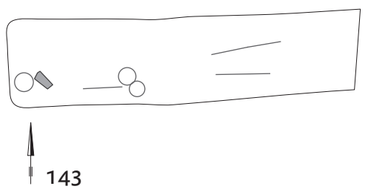
DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated, no finds.

147
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	246 cm
Grave pit width	88 cm
Elevation bottom	48.27
Orientation	1
Stratigraphic relation	above context 139, 141, 148 and 153; below context 146 (overcutting grave)

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull in the proper position (articulated?), no find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.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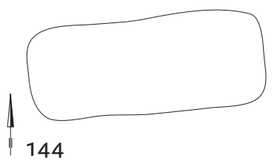
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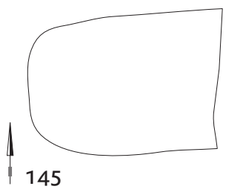
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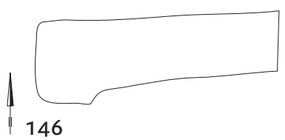
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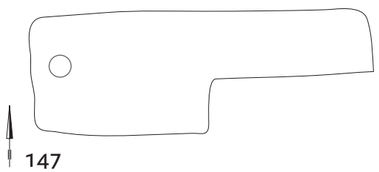
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148
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Elevation bottom	48.27
Orientation	357
Stratigraphic relation	above context 137, 138, 139, 141, 152, 153 (uncertain) and 155; below context 147 and 149 (both overcutting graves)

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull in the proper position (articulated?), no find number. Stone near the head.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

149
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	70 cm
Elevation bottom	48.27
Orientation	359
Stratigraphic relation	above context 115, 116, 137, 138, 148, 152, 154 (uncertain) and 155

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: some small (fragmented?) disarticulate bone remains.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

150
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	83
Elevation bottom	48.35
Orientation	2
Stratigraphic relation	above context 39, 114, 115 and 122; below context 123 and 151 (both overcutting graves)

DESCRIPTION
Outline of a pit observed at one level only. No further details. It is possible that this context is a grave because the pit has the form of a grave. It is cut by grave context 123 in which there is a skull.

151
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	66 cm
Elevation bottom	48.35
Orientation	14
Stratigraphic relation	above context 114, 115, 117 and 150; below context 163 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. No further details. It could be a grave because the pit has the form of a grave. The grave is cut by grave context 163 (stone-built grave). The reconstruction drawing does not represent this stratigraphic relation well, because in order to reproduce the outline of grave context 163 an outline at a higher level was chosen.

152
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	224 cm
Grave pit width	89 cm
Elevation bottom	47.94
Orientation	358
Stratigraphic relation	below context 116, 137, 148, 149, 153, 154, 155, 157, 158 and 159

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, vertebral column, ribs (not digitized), left upper arm, both legs, articulated. Probably it is the grave of a child. The grave pit, however, is of normal size and thus much larger than needed to bury a child.

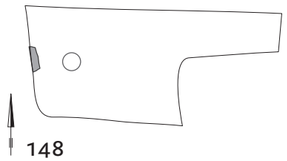
PHYSICAL ANTHROPOLOGY

Find number	1615.1
Sex WEA	indeterminate
Age in years	3 - 4

DATE (FINDS)
F-J (580/90->725)

FINDS
Glass bead: opaque red, undecorated
A Find number: 1617.5
Condition: complete
Type: S-1.8
Shape: almond
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: F-J (580/90->725)

B Glass beads: transparent blue, undecorated
Find number: 1617.1
Condition: complete
Type: S-1.8
Shape: almond
Number of beads: 4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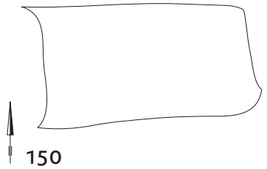
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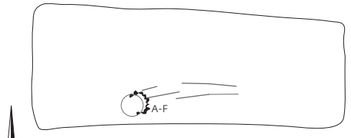

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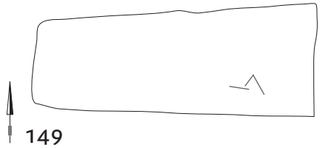
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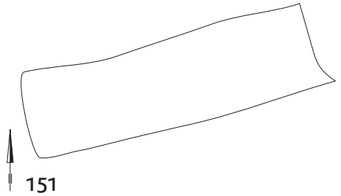

151


A-F

Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: F-J (580/90->725)

C Glass beads: opaque yellow, undecorated
Find number: 1617.2
Condition: pieces missing?
Type: S-33.6
Shape: indeterminate
Number of beads: 2
Combination group: G-H
Rhineland date: 585-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: F-J (580/90->725)

D Glass bead: opaque yellow, undecorated
Find number: 1617.4
Condition: complete
Type: S-1.8
Shape: almond
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: F-J (580/90->725)

E Glass bead: transparent blue, undecorated
Find number: 1617.6
Condition: piece missing
Type: S-1.2
Shape: cylinder, long
Number of beads: 1
Combination group: B-C
Rhineland date: 440-555
Alternative type: FAG c. group II (2-5: 400-580/90)
Maastricht date: F-J (580/90->725)

F Glass beads: opaque white, undecorated
Find number: 1617.3
Condition: complete
Shape: disc
Number of beads: 3
Maastricht date: F-J (580/90->725)

153
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit width	118 cm
Elevation top skull	48.00
Orientation	11
Stratigraphic relation	above context 152 and 242; below context 141, 146, 147 and 158

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull at the place where it can be expected. In the eastern part there is another skull and three long bones, disarticulate. No find numbers. The fill of the pit consists of a wide northern band of dark soil and a smaller, southern strip of light colored soil. The dark northern fill may indicate the position of a coffin. The southern part will be the backfill of the pit.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

154
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation top skull	48.05
Stratigraphic relation	above context 152; below context 158 and 159

DESCRIPTION
A collection of three skulls, a long bone and the remains of two long bones are found. They are positioned in a line exactly between contexts 153 and 156. No find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
F-H (580/90-670/80)

FINDS
A Plate buckle: copper alloy, plate missing, was attached to buckle with a hinged construction
Find number: 1545.1
Condition: tongue and plate missing
Type: indeterminate
Loop length: 23 mm
Alternative type: L/P/V 138? (MA3-MR2: 560/70-660/70)
Maastricht date: F-H (580/90-670/80)

155
FIND

Trench	5
Context type	stone fragment
Stratigraphic relation	above context 152; below context 148

DESCRIPTION
Three stones situated between contexts 153 and 138.

156
GRAVE

Trench	5
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.94
Elevation top skull	48.00
Orientation	0
Stratigraphic relation	below context 157 and 159

DESCRIPTION
No outline of a grave pit observed at levels 3 and 4. Complete articulated skeleton indicated at level 4 (except for the skull). However, immediately above, at level 3, two skulls are indicated of which one certainly belongs to a skeleton indicated at that level. We suppose that the northern skull of level 3 belongs to the skeleton of level 4 and that it has been moved a bit when the higher lying grave (context 157) was dug. The difference in height between levels 3 and 4 is 12 cm. Because skeletons are indicated at both levels we suppose that two graves are concerned because it is unlikely that the same skeleton was drawn twice. If this reconstruction is correct it is a nice example of a situation where two skeletons are present on the same location with only a minor difference in height between them.

PHYSICAL ANTHROPOLOGY

Find number	1616.1
Sex WEA	male
Age in years	35 - 55
Male stature in cm	171.8

157
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	240 cm
Grave pit width	89 cm
Elevation bottom	47.97
Elevation top skull	48.12
Elevation top post cranial	48.07
Orientation	10
Stratigraphic relation	above context 152 and 156; below context 159

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The left hand seems to have been placed on the pelvis. Near the feet is a collection of bones that does not belong to the skeleton, but must have been found and re-deposited while digging the grave. South of the skull there are some bone remains that neither belong to the primary burial. West of the head is a stone as well as in the north-eastern corner of the pit.

PHYSICAL ANTHROPOLOGY
Remains of six individuals were present in this find number.

- Find number	1544.1
Sex WEA	male
Age in years	53 – 58
- Find number	1544.2
Sex WEA	female
Age in years	35 - 55
- Find number	1544.3
Sex WEA	female
Age in years	40 - 60
- Find number	1544.4
Sex WEA	indeterminate
Age in years	20 - 80
- Find number	1544.5
Sex WEA	indeterminate
Age in years	20 - 80
- Find number	1544.6
Sex WEA	female
Age in years	18 - 20

158
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	87 cm
Elevation top	48.27
Elevation bottom	48.18
Elevation top skull	48.28
Orientation	3
Stratigraphic relation	above context 141, 152, 153, 154, 235, 240 and 242

DESCRIPTION
Outline of the grave observed at level 1, the skeleton is indicated at level 2. Skeletal remains indicated: skull, both collarbones (not digitized), ribs (not digitized), vertebral column, both upper arms, pelvis, left leg, articulated. The relation with context 159 cannot be established.

PHYSICAL ANTHROPOLOGY

- Find number	1458.1
Sex WEA	female
Age in years	20 - 25
- Find number	1458.2
Sex WEA	indeterminate
Age in years	15 – 20

^{14}C-DATE
GrA-32714 + 30 BP
1 sigma: 680-780 (60.4%) 790-810 (7.8%)
2 sigma: 680—870 (95.4%)

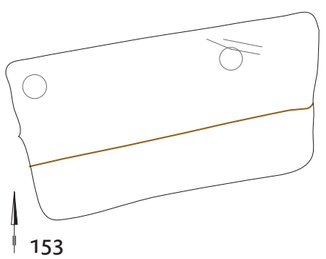
159
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	230 cm
Grave pit width	104 cm
Elevation top	48.30
Elevation bottom	48.18
Elevation top skull	48.30
Elevation top post cranial	48.25
Orientation	13
Stratigraphic relation	above context 152, 154, 156, 157 and 235

DESCRIPTION
Outline of a pit observed at two levels. At level 1 a rectangular pit is observed without any skeletal remains. At level 2 there is a grave with skeleton at the same spot, however the skull is not indicated. Although the size of the pits at each level differ slightly we suppose that the features at both levels belong to a single grave.
Skeletal remains (1456) present at level 2: vertebral column, pelvis, both legs, articulated. Moreover there is a skull (1457) north of the left knee (of another person) and two long bones near the left upper arm, which may belong to the same person as well. West of the head is a stone as well as in the north-eastern corner of the pit (see grave context 157). The relation with grave context 158 cannot be established.

PHYSICAL ANTHROPOLOGY
Remains of three individuals were present in this find number.

- Find number	1456.1
Sex WEA	male
Age in years	35 - 55
Male stature in cm	171.3
- Find number	1456.2
Sex WEA	male
Age in years	30 - 60
Male stature in cm	171.1
- Find number	1457.1
Sex WEA	female
Age in years	30 - 60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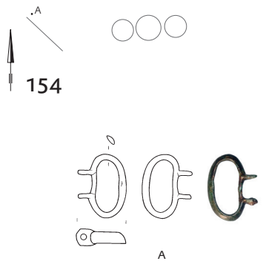

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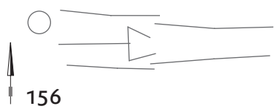
155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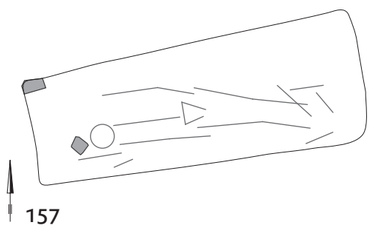
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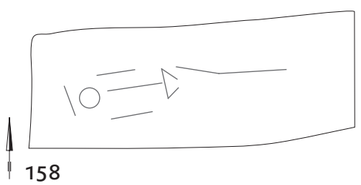
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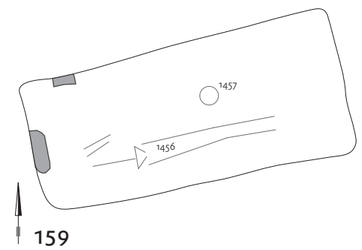


159

160
DISCARDED CONTEXT

161
DISCARDED CONTEXT

162
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave
Grave pit length	151 cm
Grave pit width	79 cm
Elevation bottom	47.95
Orientation	4
Stratigraphic relation	below context 163 and 169

DESCRIPTION
Outline of a pit observed at one level only. In the pit an outline of a coffin is indicated. No skeletal remains indicated. It is possibly the grave of a child.

163
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	stone built grave
Grave pit length	215 cm
Grave pit width	137 cm
Elevation top	48.37
Elevation top skull	48.00
Elevation top post cranial	47.98
Orientation	13
Stratigraphic relation	above context 151, 162 and 169

DESCRIPTION
Outline of a pit observed at three levels. Skeletal remains indicated at level 3: skull, right arm, lower left arm, both legs, articulated, although the skull seems to have (been?) moved a bit. The left hand may have been placed on the pelvis. At level 2 there was a skull and a long bone in the eastern part. The coffin may have been used twice.
In the pit is a stone built grave (stones without mortar?). On the drawing it is indicated that the grave is constructed with ashlars (15 x 15 cm). On slide 21587 it can be seen that the stones are more irregular, but they have piled up in such a way that the interior wall is relatively flat. The outside is irregular. At level 1 and 2 the eastern and western ends are disturbed, stones found in the fill of the grave may originate from the higher parts of the grave construction.

PHYSICAL ANTHROPOLOGY
Remains of three individuals were present in find number 1453 and one in find number 1543 (in total four individuals in this grave). Indications in database concern the articulated skeleton, not the extra material in the eastern part of container.

-	Find number	1453.1 (articulated skeleton)
	Sex WEA	female
	Age in years	44 - 53
-	Find number	1453.2
	Sex WEA	indeterminate
	Age in years	23 - 60
-	Find number	1453.3
	Sex WEA	indeterminate
	Age in years	10 - 20
-	Find number	1543.1
	Sex WEA	female
	Age in years	19 - 28
	Female stature in cm	164.0

164
GRAVE

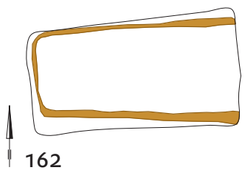
Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	217 cm
Grave pit width	74 cm
Elevation bottom	47.97
Orientation	0
Stratigraphic relation	below context 166, 169, 170 and 175

DESCRIPTION
Outline of a pit observed at one level only. In the pit the outline of (a fill of) a coffin is indicated. Skeletal remains present, skull, both clavicles (not digitized), vertebral column, both upper arms, part of the right lower arm, both legs, articulated. The right arm is somewhat flexed.

PHYSICAL ANTHROPOLOGY

Find number	1632.1
Sex WEA	female
Age in years	60 – 70

FINDS
A Glass bead: opaque red, decorated
Find number: 1633.1
Condition: complete
Shape: globular, compressed
Type: no type identification available.
Number of beads: 1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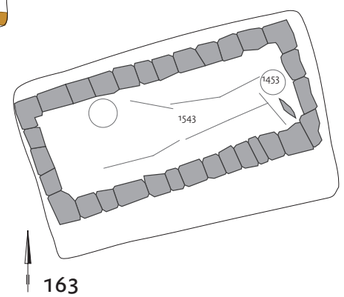

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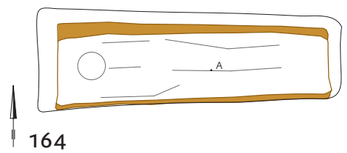
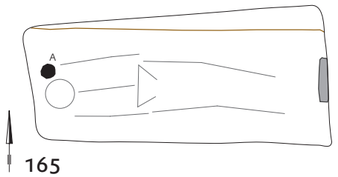


164


A



165

165
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	213 cm
Grave pit width	92 cm
Elevation bottom	47.99
Orientation	1
Stratigraphic relation	below context 167, 170, 171, 172 and 175

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The hands were placed along the body. In the west end of the pit, near the feet a stone is placed. In the pit an outline of a coffin is present. This is clearly visible on slide 21637.

PHYSICAL ANTHROPOLOGY

Find number	1579.1
Sex WEA	male
Age in years	34 - 40
Male stature in cm	169.8

FINDS
A Unidentifiable object
Find number: 1580.1
Condition: missing

166
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	210 cm
Grave pit width	65 cm
Elevation bottom	47.97
Elevation top skull	48.00
Elevation top post cranial	48.05
Orientation	6
Stratigraphic relation	above context 164; below context 169 and 175

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, right arm, both legs, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1538.1
Sex WEA	female
Age in years	20 - 40

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Disc brooch: round, silver casing with garnets, two zones.
Find number: 1539.1
Condition: 1 inlay missing
Type: Siegmund Fib 1.3
Diameter: 27 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz C1.4 (530/40-560/70)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: D-E (510/20-580/90)

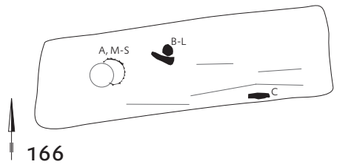
B Plate buckle (purse): copper alloy, fixed plate, dot-in-circle decoration
Find number: 1540.2
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

C Strap end
Find number: 1542.1
Condition: missing

D Triangular shaped mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.9
Condition: complete
Type: L/P/V 361
L/P/V phase: MR1-MR2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

E Triangular shaped mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.8
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

F Triangular shaped mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.7
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)



166


A


M-S


L

G Strap end (purse): copper alloy, dot-in-circle decoration
Find number: 1540.3
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

H Bird-shaped mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.6
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 660/10-660/70
Maastricht date: G-H (610/20-670/80)

I Bird-shaped mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.5
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

J Circular mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.4
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

K Triangular shaped mount (purse): copper alloy, dot-in-circle decoration
Find number: 1540.10
Condition: complete
Type: L/P/V 361
L/P/V phase: MR 1-MR 2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)

L Key: copper alloy, attached to copper alloy ring
Find number: 1540.1
Condition: complete
Type: L/P/V 350
Length: 15 mm
L/P/V phase: MA 1-MA 3
L/P/V date: 470/80-600/10
Maastricht date: C-F (460/80-610/20)

M Glass beads: opaque yellow, undecorated
Find number: 1539.3
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 32
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

N Glass beads: transparent blue, undecorated
Find number: 1539.4
Condition: pieces missing
Type: S-47.5
Shape: biconical, long
Number of beads: 5
Combination group: F-G
Rhineland date: 570-640
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: D-H (510/20-670/80)

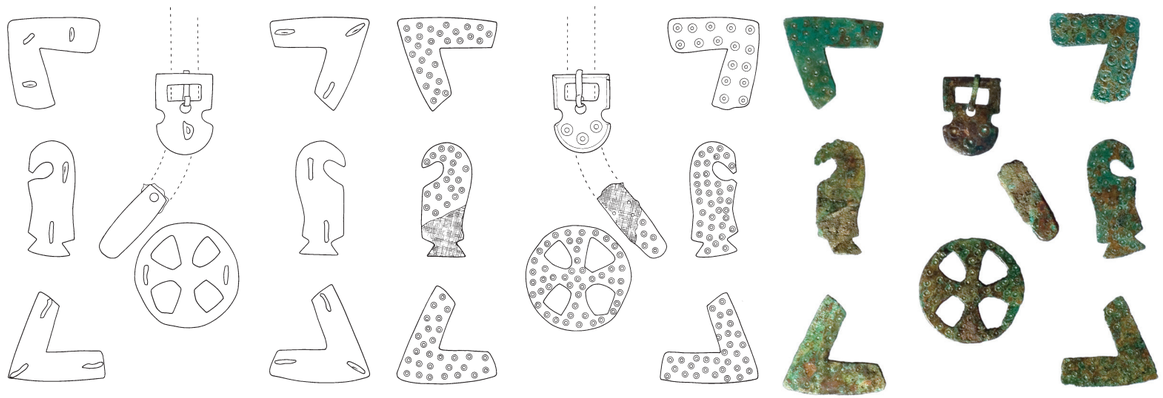
O Glass beads: opaque green, undecorated
Find number: 1539.5
Condition: complete
Type: S-1.8
Shape: biconical, long
Number of beads: 7
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-H (510/20-670/80)

P Glass beads: transparent blue, undecorated
Find number: 1539.6
Condition: complete
Type: S-47.1
Shape: globular, compressed
Number of beads: 4
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: D-H (510/20-670/80)

Q Glass beads: transparent blue, decorated
Find number: 1539.7
Condition: complete
Type: Koch 1977, M67/72
Shape: biconical
Number of beads: 2
Koch phase: Stufe 4
Koch date: 590/600-620/30
Maastricht date: D-H (510/20-670/80)

R Glass beads: opaque blue, undecorated
Find number: 1539.8
Condition: complete
Type: S-group 37 (1-2)
Shape: globular, compressed
Number of beads: 6
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-H (510/20-670/80)

S Amber beads: transparent red, polished/cut
Find number: 1539.2
Condition: complete
Shape: irregular-shaped
Number of beads: 10
Maastricht date: D-H (510/20-670/80)



B-K

167
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	231 cm
Grave pit width	82 cm
Elevation bottom	47.97
Elevation top skull	48.18
Elevation top post cranial	48.12
Orientation	6
Stratigraphic relation	above context 165 and 168; below context 171, 172 and 175

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated (except the lower right arm), articulated. The left hand was placed on the pelvis. In the pit an outline of a coffin is indicated. The coffin seems to have been placed in the eastern part of the pit. Find number 1553 is indicated in this context on the field drawing, but also in context 110 with the remark that it is 'brons' (copper alloy). Because there are copper alloy objects with find number 1553 we accept that find number 1553 belongs to context 110. This means that we have no find number for the iron object in this grave.

PHYSICAL ANTHROPOLOGY

Find number	1537.1
Sex WEA	male
Age in years	63 – 73

168
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	226 cm
Grave pit width	58 cm
Elevation bottom	47.97
Elevation top skull	48.19
Elevation top post cranial	48.12
Orientation	4
Stratigraphic relation	below context 173 and 167 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton indicated (except lower left arm upper right arm and pelvis). The legs are in a flexed position as if the lower legs were wrapped together. The pit seems to be too narrow, and as no outline of a coffin is indicated one wonders whether the outline observed could not be that of a coffin.

PHYSICAL ANTHROPOLOGY

Find number	1532.1
Sex WEA	indifferent
Age in years	12 - 18

DATE (FINDS)
D-E (510/20-580/90)

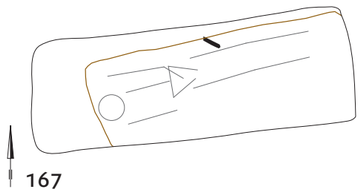
FINDS
A Buckle: iron
Find number: 1533.1
Condition: tongue partly missing
Type: Siegmund Gür 2.2b
Loop length: 40 mm
Rhineland phase: 2-3
Rhineland date: 440-530
Maastricht date: B-D (400-565)

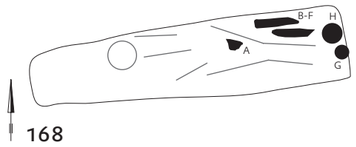
B Seax: iron
Find number: 1534.2
Condition: complete
Type: FAG Sax 1
Blade length: 195 mm
Grip length: 60 mm
FAG phase: 3-7
FAG date: 510/25-580/90
Maastricht date: D-E (510/20-580/90)

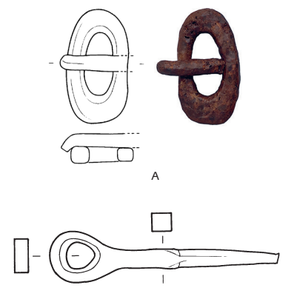
C Rod with ring: copper alloy
Find number: 1534.3
Condition: tip partly missing
Type: L/P/V 353
Length: 82 mm
L/P/V phase: MA2-MR3
L/P/V date: 520/30-700/10
Maastricht date: D-I (510/20-725)

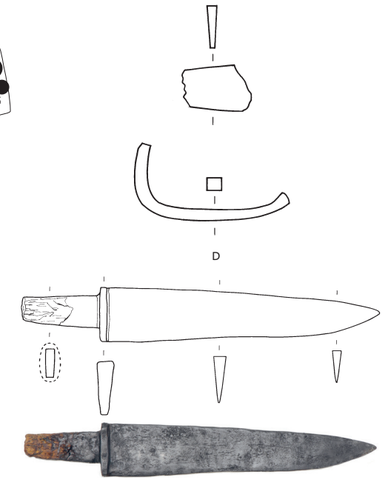
D Bend rod and fragment: iron
Find number: 1534.5

E Knife: iron
Find number: 1534.1
Condition: complete
Type: knife
Grip length: 65 mm
Blade length: 96 mm









F Rod with ring: copper alloy
Find number: 1534.4
Condition: loop partly missing
Type: L/P/V 353
Length: 116 mm
L/P/V phase: MA 2-MR 3
L/P/V date: 520/30-700/10
Maastricht date: D-I (510/20-725)

G Jug: groove decoration
Find number: 1536.1
Condition: complete
Type: Vanvinckenroye 1991, 369
Maximum height: 110 mm
Vanvinckenroye phase: Late Roman
Vanvinckenroye date: 275-325
Maastricht date: 275-325

H Dish (pottery): oxidized, carinated, roulette decoration
Find number: 1535.1
Condition: complete
Type: Siegmund Sha 2.21
Maximum height: 77 mm
Rhineland phase: 5-8
Rhineland date: 555-610/40
Alternative type: L/P/V 403 (second half MA2-MA3: 540/50-600/10)
Alternative type: FAG S-Sha 2.21 (4-7: 510/25-640/50)
Maastricht date: D-G (510/20-640/50)i ?: iron
Find number: 1534.6

169
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	198 cm
Grave pit width	76 cm
Elevation top	48.37
Elevation bottom	49,19
Elevation top skull	48.28
Orientation	15
Stratigraphic relation	above context 162, 164, 166; below context 174, 113 (cutting grave), 163 (cutting grave), 170 (cutting grave)

DESCRIPTION
Outline of a pit observed at two levels. On both levels outlines of a grave pit are present at almost the same spot. We consider them to be of a single grave. Moreover there is no indication of skeletal remains at level 1. Context 163 seems to be younger than the contexts on both levels. At level 1 a stone is observed at the location of the northern wall of the pit. It has not been assigned to this grave. Complete articulated skeleton indicated. The hands are placed along the body.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1455.1
Sex WEA	male
Age in years	19 - 28
Male stature in cm	171.9
- Find number	1455.2
Sex WEA	indeterminate
Age in years	17 - 25

170
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	128 cm
Grave pit width	55 cm
Elevation top skull	48.20
Orientation	7
Stratigraphic relation	above context 164, 165, 166, 169; below context 170

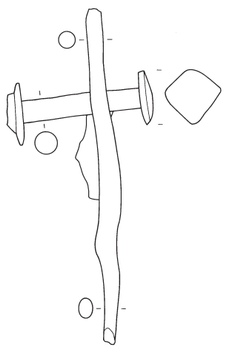
DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull and long bones at the left side (arm and leg?). Two stones have been found to the south of the skeleton.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

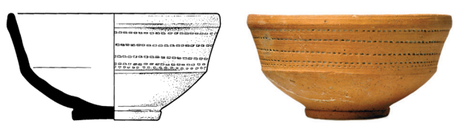
- Find number	1452.1
Sex WEA	female
Age in years	40 - 80
Female stature in cm	156.4
- Find number	1452.2
Sex WEA	male
Age in years	20 - 80


E


G


I


F


H

171
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	66
Elevation bottom	48.19
Elevation top skull	48.17
Orientation	9
Stratigraphic relation	above context 165 and 167; below context 172 and 175

DESCRIPTION
Outline of a pit observed at one level only. Skull and long bone indicated which have no find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

172
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	194 cm
Grave pit width	61 cm
Elevation top post cranial	48.13
Orientation	6
Stratigraphic relation	above context 165, 167, 171 and 218; below context 175

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton indicated, except left arm and lower right arm. Find number 1451 assigned to this grave was also assigned to the skeletal material in grave 173. It is not possible anymore to discriminate the skeletal material of both graves. South of the skull in the western part of the pit red debris is indicated, probably a Roman roof tile fragment.

PHYSICAL ANTHROPOLOGY
See grave 173.

173
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	218 cm
Elevation top skull	48.10
Orientation	2
Stratigraphic relation	above context 168; below context 176

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull and long bone (?), disarticulate. Near the head at the western end of the pit red debris is indicated, they are probably Roman roof tile fragments. The find number of the skull is the same as the skeletal material in context 172.

PHYSICAL ANTHROPOLOGY
These data relate to both graves 172 and 173.

- Find number	1451.1
Sex WEA	female
Age in years	25 - 35
- Find number	1451.2
Sex WEA	female
Age in years	10 - 20
- Find number	1451.3
Sex WEA	female
Age in years	20 - 34

DATE (FINDS)
D-E (510/20-580/90)

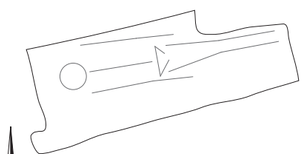
FINDS
A Seax: iron
Find number: 1450.2
Condition: grip partly missing, tip missing
Type: FAG Sax 1
Blade length: 258 mm
Grip length: 21 mm
Rhineland phase: 3-7
Rhineland date: 510/25-580/90
Maastricht date: D-E (510/20-580/90)

B Rivet: copper alloy
Find number: 1450.1
Condition: complete
Type: no type identification available
Diameter: 8 mm

174
FIND

Trench	5
Context type	stone fragment
Stratigraphic relation	above context 169

DESCRIPTION
Stray find of a stone.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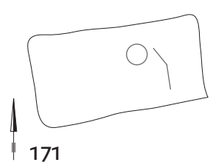
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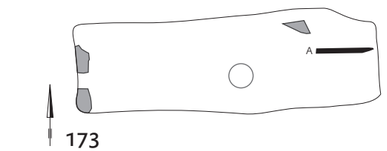
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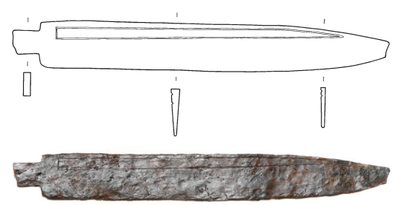
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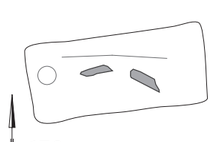
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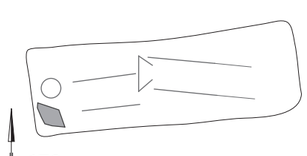

172


B

175
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.37
Orientation	6
Stratigraphic relation	above context 164, 165, 166, 167, 170, 171, 172, 176 and 218

DESCRIPTION
Outline of a pit observed at one level only. No further details. Reconstructed as a possible grave because the outline of the large pit at level 1 does not match with one of the underlying graves. However, possibilities to make good observations were limited so that the outlines of graves at level 1 may not always be accurate.

176
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.37
Orientation	3
Stratigraphic relation	above context 165, 167, 168, 171, 172, 173; below context 175

DESCRIPTION
Outline of a pit observed at one level only. No further details. Reconstructed as a possible grave because the outline of the large pit at level 1 does not match with one of the underlying graves. However, possibilities to make good observations were limited so that the outlines of graves at level 1 are not always accurate.

177
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.37

DESCRIPTION
Some long bones, possibly in a round pit of post-Merovingian date. No find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

178
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit width	99
Elevation top	48.45
Elevation bottom	48.05
Orientation	8
Stratigraphic relation	below context 180 and 181

DESCRIPTION
Outline of a pit observed at two levels. The reconstruction is based on level 3 where a clear outline of a coffin has been drawn. At level 2 stones have been found along the northern and southern parts of the pit. One of these is at the location of the northern wall of the coffin. The stones have not been assigned to this grave. Skeletal remains indicated: skull and both legs, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1513.1
Sex WEA	indifferent
Age in years	40 - 80

DATE (FINDS)
D-H (510/20-670/680)

FINDS

A Knife: iron
Find number: 1515.1
Condition: tip missing, grip partly missing
Type: Siegmund Ger 1.2
Grip length: 21 mm
Blade length: 65 mm
Rhineland phase: 10-11
Rhineland date: 670-740
Maastricht date: H-J (640/50->725)

B Glass bead: opaque red, undecorated
Find number: 1516.9
Condition: complete
Type: S-35.4
Shape: globular, compressed
Number of beads: 1
Combination group: D-G
Rhineland date: 530-640
Maastricht date: D-H (510/20-670/80)

C Glass beads: transparent, silver-in-bead
Find number: 1516.5
Condition: segments missing
Type: S-40.1
Shape: double/multiple, segmented
Number of beads: 2
Combination group: C-E
Rhineland date: 485-585
Alternative type: FAG Per 40 c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: D-H (510/20-670/80)

D Glass bead: opaque orange/ochre, undecorated
Find number: 1516.2
Type: S-34.1
Shape: annular
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Maastricht date: D-H (510/20-670/80)

E Glass bead: transparent green, decorated
Find number: 1516.12
Condition: piece missing
Type: Koch 1977, group 27
Shape: cone
Number of beads: 1
Koch date: 500-700
Maastricht date: D-H (510/20-670/80)

F Glass melon bead: opaque blue, undecorated
Find number: 1516.11
Condition: piece missing
Shape: barrel, melon (ripped)
Number of beads: 1
Rhineland date: Roman
Maastricht date: D-H (510/20-670/80)

G Glass bead: opaque yellow, decorated
Find number: 1516.3
Type: Koch 1977, group 27
Shape: globular, compressed
Number of beads: 1
Koch date: 500-700
Maastricht date: D-H (510/20-670/80)

H Glass beads: opaque yellow, undecorated
Find number: 1516.4
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 4
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

I Glass bead: opaque
Find number: 1516.7
Condition: corroded
Base colour: unknown,
Shape: globular, compressed
Decoration technique: unknown
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

J Glass bead: opaque green, undecorated
Find number: 1516.6
Condition: complete
Shape: globular, compressed
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

K Glass bead: transparent green, undecorated
Find number: 1516.8
Condition: segment(s) missing
Type: S-group 46 (1-5)
Shape: globular, compressed
Number of beads: 1
Combination group: A/H-I
Rhineland date: 485-555-610-705
Maastricht date: D-H (510/20-670/80)

L Amber bead: transparent red, polished/cut
Find number: 1516.13
Condition: piece missing
Shape: irregular-shaped
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

M Amber beads: transparent red, polished/cut
Find number: 1516.1
Condition: complete
Shape: irregular-shaped
Number of beads: 2
Maastricht date: D-H (510/20-670/80)

N Glass bottle: green
Find number: 1406.2
Condition: broken, pieces missing
Type: Feyeux 2003, 20.0
Maximum height: 95 mm
Feyeux date: 400-600
Alternative type: L/P/V 440 (PM-MA3: 440/50-600/10)
Maastricht date: B-F (400-610)

O Comb: tooth segment plate, antler, part of composite double comb
Find number: 1406.1
Condition: teeth missing
Type: Siegmund Ger 3.2
Length: 26 mm
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)

P Indeterminate objects (rod, nail?): iron
Find number: 1516.14

Q Shards (pottery)
Find number: 1514.1-5
Condition: 8 fragments
Maastricht date: Roman

R Shards (pottery)
Find number: 1407.1-2
Condition: 11 fragments
Maastricht date: Roman

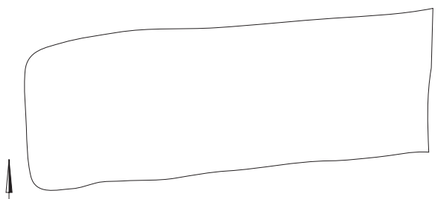
179
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit length	101 cm
Grave pit width	41 cm
Elevation bottom	48.02
Elevation top post cranial	48.12
Orientation	9
Stratigraphic relation	below context 180; above context 213

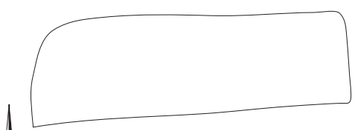
DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton is present. Probably a child. West of the head a (fragment of) a 'millstone' (as indicated on the drawing) is present (find number 1519, it is missing). The skeletal remains are registered under number 1504. The contents of number 1505 is not clear.

PHYSICAL ANTHROPOLOGY

Find number	1504.1
Sex WEA	indeterminate
Age in years	0.5 - 1


175


177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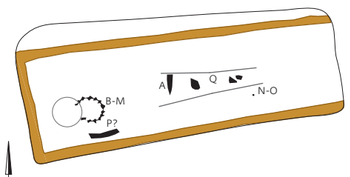
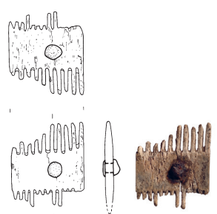


178

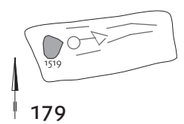

A


B


O


N


P



179

FINDS

A Glass bead: opaque green
Find number: 1504.1
Condition: pulverized
Shape: unknown
Decoration technique: unknown

B Glass bead: transparent blue,
Find number: 1504.2
Condition: pulverized
Type: S-group 47
Shape: unknown
Decoration technique: unknown
Combination group: A/F-I
Rhineland date: 485-555 / 570-705
Alternative type: FAG c. group I/IV-V (3: 460/80-510/25 / 5-10: 580/90-750)
Maastricht date: C (460-510/25) / F-J (580/90->725)

180
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	160 cm
Grave pit width	70 cm
Elevation bottom	48.40
Orientation	2
Stratigraphic relation	above context 178 and 179

DESCRIPTION

Outline of a pit observed at one level only. No further details. The qualification 'possible grave' has been given to this outline because it does not match well with the outlines of underlying graves. The outline may thus represent a grave on its own. The possibilities for making good observations were, however, limited so that the outlines of grave pits at level 1 do not seem to be reliable in all cases. Perhaps the outline should be combined with context 179 to reconstruct a single grave.

FINDS

A Shards (pottery)
Find number: 1374.1
Condition: 1 fragment
Maastricht date: Roman

181
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	88 cm
Elevation bottom	48.40
Orientation	352
Stratigraphic relation	above context 178; below context 182

DESCRIPTION

Outline of a pit observed at one level only. No further details. The qualification 'possible grave' has been given to this outline because it does not match well with the underlying graves. The possibilities for making good observations were however very limited so that the outlines of grave pits at level 1 do not seem to be reliable in all cases.

182
PIT

Trench	5
Burial type	pit
Elevation bottom	48.40
Orientation	276
Stratigraphic relation	above context 100, 101, 103, 181

DESCRIPTION

Outline of a pit observed at one level only. It is probably not a grave. The pit is north-south oriented.

183
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave with stones within
Grave pit length	203 cm
Grave pit width	90 cm
Elevation top	48.06
Elevation bottom	47.88
Orientation	6
Stratigraphic relation	below context 101, 185, 186 and 184 (cutting grave)

DESCRIPTION

Outline of a pit observed at two levels. The reconstruction is based on the drawing at level 4, except the stone west of the head, which is found at level 3. The stratigraphic relations visible at level 3 remain visible in this reconstruction. The strip of light colored soil in the southern part of the pit seems to point to the presence of a coffin in the northern part of the pit. Complete articulated skeleton indicated. At level 4 a ring near the right hand is indicated, but has no find number. The hands were placed along the body.

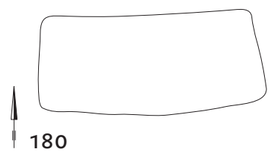
PHYSICAL ANTHROPOLOGY

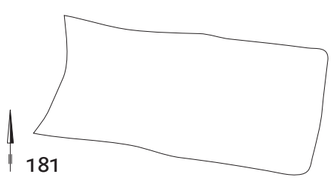
Remains of two individuals were found in this find number.

-	Find number	1578.1
	Sex WEA	female
	Age in years	23 - 40
-	Find number	1578.2
	Sex WEA	indeterminate
	Age in years	20 - 80

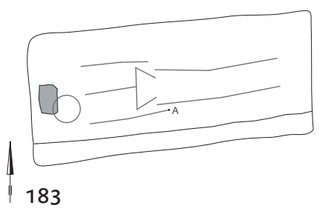
FINDS

Ring
A Find number: 8888-183.1
Condition: missing









184
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	69 cm
Elevation top skull	48.27
Elevation top post cranial	48.12
Orientation	2
Stratigraphic relation	above context 183; below context 101 and 186

DESCRIPTION

Outline of a pit observed at one level only. On the slide of level 2 one can however already see the fill of a grave.
Almost complete, articulated skeleton indicated (except lower left leg). The hands were placed on the pelvis. Find number 1510.1 has been assigned to both the skeletal remains and the Roman glass fragment.

PHYSICAL ANTHROPOLOGY

Find number	1510.1
Sex WEA	female
Age in years	40 – 70

FINDS

A Glass: blue, handle with rib
Find number: 1510.1
Condition: fragment
Type: Isings 52/55
Isings phase: Roman
Isings date: 70-200
Maastricht date: Roman

B Glass: blue
Find number: 1510.2
Condition: fragment

C Shards (pottery)
Find number: 1510.3-8, 12-13
Condition: 41 fragments
Maastricht date: Roman

D Unidentifiable object (iron)
Find number: 1510.10
Condition: 2 fragments

E Bone
Find number: 1510.11
Condition: 2 fragments

F Brick?
Find number: 1510.9
Condition: 1 fragment

185
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	267 cm
Grave pit width	88 cm
Elevation bottom	48.43
Orientation	2
Stratigraphic relation	above context 183 and 201

DESCRIPTION

Outline of a grave observed at one level only. No further details. It is included in the catalogue as a possible grave because the outline of the grave at level 1 does not match well with those observed at lower lying levels. The circumstances for observing proper stratigraphic relations were not favorable. The outlines of the pits at level 1 are not always reliable.

186
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	stone built grave
Grave pit length	217 cm
Grave pit width	80 cm
Elevation top	48.43
Elevation bottom	48.30
Orientation	3
Stratigraphic relation	above context 183, 184, 201 and 202

DESCRIPTION

Outline of a pit observed at two levels. In the pit a stone built grave is present. It could not be established whether mortar was used or not. Remains of the walls were still present on the west and south sides. The drawing indicates that ashlars were used (15 x 15 cm). As with context 163 a slide shows that the stones had a more irregular appearance. The inside wall of the grave is relatively flat, the outside irregular. Skeletal remains are indicated, however partly in a disarticulate position. The skull may be situated in the proper place, as well as a few ribs and long bones of the arms. The pelvis may be situated too far to the east and there does not seem to be enough space for the lower legs. Long bones that are not in an articulated position lie next to a partially articulated skeleton.

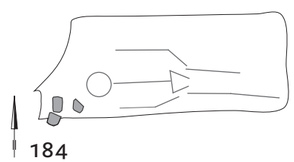
PHYSICAL ANTHROPOLOGY

Remains of three individuals were present in this find number.

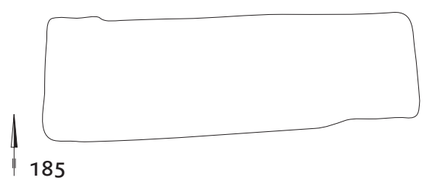
-	Find number	1432.1
	Sex WEA	male
	Age in years	40 - 80
	Male stature in cm	166.9
-	Find number	1432.2
	Sex WEA	male
	Age in years	20 – 34
-	Find number	1432.3
	Sex WEA	female
	Age in years	15 – 35

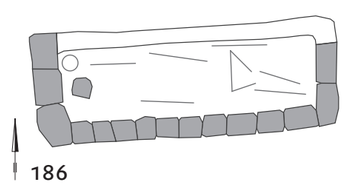
FINDS

A Shards (pottery)
Find number: 1432.1-5
Condition: 9 fragments
Maastricht date: Roman









187
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	11 cm
Grave pit width	105 cm
Elevation top	48.32
Elevation top skull	47.80
Orientation	1
Stratigraphic relation	below context 99

DESCRIPTION

Outline of a pit observed at two levels. The reconstruction is based on the drawing of level 4. On the same spot at level 2 the fill of a grave can already be seen that cannot belong to another grave (slide 21582). It can be deduced that grave context 187 was already visible at that level. Both to the north and the south of the skeleton a strip of dark soil seems to indicate the presence of a coffin. At level 3 the southern strip of dark soil lies somewhat more to the north, perhaps it is an indication for a plank that had collapsed to the inside. Complete articulated skeleton indicated except for the lower arms (level 4). Find number 1409 indicated on the field drawing is missing. There is no indication as to the nature of this object.

PHYSICAL ANTHROPOLOGY

Find number	1635.1
Sex WEA	female
Age in years	24 - 30

DATE (FINDS)

D-E (510/20-580/90)

FINDS

A Buckle: copper alloy, *Kolbendorn?*
Find number: 1643.1
Condition: complete
Type: Siegmund Gür 2.4
Loop length: 30 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Alternative type: L/P/V 109 (PM-MA2: 440/50-560/70)
Maastricht date: C-D (460/80-565)

B Disc brooch: rosette, silver casing with one zone of garnets
Find number: 1642.1
Condition: complete
Type: Siegmund Fib 1.3
Diameter: 31 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz E3.22 (560/70-600/10)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: E-F (565-610)

C Disc brooch: rosette, silver casing with one zone of garnets
Find number: 1641.1
Condition: pin missing
Type: Siegmund Fib 1.3
Diameter: 31 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz E3.22 (560/70-600/10)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: E-F (565-610)

D Earring: applied polygon casing with garnets
Find number: 1640.1
Condition: tip of ring missing
Type: FAG Ohr 4A
FAG phase: 3-5
FAG date: 460/80-580/90
Alternative type: Von Freeden 1979, (500-550)
Maastricht date: C-E (460/80-580/90)

E Earring: applied polygon casing with garnets
Find number: 1638.2
Condition: fragmented
Type: FAG Ohr 4A
FAG phase: 3-5
FAG date: 460/80-580/90
Alternative type: Von Freeden 1979, (500-550)
Maastricht date: C-E (460/80-580/90)

F Finger ring: silver, simple cast.
Find number: 1638.1
Condition: complete
Ring diameter: 19 mm

G Pendant: gold, filigree decoration
Find number: 1636.2
Condition: complete
Type: Siegmund Per 6.1
Diameter: 15 mm
Rhineland phase: 5-7
Rhineland date: 555-610
Maastricht date: D-F (510/25-610/20)

H Pendant: gold, filigree decoration
Find number: 1636.1
Condition: complete
Type: Siegmund Per 6.1
Diameter: 15 mm
Rhineland phase: 5-7
Rhineland date: 555-610
Maastricht date: D-F (510/25-610/20)

I Glass bead: opaque yellow, decorated
Find number: 1637.8
Condition: complete
Type: Koch 1977, group 27
Shape: globular, compressed
Number of beads: 1
Koch date: 500-700
Maastricht date: B-E (400-580/90)

J Glass bead: transparent white, undecorated
Find number: 1637.7
Condition: complete
Shape: barrel, melon (ripped)
Number of beads: 1
Maastricht date: B-E (400-580/90)

K Glass bead: opaque blue, undecorated
Find number: 1636.8
Condition: complete
Type: S-group 37 (1-2)
Shape: globular, compressed
Number of beads: 1
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-G (510/20-640/50)

L Glass beads: opaque blue, undecorated
Find number: 1637.9
Condition: complete
Type: S-group 37 (1-2)
Shape: globular, compressed
Number of beads: 2
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: B-E (400-580/90)

M Glass beads: opaque red, decorated
Find number: 1637.4
Condition: broken, pieces missing
Type: S-35.13
Shape: cylinder
Number of beads: 2
Combination group: D-H
Rhineland date: 530-670
Maastricht date: B-E (400-580/90)

N Glass beads: transparent, silver-in-bead
Find number: 1637.6
Condition: broken, segments missing
Type: S-40.1
Shape: double/multiple, segmented
Number of beads: 34
Combination group: C-E
Rhineland date: 485-585
Alternative type: FAG Per 40 c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: B-E (400-580/90)

O Glass beads: transparent blue, undecorated
Find number: 1637.10
Condition: broken, piece missing
Type: S-1.2
Shape: cylinder, long
Number of beads: 2
Combination group: B-C
Rhineland date: 440-555
Alternative type: FAG c. group II (2-5: 400-580/90)
Maastricht date: B-E (400-580/90)

P Glass beads: opaque yellow, decorated
Find number: 1637.11
Condition: complete
Type: S-33.7
Shape: globular, compressed
Number of beads: 3
Combination group: D-H
Rhineland date: 530-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Maastricht date: B-E (400-580/90)

Q Glass beads: opaque
Find number: 1637.12
Condition: corroded
Base colour: unknown
Shape: globular, compressed
Decoration technique: unknown
Number of beads: 2
Maastricht date: B-E (400-580/90)

R Glass bead: transparent blue, undecorated
Find number: 1637.13
Condition: complete
Type: S-47.9
Shape: polyhedral
Number of beads: 1
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: B-E (400-580/90)

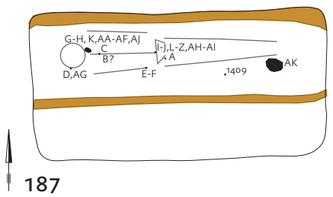
S Glass bead: transparent green, undecorated
Find number: 1637.14
Condition: complete
Shape: cylinder, short
Number of beads: 1
Maastricht date: B-E (400-580/90)

T Glass beads: opaque black, undecorated
Find number: 1637.15
Condition: complete
Type: S-31.1
Shape: globular, compressed
Number of beads: 8
Combination group: C-D
Rhineland date: 485-585
Alternative type: FAG c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: B-E (400-580/90)

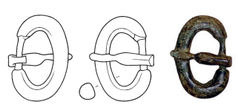
U Glass beads: transparent blue, undecorated
Find number: 1637.16
Condition: complete
Type: S-47.1
Shape: cylinder, short
Number of beads: 9
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: B-E (400-580/90)

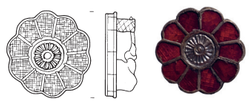
V Glass bead: opaque yellow, undecorated
Find number: 1637.17
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 1
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: B-E (400-580/90)

W Glass bead: opaque red, decorated
Find number: 1637.18
Condition: complete



187


A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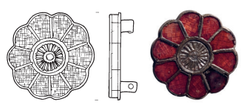
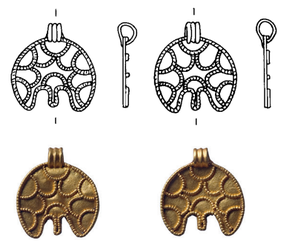

C


D

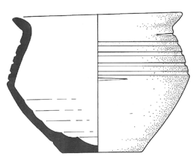

E


F


G H


I-J, L-Z


AG


AK

Type: S-35.11
Shape: globular, compressed
Number of beads: 1
Combination group: F-G
Rhineland date: 570-640
Alternative type: Koch 1977, group 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: B-E (400-580/90)

X Glass beads: opaque red, undecorated
Find number: 1637.19
Condition: complete
Type: S-35.4
Shape: globular, compressed
Number of beads: 5
Combination group: D-G
Rhineland date: 530-640
Maastricht date: B-E (400-580/90)

Y Glass bead: various colours, decorated
Find number: 1637.2
Condition: corroded
Type: S-2.12
Shape: cylinder
Number of beads: 1
Combination group: C-D
Rhineland date: 485-585
Maastricht date: B-E (400-580/90)

Z Glass bead: opaque red, decorated
Find number: 1637.3
Condition: complete
Type: S-2.11
Shape: cylinder
Number of beads: 1
Combination group: D
Rhineland date: 530-585
Alternative type: FAG c. group II-III (2-5: 400-580/90)
Alternative type: Koch 1977, 48.14 (Stufe 2-3: 545/50-590/600))
Maastricht date: B-E (400-580/90)

AA Glass bead: opaque black, undecorated
Find number: 1636.9
Condition: complete
Type: S-31.1
Shape: globular, compressed
Number of beads: 1
Combination group: C-D
Rhineland date: 485-585
Alternative type: FAG c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: D-G (510/20-640/50)

AB Glass bead: opaque red, decorated
Find number: 1636.7
Condition: complete
Type: S-35.11
Shape: globular, compressed
Number of beads: 1
Combination group: F-G
Rhineland date: 570-640
Alternative type: Koch 1977, group 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: D-G (510/20-640/50)

AC Glass beads: transparent, silver-in-bead
Find number: 1636.5
Condition: segments missing?
Type: S-40.1
Shape: double/multiple, segmented
Number of beads: 6
Combination group: C-E
Rhineland date: 485-585
Alternative type: FAG Per.40 c. group II (III) (2-5: 400-580/90 (3-5: 460/80-580/90))
Maastricht date: D-G (510/20-640/50)

AD Glass beads: opaque red, undecorated
Find number: 1636.4
Condition: complete
Type: S-35.4
Shape: globular, compressed
Number of beads: 11
Combination group: D-G
Rhineland date: 530-640
Maastricht date: D-G (510/20-640/50)

AE Glass beads: opaque green, undecorated
Find number: 1636.3
Condition: complete
Type: S-1.8
Shape: biconical, long
Number of beads: 2
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-G (510/20-640/50)

AF Glass beads: opaque yellow, undecorated
Find number: 1636.10
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 2
Rhineland phase: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-G (510/20-640/50)

AG Amber bead: transparent red, polished/cut
Find number: 1640.2
Condition: complete
Shape: irregular-shaped
Number of beads: 1

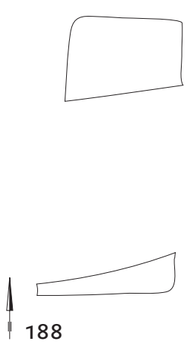
AH Amber bead: transparent red, polished/cut
Find number: 1637.1
Condition: complete
Shape: cylinder
Number of beads: 1
Maastricht date: B-E (400-580/90)

AI Amber beads: transparent red, polished/cut
Find number: 1637.5
Condition: complete
Shape: irregular-shaped
Number of beads: 14
Maastricht date: B-E (400-580/90)

AJ Amber beads: transparent red, polished/cut
Find number: 1636.6
Condition: complete
Shape: irregular-shaped
Number of beads: 3
Maastricht date: D-G (510/20-640/50)

AK Biconical pot: reduced, groove decoration
Find number: 1639.1
Condition: complete
Type: Siegmund Kwt 2.31
Maximum height: 99 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: FAG Kwt 3A (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)

AL Shards (pottery)
Find number: 1523.1
Condition: fragment



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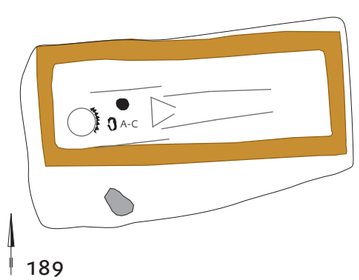

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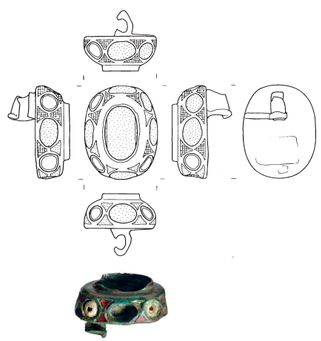


A

188
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	199 cm
Grave pit width	98 cm
Elevation bottom	48.12
Orientation	85
Stratigraphic relation	below context 189

DESCRIPTION
Outline of a pit observed at one level only. No further details. It is not certain that this context is a grave. It is included in the catalogue because of the rectangular shape of the pit. It is wider on the south side than northern side. If it was a grave the person involved may have been buried with the head in the south. The colors of the soil of the fill, as is indicated on the field drawing, is very light.

189
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden coffin grave with stones outside
Grave pit length	237 cm
Grave pit width	133 cm
Elevation top	48.48
Elevation bottom	48.12
Orientation	6
Stratigraphic relation	above context 80 (not in Harris matrix) and 188

DESCRIPTION
Outline of a pit observed at three levels. The reconstruction is based on level 3. At level 2 a clear outline of a coffin was observed. The traces of the wood are 12 to 14 cm thick, which suggests that very thick planks were used. The outside measurements of the coffin were: 218 x 98 cm and on the inside 196 x 60 cm. There is a stone in the southern part of the grave pit outside the coffin near the upper right arm. Complete, articulated skeleton indicated. The hands were placed along the body. One copper alloy object has no find number.

PHYSICAL ANTHROPOLOGY

Find number	1488.1
Sex WEA	female
Age in years	20 – 40

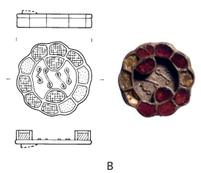
DATE (FINDS)
E-F (565-610)

FINDS
A Brooch: copper alloy, oval with garnets and glass(?) inlays
Find number: 1489.2
Condition: some stones or inlays are missing, fastener is partly missing
Type: no type identification available
Diameter: 33 mm

B Disc brooch: silver casing with garnets and central field with filigree
Find number: 1489.1
Condition: 4 garnets and fastener missing
Type: Siegmund Fib 1.4
Diameter: 26 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: Vielitz F3.11 (560/70-600/10)
Alternative type: FAG S-Fib 1.4 (4B-5: 545-580/90)
Maastricht date: E-F (565-610)

C Bead
Find number: 1489.3
Condition: missing

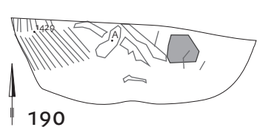
D Shards (pottery)
Find number: 1430.1-3
Condition: 4 fragments
Maastricht date: Roman



B

190
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Elevation top	48.48
Elevation top post cranial	48.40
Stratigraphic relation	above context 192



190

DESCRIPTION
Outline of a pit observed at levels 1 and 2. At level 1 a semicircular pit is located at the northern limit of the trench. Some remains of bone and a fragment of iron are present in the fill (according to the field drawing). It is suggested that the fill of the pit is cut by a small mortar floor, which is clearly visible on slide 21582. At level 2 a pit is situated on the same spot, a comment says: 'black, charcoal'. A large number of ribs is indicated, which are also visible on slides 21582 and 19586, as well as blue elements, usually an indication for the presence of stones. On the slides these stones are hardly visible, perhaps it concerns bone material as well. At level 3 this pit is not visible anymore. Slide 19586 has been made to photograph the complex situation. The bones seem to form the thorax of a large animal. The reconstruction of context 190 is based on the outline of the pit at level 1 and the bones, iron and animal skeleton of level 2.

FINDS
A Slag
Find number: 1372.1
Condition: 1 fragment

191
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	71 cm
Elevation bottom	48.12
Orientation	93
Stratigraphic relation	below context 192

DESCRIPTION
Outline of a pit observed on one level only. The pit is oriented north-south or south-north. No further details.



191

192
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Elevation top	48.48
Elevation bottom	48.12
Orientation	1
Stratigraphic relation	below context 190 (at level 1 only); above context 191

DESCRIPTION
Outline of a pit observed at levels 1 and 3. At level 2 this grave does not seem to have been observed. This could be an indication that the graves at levels 1 and 3 are two separate graves. Nevertheless we are of the opinion that a single grave is concerned. A small strip of dark soil running over the entire length of the pit south of the skeleton suggests the presence of a coffin. The northern- and western sides of the grave pit are not excavated because they were situated outside the excavation trench. Complete, articulated skeleton indicated.

PHYSICAL ANTHROPOLOGY

Find number	1509.1
Sex WEA	male
Age in years	30 - 60
Male stature in cm	168.0

FINDS
Stone
Find number: 1509.1
Condition: 2 fragments

193
DISCARDED CONTEXT

194
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit width	1,04
Elevation top	48.43
Elevation top skull	48.17
Elevation top post cranial	48.04
Orientation	16
Stratigraphic relation	above context 195 and 196

DESCRIPTION
Outline of a pit observed at three levels. There are some differences between the locations of the outline of the pit at each level. Curious is the location of the possible outline of a coffin at level 3 in relation to what, at level 1, could be the fill of a coffin. They are not located at the same place inside the outline of the pit. At level 1 the coffin seems to be in the northern part of the pit. At level 3 the coffin is in the southern part. We do not think that two coffins have been lowered in the same pit. There is only one skeleton. The reconstruction is based on the outline of the pit of level 2 and the coffin and skeleton of level 3. Complete, articulated skeleton indicated. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY

Find number	1507.1
Sex WEA	indifferent
Age in years	44 - 53

DATE (FINDS)
E (565-580/90)

FINDS
A Plate buckle: copper alloy
Find number: 1503.1
Condition: complete
Type: no type identification available
Loop length: 27 mm
Plate length: 43 mm
Alternative type: L/P/V 162? (MA2-MA3: 520/30-600/10)
Maastricht date: E (565-580/90)

B Seax: iron
Find number: 1502.1
Condition: complete
Type: FAG Sax 1
Blade length: 167 mm
Grip length: 56 mm
FAG phase: 3-7
FAG date: 510/25-580/90
Maastricht date: D-E (510/20-580/90)

C Ring (belt appendage): copper alloy
Find number: 1502.2
Condition: complete
Ring diameter: 11 mm

195
PIT

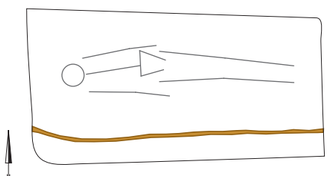
Trench	5
Context type	pit
Elevation bottom	48.33
Stratigraphic relation	below context 194

DESCRIPTION
Outline of a pit observed at one level only. No further information. Perhaps one pit in combination with context 196.

196
PIT

Trench	5
Context type	pit
Elevation top	48.43
Elevation bottom	48.32
Stratigraphic relation	below context 194

DESCRIPTION
Outline of a pit observed at one level only. No further information. Perhaps one pit in combination with context 195.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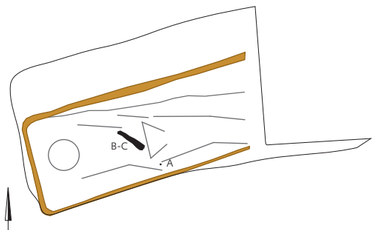

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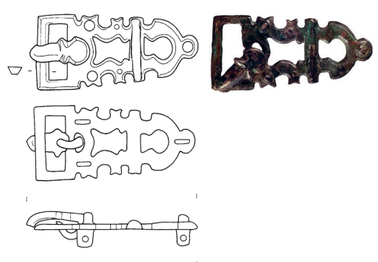
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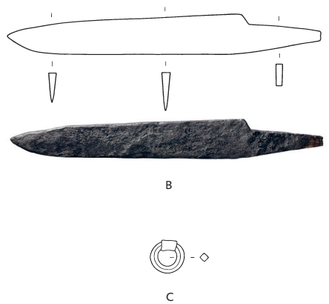


197
DISCARDED CONTEXT

198
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	222 cm
Grave pit width	84 cm
Elevation bottom	47.92
Orientation	5
Stratigraphic relation	below context 204 and 410

DESCRIPTION
Outline of a pit observed at one level only. Complete, articulated skeleton indicated (except the upper left arm). In the grave some beads and a (finger)ring were present near the left hand without a find number.

PHYSICAL ANTHROPOLOGY

Find number	1742.1
Sex WEA	female
Age in years	26 - 35
Female stature in cm	150.1

FINDS
On the field drawing two objects (ring and beads) at the height of the chest are indicated without find number. Another find has number 1741. The finds we have at present are a copper alloy finger ring and finger bone. Some mixing up of find numbers and objects must have taken place.

A Finger ring: copper alloy
Find number: 1741.1
Condition: part missing, broken in two
Type: Siegmund Rng 3
Ring diameter: 19 mm

B Bead
Find number: 1741.2
Condition: missing

C Unknown object
Find number: 1741.3
Condition: missing

199
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	50 cm
Elevation bottom	47.93
Orientation	7
Stratigraphic relation	below context 200

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains present: both legs, articulated. The eastern part of the grave is intersected by grave context 200.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Seax: iron
Find number: 1684.1
Condition: missing

B Unidentifiable object
Find number: 1684.2
Condition: missing

200
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	119 cm
Grave pit width	45 cm
Elevation bottom	47.93
Orientation	8
Stratigraphic relation	above context 199

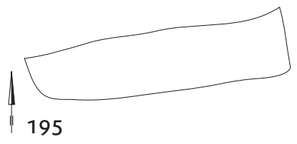
DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, vertebral column, long bones (it cannot be established whether they are from arms or legs), articulated. It is possibly the grave of a child.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1508.1
Sex WEA	indeterminate
Age in years	40 - 80
- Find number	1508.2
Sex WEA	indeterminate
Age in years	2 - 10

FINDS
A Shard (pottery)
Find number: 1508.1
Condition: 1 fragment
Maastricht date: Roman

B Unidentifiable object (iron)
Find number: 1508.2
Condition: 1 fragment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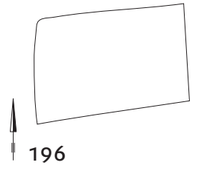
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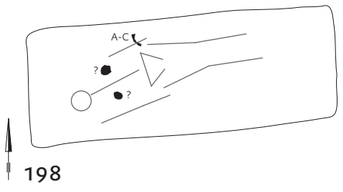
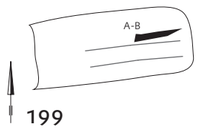


198


A



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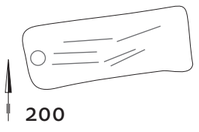

200

201
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	229 cm
Grave pit width	100 cm
Elevation top	48.20
Elevation bottom	48.02
Elevation top skull	48.22
Elevation top post cranial	48.04
Orientation	1
Stratigraphic relation	above context 210 and 211; below context 185 and 203

DESCRIPTION
Outline of a pit observed at two levels. At level 2 there is only a vague indication of the fill of a grave, but its western limit coincides to such an extent with the location of the grave at level 3 that we suppose it belongs to the same grave. Remains of a coffin observed. Complete, articulated skeleton indicated. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY

Find number	1506.1
Sex WEA	male
Age in years	34 - 46

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Buckle (purse): copper alloy, iron tongue
Find number: 1501.1
Condition: complete
Type: Siegmund Sna 1.1
Loop length: 17 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: L/P/V 124 (MA1-MR1: 470/80-630/40)
Maastricht date: D-E (510/20-580/90)

B Knife: iron
Find number: 1501.2
Condition: complete
Grip length: 60 mm
Blade length: 80 mm

C Arrowhead: iron
Find number: 1501.3
Condition: nearly complete
Length: 116 mm
Type: L/P/V 23/24
Rhineland phase: PM-MA3
Rhineland date: 440/50-600/10
Maastricht date: C-F (460/80-610)

D Metal fragment
Find number: 1501.5
Type: indeterminate fragment of iron

E Flint
Find number: 1501.4
Type: Siegmund Ger 6
Length: 49 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

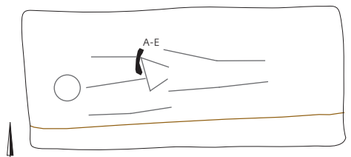
F Shards (pottery)
Find number: 1506.1-6
Condition: 10 fragments
Maastricht date: 5 Roman, 1 Merovingian

202
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	202 cm
Grave pit width	81 cm
Elevation bottom	48.33
Orientation	5
Stratigraphic relation	above context 199 and 200; below context 186 and 203

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: skull, both clavicles (not digitized), vertebral column, right arm, upper left arm. The right hand was placed on the pelvis.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

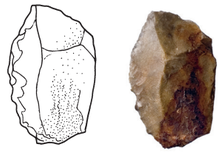


201


A


B


C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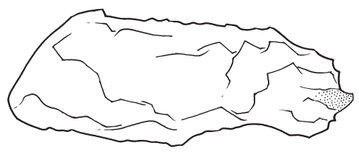
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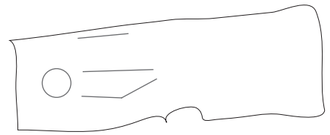
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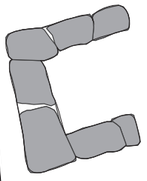
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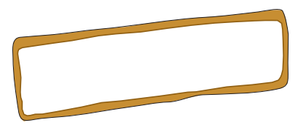

204

203
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	stone built grave
Elevation top container	48.42
Elevation base container	48.20
Orientation	14
Stratigraphic relation	above context 201, 202, 210 and 211

DESCRIPTION
Western part of a stone built grave. A few rectangular stones is what remains of this grave. It cannot be established whether mortar has been used or not to build up the wall. At level 1 there is a pit with a fill of black soil on the same location. It could be that it is the grave pit of the same grave. We did not reconstruct the grave as such.

204
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave
Elevation bottom	48.32
Orientation	7

DESCRIPTION
On the drawing of level 2 an outline of a coffin is indicated in this place. Some grey discolorations of the soil might be the last remnants of the fill of a pit. No skeletal remains indicated.

FINDS
Black pot (pottery)
Find number: 1682.1
Condition: missing

205
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Elevation bottom	48.31
Orientation	6

DESCRIPTION
Outline of a pit observed at one level only. Traces of a coffin observed. A small part of the northern limit of the pit and a part of the eastern half of the grave were not excavated. Complete, articulated skeleton indicated. The left hand was placed on the pelvis. On the left lower arm green stains on the bone, probably from grave goods.

PHYSICAL ANTHROPOLOGY

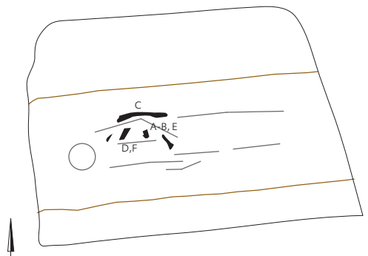
Find number	1655.1
Sex WEA	male
Age in years	47 - 63

DATE (FINDS)
F-H (580/90-670/80)

FINDS
A Plate buckle: copper alloy, trapezium shaped plate with cast animal style decoration
Find number: 1654.1
Condition: complete
Type: L/P/V 179?
Loop length: 41 mm
Plate length: 70 mm
L/P/V phase: MR 1-MR 3
L/P/V date: 600/10-700/10
Maastricht date: G-H (610/20-670/80)

B Back plate: copper alloy, rectangular with stamped triangles as decoration
Find number: 1654.2
Condition: complete
Type: L/P/V 179?
Plate length: 42 mm
Plate width: 26 mm
L/P/V phase: MR 1-MR 3
L/P/V date: 600/10-700/10
Maastricht date: G-H (610/20-670/80)

C Seax: iron
Find number: 1653.1
Condition: most of grip missing
Type: FAG Sax 1
Blade length: 258 mm
Grip length: 15 mm
FAG phase: 3-7
FAG date: 510/25-580/90
Maastricht date: D-E (510/20-580/90)



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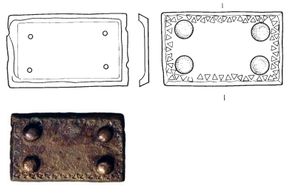
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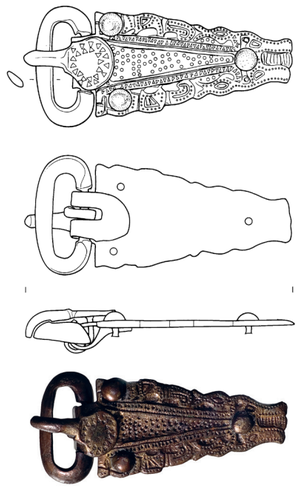

A


C

D

E F

D Firesteel: iron
Find number: 1652.1
Condition: complete
Type: Siegmund Ger 5
Length: 114 mm
Maastricht date: C-I (460/80-725)

E Buckle (purse): copper alloy, rectangular facetted loop
Find number: 1654.3
Condition: tongue missing
Type: Siegmund Sna 1.1
Loop length: 18 mm
Rhineland phase: 5
Rhineland date: 555-570
Maastricht date: D-E (510/20-580/90)

F Nail and indeterminate object
Find number: 1652.2

206
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	83 cm
Elevation bottom	48.31
Orientation	5

DESCRIPTION
Outline of a pit observed at one level only. The eastern part of the pit was not excavated. No further details.

207
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	56 cm
Elevation bottom	48.31
Orientation	352

DESCRIPTION
Outline of a pit observed at one level only. The eastern part of the pit was not excavated. Skeletal remains indicated: skull, in the right place?

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

208
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	228 cm
Grave pit width	112 cm
Elevation top	48.31
Elevation bottom	47.94
Orientation	7

DESCRIPTION
Outline of a pit observed at two levels. Complete, articulated skeleton indicated. At level 3 a string of beads without find number is indicated. Find number 1716 seems to be allocated to the skeletal material. It could not be found. Find number 1646 was present at level 2. It has erroneously not been included in the plan of the grave.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
H-I (640/50-725)

FINDS
A Strap end: large, copper alloy, engraved decoration and decorative rivets
Find number: 1646.1
Condition: 1 rivet missing?
Type: no type identification available (very long strap end)
Plate length: 142 mm
Maastricht date: H-I (640/50-725)

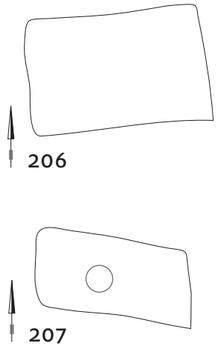
B Beads
Find number: 8888-208.1
Condition: missing

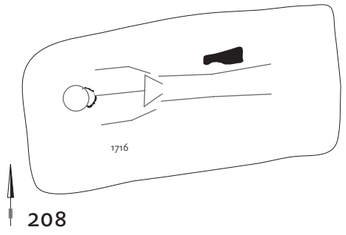
209
FIND

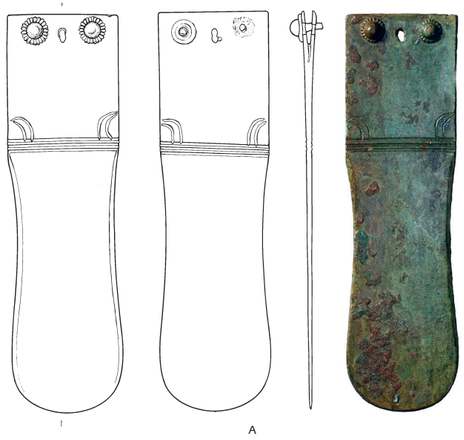
Trench	5
Context type	find
Elevation bottom	47.93

DESCRIPTION
Pot observed at level 3 without any grave context.

FINDS
A Bowl: oxidized, undecorated
Find number: 1683.1
Condition: complete
Type: Siegmund Sha 2.21
Maximum height: 119 mm
Rhineland phase: 5-8
Rhineland date: 555-610/40
Alternative type: L/P/V 403 (second half MA2-MA3: 540/50-600/10)
Alternative type: FAG S-Sha 2.21 (4-7: 510/25-640/50)
Maastricht date: D-G (510/20-640/50)






A

210
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	226 cm
Grave pit width	108 cm
Elevation bottom	47.90
Orientation	7
Stratigraphic relation	below context 201, 203, 211 and 213

DESCRIPTION
Outline of a pit observed at three levels. Traces of a coffin observed at level 4. Grave context 210 is intersected by context 201, but this has not been observed at level 2, probably because of the presence of the stone built grave context 203 at that location. Despite the fact that this grave could already be observed at level 2 it belongs to the older graves in this part of the cemetery for it is older than 201 and 203. Complete skeleton indicated. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY

Find number	1743.1
Sex WEA	male
Age in years	35 - 45
Male stature in cm	167.1

DATE (FINDS)
D-H (510/20-670/80)

^{14}C-DATE
GrA-32719 1590 + 30 BP
1 sigma: 420-470 (27.6%) 480-540 (40.6%)
2 sigma: 410-550 (95.4%)

FINDS
A Buckle (purse): copper alloy, rectangular and facetted loop
Find number: 1744.1
Condition: complete
Type: Siegmund Sna 1.1
Loop length: 16 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: L/P/V 124 (MA1-MR1: 470/80-630/40)
Maastricht date: D-E (510/20-580/90)

B Knife: iron
Find number: 1744.6
Condition: very corroded

C Tweezer: copper alloy
Find number: 1744.2
Condition: complete
Type: Siegmund Ger 2.6
Length: 70 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Maastricht date: G-H (610/20-670/80)

D Flint
Find number: 1744.3
Type: Siegmund Ger 6
Length: 25 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)

E Stone
Find number: 1744.4
Type: pebble stone
Length: 57 mm

F Metal fragment
Find number: 1744.5
Condition: fragment
Type: possibly a fragment of a firesteel? An iron fragment is indicated on the field drawing near the tweezer and the buckle. The contents of a purse?

211
GRAVE

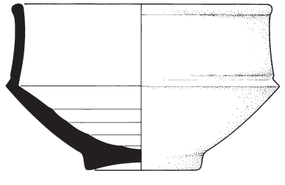
Trench	5
Burial type	inhumation grave
Grave pit length	151 cm
Grave pit width	55 cm
Elevation top	48.20
Elevation bottom	47.90
Orientation	0
Stratigraphic relation	above context 210 and 213; below context 201 and 203

DESCRIPTION
Outlines of a pit observed at levels 2 and 3. However, they do not match exactly. At level 3 a division in the fill of the pit has been observed suggesting that a large coffin or a chamber was present in the pit. In the south-west corner of the dark fill a skull is indicated, in the north-eastern corner two long bones. The long bones could lie in an articulated position. This grave has been reconstructed independent of context 210 because of stratigraphic reasons.

PHYSICAL ANTHROPOLOGY
It is assumed that the skeletal remains are of one individual (female characteristics).

Find number	1721.1
Sex WEA	female
Age in years	17 - 34
Female stature in cm	159.4


A
209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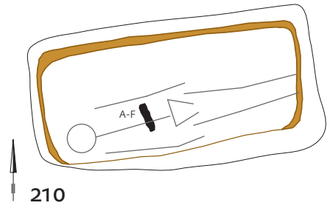
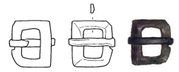
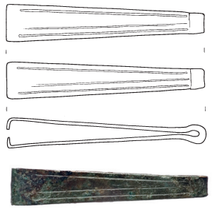



A


B


C


D

212
DISCARDED CONTEXT

213
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	56 cm
Elevation bottom	47.98
Orientation	359
Stratigraphic relation	below context 179 and 211; above context 210

DESCRIPTION
Outline of a pit observed at one level only. Complete, articulated skeleton indicated, except for the skull (and lower arms?). On the left tibia an iron oxide concretion was observed.

PHYSICAL ANTHROPOLOGY

Find number	1720.1
Sex WEA	male
Age in years	18 - 25
Male stature in cm	170.5

214
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	265 cm
Grave pit width	99 cm
Elevation top	47.92
Elevation bottom	47.64
Orientation	9
Stratigraphic relation	below context 223 and 215 (cutting grave)

DESCRIPTION
Outline of a pit observed at two levels. At level 3 the outline of a pit is visible, but without skeletal remains. At level 4 outlines of a pit and a coffin, and a skeleton were observed. The outlines of the pit at both levels do not match perfectly. The lack of a skeleton at level 3 is the argument to combine the evidence from level 3 with that of level 4. At level 4 a part of a Roman roof tile is located south of the right shoulder. Complete, articulated skeleton indicated. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY

Find number	1758.1
Sex WEA	female
Age in years	20 - 34

DATE (FINDS)
D-H (510/20-670/80)

^{14}C-DATE
GrA-32721: 1535 + 30 BP
1 sigma: 430-490 (31.8%) 530-580 (36.4%)
2 sigma: 430-600 (95.4%)

FINDS
A Belt part, buckle
Find number: 1761.1
Condition: loop missing, only shield tongue remains
Type: indeterminate
Maastricht date: D-E? (510/20-580/90)

B Glass bead: opaque yellow, decorated
Find number: 1759.1
Condition: decoration vague
Type: S-33.7
Shape: globular, compressed
Number of beads: 1
Combination group: D-H
Rhineland date: 530-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Maastricht date: D-H (510/20-670/80)

C Glass beads: opaque yellow, undecorated
Find number: 1759.2
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 10
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

D Indeterminate metal fragment
Find number: 1759.3
Condition: fragment

E Unknown object
Find number: 1760.1
Condition: missing

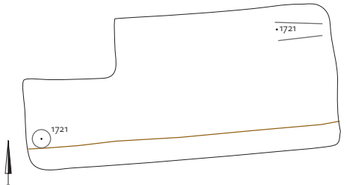
215
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	86 cm
Elevation bottom	47.92
Orientation	1
Stratigraphic relation	above context 214 and 229

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, left clavicle (not digitized), vertebral column, left ribs (not digitized), left arm (flexed), upper left leg, articulated.

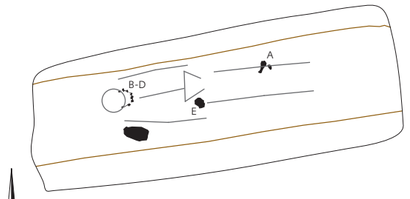
PHYSICAL ANTHROPOLOGY

Find number	1717.1
Sex WEA	male
Age in years	30 - 45
Male stature in cm	174.3



211


213



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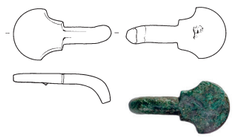

A


B

216
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave
Grave pit width	77 cm
Elevation top	47.92
Elevation bottom	47.94
Orientation	5

DESCRIPTION
Outline of a pit observed at two levels. It is not certain whether the evidence from levels 2 and 3 can be combined to reconstruct a single grave. However, there are no indications that two graves are involved, so we decided to reconstruct one grave. Traces of a coffin may have been observed. No skeletal remains indicated.

217
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	64 cm
Elevation bottom	47.94
Orientation	2
Stratigraphic relation	below context 218 (cutting grave) and 223

DESCRIPTION
Outline of a pit observed at one level only. The identification of this context as a grave is highly uncertain. Only the easternmost part of a pit remains.

218
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	190 cm
Grave pit width	106 cm
Elevation top	47.92
Elevation bottom	47.93
Orientation	3
Stratigraphic relation	below context 172, 175, 220 (uncertain), 223; above context 217

DESCRIPTION
Outline of a pit observed at two levels. At level 3 the outline of a pit was observed in which a pot and an iron object were indicated, but no skeletal remains. At the same location at level 4 the outlines of a pit and a coffin were observed as well as the long bones of two legs. Skeletal remains indicated: both legs, articulated.

PHYSICAL ANTHROPOLOGY

Find number	1745.1
Sex WEA	male
Age in years	20 - 80

DATE (FINDS)
E-F (565-610/20)

FINDS
A Biconical pot (pottery): reduced, roulette stamp decoration
Find number: 1686.1
Condition: complete
Type: Siegmund Kwt 3.12
Maximum height: 111 mm
Rhineland phase: 6 (7)
Rhineland date: 570-585 (610)
Maastricht date: E-F (565-580/90 (610/20))

B Metal fragment
Find number: 1688.1
Condition: missing

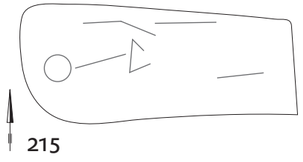
219
DISCARDED CONTEXT

220
FIND

Trench	5
Context type	find
Elevation bottom	47.93
Stratigraphic relation	above context 218 (uncertain)

DESCRIPTION
Pot observed at level 3 outside the outline of the pit of context 218. We suppose that this pot does not belong to that grave, although this conclusion is not entirely certain. The pot is located inside the outline of the pit at the lower level 4. The place of the pot in the grave is unusual. It may have stood on a coffin and moved when the coffin collapsed, but then it would rather have been found at level 4. In the end it is difficult to relate this pot to a grave.

FINDS
A Jug (pottery) ?
Find number: 1685.1
Condition: missing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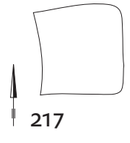
216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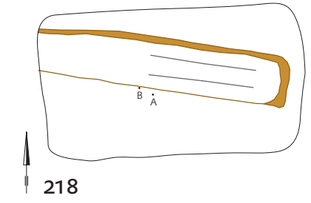


218


A

221
PIT

Trench	5
Context type	pit
Elevation bottom	47.93
Stratigraphic relation	below context 223

DESCRIPTION
A small pit in which a fragment of a glass dish was found. It is not possible to identify this pit as a grave. Maybe the pit is of Roman date.

FINDS
A Glass dish: wall fragment, ribbed
Find number: 1723.1
Condition: fragment
Type: Isings 3b
Isings phase: Roman
Isings date: 69-98
Maastricht date: Roman

222
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	155 cm
Grave pit width	61 cm
Elevation bottom	48.40
Orientation	9
Stratigraphic relation	below context 413

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton indicated except for vertebral column and lower legs(?). The hands were placed along the body. This context is intersected by a pit (context 413).

PHYSICAL ANTHROPOLOGY

Find number	1647.1
Sex WEA	male
Age in years	55 - 61
Male stature in cm	160.2

DATE (FINDS)
E-H (565-670/80)

FINDS
A Plate buckle: copper alloy, trapezium plate with cast animal style decoration
Find number: 1648.1
Condition: eyes partly missing
Type: no type identification available
Loop length: 26 mm
Plate length: 28 mm
Alternative type: L/P/V 133 (MA3-MR2: 560/70-660/70)
Maastricht date: E-H (565-670/80)

223
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave with stones within
Grave pit length	216 cm
Grave pit width	99 cm
Elevation bottom	48.40
Orientation	12
Stratigraphic relation	above context 214, 217, 218 and 221

DESCRIPTION
Outline of a pit observed at one level only. Inside this outline the outline of a coffin is indicated. Complete skeleton indicated. The skull, however, is located near the knees. Possibly a decapitated person is buried in this grave. West of the right shoulder a stone is indicated.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1649.1 (skull shows no damage of decapitation, cervical vertebrae are missing, decapitation traces would be expected to be visible in these vertebrae)
Sex WEA	male
Age in years	20 - 25
Male stature in cm	174.2
- Find number	1649.2 (isolated fragment of a tibia of a juvenile, admixture)
Sex WEA	indeterminate
Age in years	0 - 20

DATE (FINDS)
F-H (580/90-670/80)

FINDS
A Glass: green, pedestal
Find number: 1651.1
Condition: fragment
Type: Siegmund Gla 4?
Maximum height: 36 mm
Rhineland phase: 2-5
Rhineland date: 440-570
Alternative type: Feyeux 2003, 41.x (450-550)
Maastricht date: B-D (400-565)

B Biconical pot (pottery): reduced, undecorated
Find number: 1650.1
Condition: complete
Type: Siegmund Kwt 2.43
Maximum height: 78 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Alternative type: FAG S-Kwt 2.43 (6-8: 580/90-670/80)
Alternative type: L/P/V 392 (MA3-MR2: 560/70-660/70)
Maastricht date: F-H (580/90-670/80)

224
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave with stones
Grave pit length	29 cm
Grave pit width	87 cm
Elevation bottom	47.94
Orientation	358
Stratigraphic relation	below context 225, 226 and 227

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. It is possible that this outline of a grave has to be combined with that drawn on this location at level 3 (context 225). However there are no skeletal remains indicated in that grave either.

225
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	177 cm
Grave pit width	115 cm
Elevation bottom	47.93
Orientation	4
Stratigraphic relation	above context 224; below context 226 and 227

DESCRIPTION
Outline of a pit observed at one level only. The grave pit is relatively short, unless it is the grave of a child. The seax is not located at a place where one would expect it. At level 4 a grave (context 224) is indicated at the same place. At level 3 a dark spot of charcoal has been observed just east of the outline of the pit. Perhaps this is a remnant of the same grave that has not been identified as such. If that is the case the finds discovered at level 3 should rather be combined with the outline of a grave at level 4 (context 224). Find number 1637 is indicated twice on the field drawing: once in relation to context 225 (seax) and once in relation to context 187 (beads). There is a string of beads with that find number but no seax. In the field list of finds there is however a find number 1687 of a seax and iron. On the field drawing the find number is written in ink at the spot where there was a pencil written find number that has been erased to place the number in ink. The person doing this probably made a mistake and wrote down 1637 instead of 1687. The find number in this grave is thus most probably 1687, which also fits well in the series of find numbers in this part of the excavation.

FINDS
A Jar (pottery): oxidized, undecorated
Find number: 1699.1
Condition: complete
Type: Vanvinckenroye 1991, 423
Maximum height: 172 mm
Vanvinckenroye phase: Middle Roman
Vanvinckenroye date: 150-200
Maastricht date: 150-200

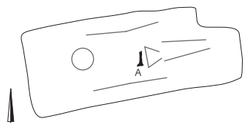
B Plate buckle: iron, undecorated, with textile remains
Find number: 1687.1
Condition: Corroded, tongue and plate partly missing
Type: Indeterminate
Loop length: 54 mm
Plate length: 40 mm

C Rivet: copper alloy
Find number: 1687.2
Condition: complete
Type: Indeterminate
Diameter: 9 mm

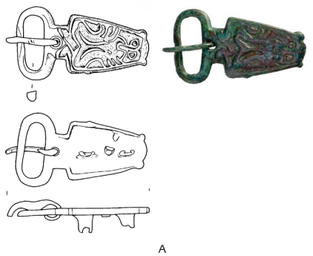
D Rest: metal (with organic remains?)
Find number: 1687.3
Condition: fragment
Type: Indeterminate
Length: 80 mm

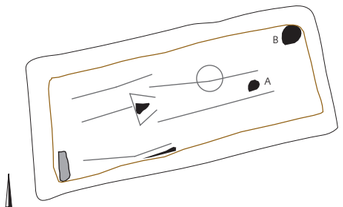


221



222





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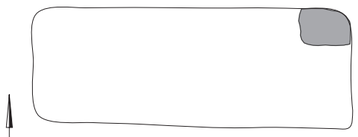
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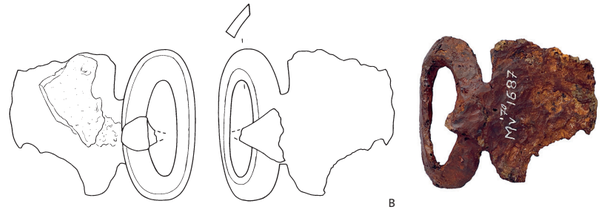
225


A



B C


D

226
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	217 cm
Grave pit width	82 cm
Elevation bottom	48.35
Orientation	17
Stratigraphic relation	above context 225

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton indicated except for lower arms and collarbones. North of the skeleton are indicated a skull, pelvis, long bone of an upper leg (child?), all in an articulated position; in the western part of the pit are indicated: a vertebral column, both arms, all articulated (possibly the upper part of a body?).

PHYSICAL ANTHROPOLOGY
In total remains of five individuals were present in this grave.
Remains of three individuals were present in find number 1657.

- Find number	1657.1
Sex WEA	female
Age in years	23 - 55
- Find number	1657.2
Sex WEA	female
Age in years	40 - 80
- Find number	1657.3
Sex WEA	indeterminate
Age in years	20 - 40

Remains of two individuals were present in find number 1658

- Find number	1658.1
Sex WEA	male
Age in years	22 - 24
- Find number	1658.2
Sex WEA	indeterminate
Age in years	14 - 16

227
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	228 cm
Grave pit width	79 cm
Elevation bottom	48.35
Orientation	14
Stratigraphic relation	above context 224, 225, 233, 234 and 236

DESCRIPTION
Outline of a pit observed at one level only. Skeletal material indicated: three skulls and a long bone, all located along the southern limit of the grave pit, disarticulate.

PHYSICAL ANTHROPOLOGY
Remains of six individuals were present in this find number. One or two skulls from grave 239 had been included in this find number. It cannot be established which skulls.

- Find number	1656.1
Sex WEA	indeterminate
Age in years	20 - 80
- Find number	1656.2
Sex WEA	indeterminate
Age in years	18 - 80
- Find number	1656.3 (skull)
Sex WEA	female
Age in years	40 - 80
- Find number	1656.4 (mandible)
Sex WEA	female
Age in years	20 - 80
- Find number	1656.5 (skull fragments)
Sex WEA	female
Age in years	20 - 80
- Find number	1656.6 (skull fragments)
Sex WEA	female
Age in years	30 - 60

228
FIND

Trench	5
Context type	find
Elevation bottom	48.35

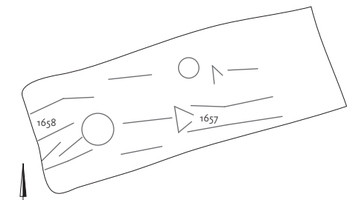
DESCRIPTION
Red-colored biconical jug. No relation with a grave can be established. Maybe there is a relation with a grave observed at a higher level, which has not been documented.

FINDS
A Trefoil jug (pottery): oxidized, carinated, groove decoration
Find number: 1644.1
Condition: complete
Type: no type identification available
Maximum height: 152 mm
Maastricht date: Merovingian

229
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	47.94
Orientation	0
Stratigraphic relation	below context 215 and 231

DESCRIPTION
Outline of a pit observed at one level only. Only outline available. The eastern part has not been excavated, the southern part is disturbed by context 231. No skeletal material indicated.



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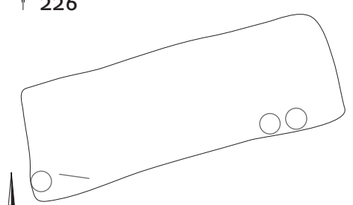
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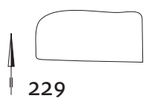
228A


229

230
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave with stones within
Grave pit width	110 cm
Elevation bottom	47.94
Orientation	2
Stratigraphic relation	above context 233 (uncertain possibly below); below context 231 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. Outline of the fill of a coffin indicated. The eastern part of the grave pit may not have been documented correctly, possibly the circumstances to observe it were not favorable. The outline of the pit is probably too long. Complete articulated skeleton indicated. On both sides of the skull stones are placed.

PHYSICAL ANTHROPOLOGY

Find number	1764.1
Sex WEA	female
Age in years	20 - 26
Female stature in cm	156.4

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Finds
Buckle: copper alloy
Find number: 1766.1
Condition: tongue missing
Type: indeterminate
Loop length: 33 mm

B Slotted plate: copper alloy
Find number: 1767.2
Type: T-shaped mount
Plate length: 31 mm

C Bracelet?
Find number: 1767.12
Condition: complete
Type: no type identification available
Ring diameter: 83 mm

D Shear: iron
Find number: 1767.5
Condition: one tip missing
Type: L/P/V 355
Length: 164 mm
L/P/V phase: MA 1-MR 3
L/P/V date: 470/80-700/10
Maastricht date: C-G (460/80-640/50)

E Ring
Find number: 1765.2
Condition: missing

F Knife: iron
Find number: 1767.6
Condition: complete
Grip length: 62 mm
Blade length: 108 mm

G Latchlifter key: copper alloy
Find number: 1767.7
Condition: one arm terminal is missing
Type: L/P/V 351
Length: 128 mm
L/P/V phase: MA 1-MA 3
L/P/V date: 470/80-600/10
Maastricht date: C-F (460/80-610)

H Key: copper alloy
Find number: 1767.8
Condition: complete
Type: L/P/V 350
Length: 61 mm
L/P/V phase: MA 1-MA 3
L/P/V date: 470/80-600/10
Maastricht date: C-F (460/80-600/10)

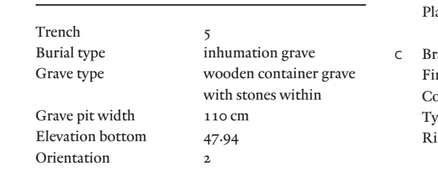
I Plate buckle (purse): copper alloy, fast plate, stamped decoration
Find number: 1767.1
Condition: tongue missing
Type: L/P/V 131
Loop length: 15 mm
Plate length: 11 mm
L/P/V phase: MA3-MR2
L/P/V date: 560/70-660/70
Maastricht date: E-H (565 -670/80)

J Metal fragment: copper alloy round plate
Find number: 1767.13
Condition: complete
Type: indeterminate object
Diameter: 12 mm

K Biconical pot (pottery): reduced, groove decoration
Find number: 1756.1
Condition: little parts of the rim are missing
Type: Siegmund Kwt 2.31
Maximum height: 98 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: FAG Kwt 3A (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)

L Bead
Find number: 1765.1
Condition: missing

M Comb: composite double, antler
Find number: 1767.3
Condition: connecting plates and teeth partly missing
Type: Siegmund Ger 3.23
Length: 99 mm
Rhineland phase: 4-7



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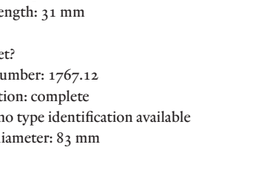

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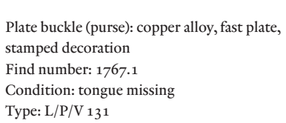
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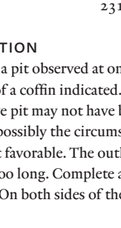
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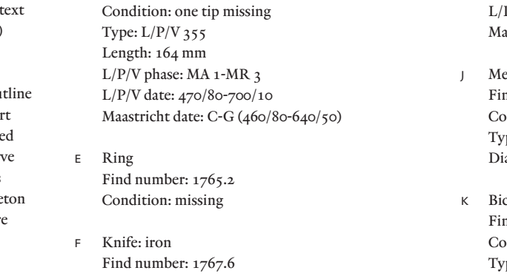
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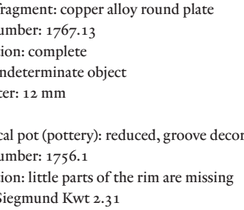

H

Rhineland date: 530-610
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)
Alternative type: Dijkman/Ervynck 1998, 32B
Maastricht date: D-F (510/25-610/20)

N Comb case: antler, decorated
Find number: 1767.4
Condition: damaged, connecting plates + endplates partly missing
Type: Siegmund Ger 3.23
Length: 132 mm
Rhineland phase: 4-7
Rhineland date: 530-610
Alternative type: L/P/V 324 (MA1-MR1: 470/80-630/40)
Alternative type: Dijkman/Ervynck 1998, 32A
Maastricht date: D-F (510/25-610/20)

O Amulet: antler disc, perforated, probable decoration invisible
Find number: 1767.9
Condition: weathered
Type: L/P/V 359
Diameter: 41 mm
L/P/V phase: MA 2-MA 3
L/P/V date: 540/50-600/10
Alternative type: Koch 1977, (Stufe 2-3: 545/50-600)
Maastricht date: D-F (510/20-610)

P Flint
Find number: 1767.11
Type: Siegmund Ger 6
Length: 20 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

Q Flint
Find number: 1767.10
Type: Siegmund Ger 6
Length: 35 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

R Shard (pottery)
Find number: 1768.1
Condition: fragment

S Lead fragment
Find number: 1767.15

T Indeterminate object
Find number: 1767.14

U Indeterminate object
Find number: 1766.2
Type: two mounts fitted together with nails

231
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	82 cm
Elevation bottom	47.94
Orientation	1
Stratigraphic relation	above context 229 and 230

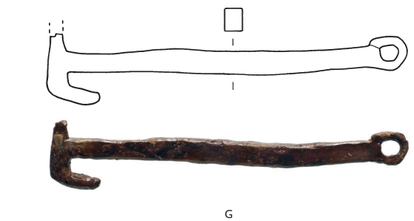
DESCRIPTION
Outline of a pit observed at three levels. The eastern part of the pit has not been excavated. No skeletal remains indicated, no finds. It is not certain that this pit is a grave.

232
DISCARDED CONTEXT

233
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	82 cm
Elevation bottom	47.92
Orientation	10
Stratigraphic relation	above context 230 (uncertain); below context 227, 239 and 237 (uncertain, not in Harris matrix)

DESCRIPTION
Outline of a pit observed at one level only. The reconstruction of the outline is problematic because the pit seems to be much too large. We decided to maintain this reconstruction because the outline cannot be brought in connection with any other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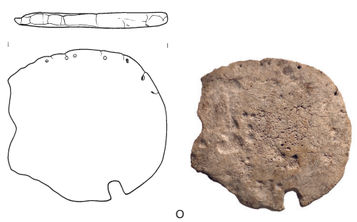
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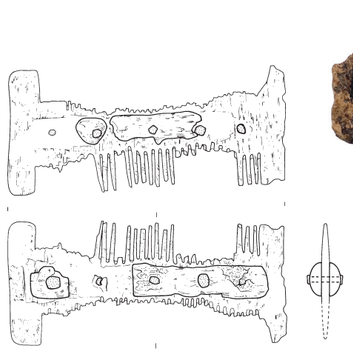
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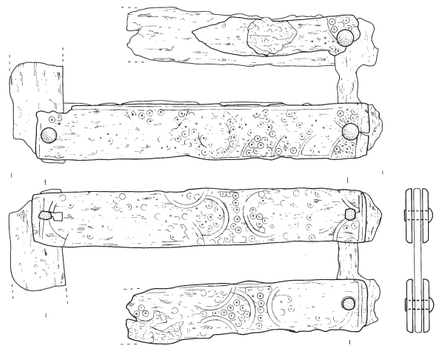
M,N


N

feature. Complete articulated skeleton of a child indicated. The hands were placed on the pelvis. Find number 1718 must be related to the skeletal remains, which are missing.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

234
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	225 cm
Grave pit width	68 cm
Elevation bottom	47.94
Orientation	6
Stratigraphic relation	below context 236 and 235 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. No other evidence. This grave is situated at more or less the same location as context 236 on the drawing of level 3. This cannot be the same grave as 234 because at level 4 a grave (235) is intersecting grave 234. At level 3, grave 236 is however not cut by 235, which should have been the case when contexts 234 and 236 were identical. The information of the field drawings indicate that three different graves are present at that location.

235
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	161 cm
Grave pit width	82 cm
Elevation bottom	47.94
Orientation	12
Stratigraphic relation	below context 158, 159 and 236; above context 234

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull, both collarbones (not digitized), vertebral column and right side ribs (which are slightly out of place) (not digitized), pelvis and both legs. The skeletal remains are more or less in an articulated position except the vertebral column and ribs.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1746.1
Sex WEA	female
Age in years	44 - 60
Female stature in cm	157.3
- Find number	1746.2
Sex WEA	indeterminate
Age in years	3 – 5

DATE (FINDS)
C-D (460/80-565)

FINDS
A Buckle: copper alloy
Find number: 1747.1
Condition: missing

B Glass beads: transparent green, undecorated
Find number: 1748.1
Condition: complete
Type: S-group 46 (1-5)
Shape: globular, compressed
Number of beads: 4
Combination group: A/H-I
Rhineland date: 485-555-610-705
Maastricht date: C-D (460/80-565)

C Glass bead: transparent white, undecorated
Find number: 1748.7
Condition: complete
Shape: cube
Number of beads: 1
Maastricht date: C-D (460/80-565)

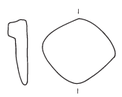
D Glass bead: opaque white, undecorated
Find number: 1748.8
Condition: complete
Shape: irregular-shaped
Number of beads: 1
Maastricht date: C-D (460/80-565)

E Glass beads: opaque
Find number: 1748.5
Condition: corroded
Base colour: unknown,
Shape: barrel
Decoration technique: unknown
Number of beads: 3
Maastricht date: C-D (460/80-565)


K


P


I, B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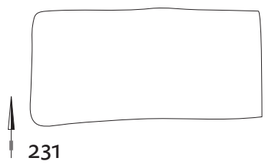
Q


U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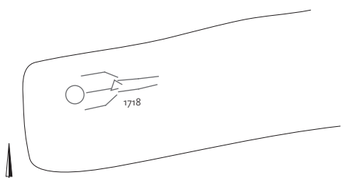

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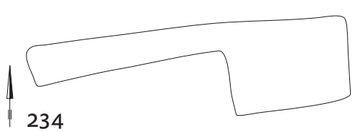

234

F Glass bead: opaque white, undecorated
Find number: 1748.4
Condition: complete
Shape: cylinder, short
Number of beads: 1
Maastricht date: C-D (460/80-565)

G Glass bead: transparent green, decorated
Find number: 1748.3
Condition: complete
Type: Koch 2001, M80
Shape: biconical
Number of beads: 1
Koch phase: Pleidelsheim B-C (SD-Phase 5-6: 530- 580)
Maastricht date: C-D (460/80-565)

H Glass bead: transparent white, undecorated
Find number: 1748.2
Condition: corroded
Shape: globular, compressed
Number of beads: 1
Maastricht date: C-D (460/80-565)

I Glass beads: transparent green, undecorated
Find number: 1748.6
Condition: complete
Type: S-46.4
Shape: cylinder, hexagonal
Number of beads: 2
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: C-D (460/80-565)

J Glass bead: opaque, undecorated
Find number: 1748.10
Base colour: unknown
Shape: unknown
Number of beads: 1
Maastricht date: C-D (460/80-565)

K Glass globular beaker: green
Find number: 1750.1
Condition: broken
Type: FAG S-Gla 3.2
Maximum height: 85 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

L Dish (pottery): terra sigillata
Find number: 1749.1
Condition: complete
Type: Pirling/Siepen 2006, 351 (150-250)
Maximum height: 45 mm
Maastricht date: 150-250

236
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	88
Elevation bottom	47.92
Orientation	4
Stratigraphic relation	above context 234 and 235; below context 227

DESCRIPTION
Outline of a pit observed at one level only. No other evidence. See remarks under context 234.

237
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	wooden container grave
Grave pit length	206 cm
Grave pit width	106 cm
Elevation top	47.92
Elevation bottom	47.93
Orientation	7
Stratigraphic relation	below context 239, 243, 238 (cutting grave) and 241 (cutting grave)

DESCRIPTION
Outline of a pit observed at two levels. A dark strip of soil in the northern part of the pit could indicate the presence of a coffin. A difference in soil color in the southern part of the pit could indicate the difference between the fill of the pit and that of a coffin. If a coffin was present its size can more or less be established.

238
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	grave with wooden partition
Grave pit width	109 cm
Elevation top	47.90
Elevation bottom	47.93
Orientation	358
Stratigraphic relation	above context 237 and 244; below context 239 and 246

DESCRIPTION
Outline of a pit observed at two levels. Possibly at level 3 the difference between the fill of the pit and a coffin is visible. The eastern part of the grave is situated outside the excavation trench.

239
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	243 cm
Grave pit width	62 cm
Elevation bottom	48.34
Orientation	3
Stratigraphic relation	above context 233, 237 and 238

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: two skulls at a spot where one expects one skull. One or both skulls have been included in the find number (1656) of the skulls of context 227.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

240
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	stone built grave
Grave pit length	18 cm
Grave pit width	110 cm
Elevation base container	47.85 (floor inside)
Orientation	8
Stratigraphic relation	below context 158, 242, 243 and 241 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. In the pit a tufa stone chamber has been built. It has a floor of tufa stones and sides of upright flat tufa stones. No skeletal remains indicated. This grave pit is situated at the same location as grave context 242 at level 3 (with a lot of skeletal material in disarray) with more or less the same outline of a pit. However it is impossible that they belong to the same grave because at level 4 context 240 is cut by context 241. That grave is also indicated at level 3 but it is cut by context 242 which thus has to be younger than 241 that in its turn, according to the field drawing, is younger than 240. According to the field drawings there is a clear stratigraphic and chronological relation: from old to young: 240, 241, 242, 243. Graves 240 and 242 are at the same location as well as graves 241 and 243. The result is that there are four graves that follow each other in time whereby twice a new grave is located on the location of a previous one. It is possible that the excavators did not observe the stratigraphic relations correctly and that only two graves were present. The field drawings however do not allow such a reconstruction.

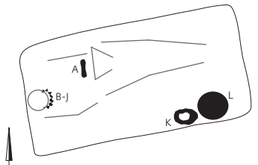
241
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	192 cm
Grave pit width	79 cm
Elevation top	47.90
Elevation bottom	47.73
Orientation	2
Stratigraphic relation	below context 243 and 242(cutting grave); above context 237 and 240

DESCRIPTION
Outline of a pit observed at two levels. Complete articulated skeleton indicated. The hands were placed along the body. We maintained the outlines of both levels 3 and 4 because the outline of level 4 may be the outline of the fill of a coffin instead of a grave pit. In that case the outline of the pit has not been observed at level 4. In the composite drawing there is now a difference visible between a possible fill of a coffin and that of a pit, a combination that, as such has not been observed in the field. For further information on the relations with other graves see context 240.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1757.1
Sex WEA	female
Age in years	20 - 25
Female stature in cm	167.2
- Find number	1757.2
Sex WEA	indeterminate
Age in years	20 - 80



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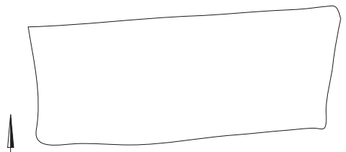
K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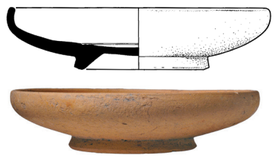
B-J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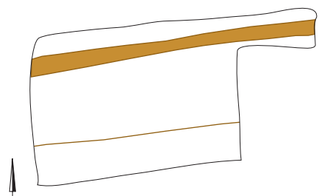
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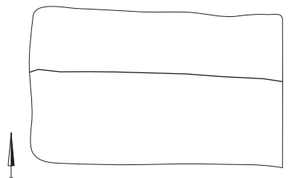
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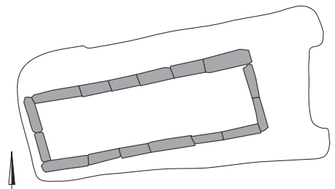
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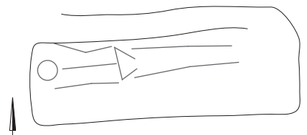
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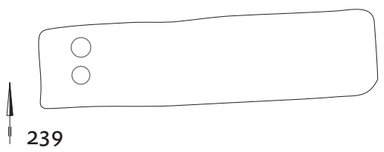

239

242
GRAVE

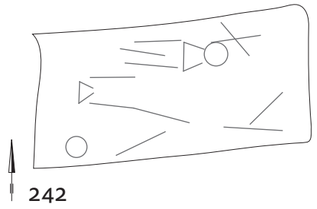
Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	98 cm
Elevation bottom	47.92
Orientation	6
Stratigraphic relation	above context 240 and 241; below context 158, 243 and 153 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains observed of at least two individuals. Of the northern skeleton possibly articulated parts of the (lower?) arms, pelvis, and legs are indicated. Between the knees is a skull. Of the southern skeleton there are possibly the articulated remains of the pelvis, the right leg and the upper left leg. Along the southern limit of the pit disarticulate skeletal remains: skull and long bones. See remarks at context 240.

PHYSICAL ANTHROPOLOGY
Remains of three individuals were present in this find number.

-	Find number	1713.1
	Sex WEA	male
	Age in years	40 - 80
-	Find number	1713.2
	Sex WEA	male
	Age in years	14 - 24
-	Find number	1713.3
	Sex WEA	male
	Age in years	30 - 60

FINDS
A Shards (pottery)
Find number: 1713.1-2
Condition: 2 fragments
Maastricht date: 1 Roman, 1 Merovingian (burnished black)


242

243
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	223 cm
Grave pit width	92 cm
Elevation bottom	48.35
Orientation	2
Stratigraphic relation	above context 237, 240, 241, 242, 244 and 245

DESCRIPTION
Outline of a pit observed at one level only. Only outline of a pit, no skeletal remains observed.

244
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	194 cm
Grave pit width	139 cm
Elevation bottom	47.93
Orientation	3
Stratigraphic relation	below context 238, 243 and 245

DESCRIPTION
Outline of a pit and the fill of a coffin observed at one level only.

245
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	230 cm
Grave pit width	80 cm
Elevation top	47.90
Elevation bottom	47.93
Orientation	4
Stratigraphic relation	above context 244; below context 243 and 246

DESCRIPTION
Outline of a pit observed at two levels. Articulated skeletal remains indicated: skull, left leg and lower right leg. A seax is situated between the legs. See also description of context 244.

PHYSICAL ANTHROPOLOGY
Remains of at least three individuals were present in this find number.

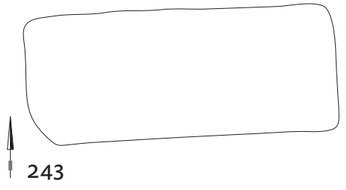
-	Find number	1762.1
	Sex WEA	indeterminate
	Age in years	6 - 10
-	Find number	1762.2
	Sex WEA	indeterminate
	Age in years	7 - 11
-	Find number	1762.3
	Sex WEA	indeterminate
	Age in years	1 - 3

FINDS
A Seax
Find number: 1763.1
Condition: missing

246
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	100 cm
Elevation bottom	47.35
Orientation	2
Stratigraphic relation	above context 238 and 245

DESCRIPTION
Outline of a pit observed at one level only. Only outline of a pit observed, the eastern part has not been excavated. No skeletal remains indicated.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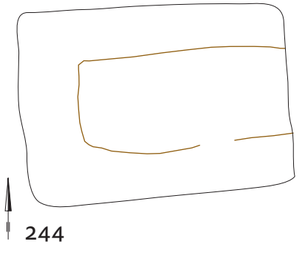
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247
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	233 cm
Grave pit width	115 cm
Elevation top	47.90
Elevation bottom	47.63
Orientation	4
Stratigraphic relation	below context 249

DESCRIPTION
Outline of a pit and fill of a coffin observed at two levels. Complete articulated skeleton observed. The hands were placed along the body. The relation with context 248 is not clear. The two graves intersect each other, but the nature of the intersection cannot be established. Grave context 249 seems to cut grave context 247. The strap end is in a somewhat unusual position.

PHYSICAL ANTHROPOLOGY

Find number	1751.1
Sex WEA	female
Age in years	20 - 40
Female stature in cm	159.8

DATE (FINDS)
E-F (565-610/20)

FINDS
A Strap end: copper alloy, stamped geometric decoration
Find number: 1754.1
Condition: complete
Type: no type identification available
Plate length: 66 mm
Maastricht date: E-F (565-610/20)

B Glass beads: transparent, undecorated
Find number: 1752.6
Condition: corroded
Base colour: unknown,
Shape: unknown
Number of beads: 4
Maastricht date: D-H (510/20-670/80)

C Glass bead: opaque yellow, decorated
Find number: 1752.9
Condition: complete
Type: S-33.7
Shape: globular, compressed
Number of beads: 1
Combination group: D-H
Rhineland date: 530-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Maastricht date: D-H (510/20-670/80)

D Glass bead: transparent green, decorated
Find number: 1752.8
Condition: complete
Type: Koch 2001, group 42
Shape: cube
Number of beads: 1
Koch phase: Pleidelsheim C-D (SD-Phase 6-9: 555-650)
Maastricht date: D-H (510/20-670/80)

E Glass bead: opaque red, undecorated
Find number: 1752.1
Condition: complete
Type: S-35.4
Shape: globular
Number of beads: 1
Combination group: D-G
Rhineland date: 530-640
Maastricht date: D-H (510/20-670/80)

F Glass bead: opaque red, decorated
Find number: 1752.10
Condition: complete
Type: S-35.8
Shape: globular, compressed
Number of beads: 1
Combination group: F-H
Rhineland date: 570-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Alternative type: Koch 1977, 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: D-H (510/20-670/80)

G Amber bead: transparent red, carved
Find number: 1752.7
Condition: broken, piece missing
Shape: cylinder
Number of beads: 1
Maastricht date: D-H (510/20-670/80)

H Amber beads: transparent red, polished/cut
Find number: 1752.4
Condition: complete
Shape: irregular-shaped
Number of beads: 2
Maastricht date: D-H (510/20-670/80)

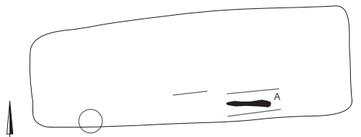
I Glass bead: opaque blue, undecorated
Find number: 1752.3
Condition: complete
Type: S-group 37 (1-2)
Shape: cylinder, short
Number of beads: 1
Combination group: F-I
Rhineland date: 570-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-H (510/20-670/80)

J Glass bead: transparent orange/ochre, undecorated
Find number: 1752.5
Condition: complete
Shape: globular, compressed
Maastricht date: D-H (510/20-670/80)

K Glass vessel fragment, green
Find number: 1754.2
Condition: fragment

L Glass beads: opaque yellow, undecorated
Find number: 1752.2
Condition: complete
Type: S-33.3
Shape: globular
Number of beads: 12
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

M Metal fragment
Find number: 1753.1
Condition: missing



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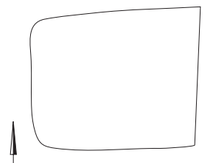
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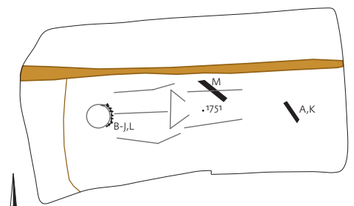


247


A


B-J, L

248
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	103 cm
Elevation bottom	47.92
Orientation	9
Stratigraphic relation	below context 143, 145 and 146

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The relation with grave context 247 is not clear. The two graves intersect, but the nature of the intersection is not clear.

249
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	225 cm
Elevation top	47.92
Orientation	11
Stratigraphic relation	above context 247, 250, 251 and 252

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains observed. This grave context cannot be identical with grave context 250 because they are separated stratigraphically by pit context 251.

250
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	202 cm
Grave pit width	90 cm
Elevation bottom	47.94
Orientation	4
Stratigraphic relation	below context 249, 252 and 251 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: both legs.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Buckle (shoe): copper alloy, rectangular loop
Find number: 1795.1
Condition: complete
Type: Siegmund Sna 1.1
Loop length: 12 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: L/P/V 125 (MA1-MR1: 470/80-630/40)
Maastricht date: D-E (510/20-580/90)

B Glass bead: opaque yellow, undecorated
Find number: 1795.4
Shape: globular, compressed
Number of beads: 1

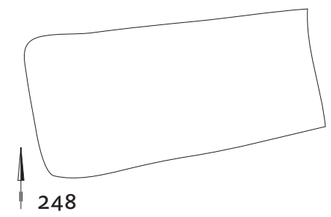
C Glass bottle: green
Find number: 1795.2
Condition: complete
Type: Feyeux 2003, 20.0
Maximum height: 108 mm
Feyeux date: 400-600
Alternative type: L/P/V 440 (PM-MA3: 440/50-600/10)
Maastricht date: B-F (400-610)

D Two metal fragments
Find number: 1795.3

251
PIT

Trench	5
Context type	pit
Elevation bottom	47.95
Stratigraphic relation	below context 143, 145, 146, 248 and 249; above context 250

DESCRIPTION
Outline of a pit observed at one level only. No further details.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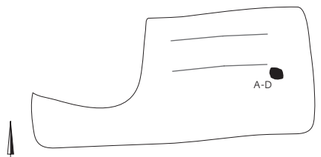

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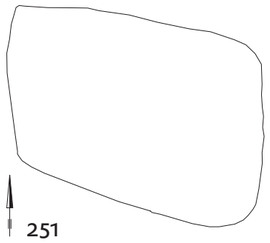
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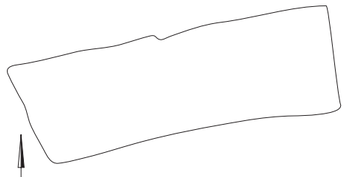

249


A B


C

252
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	135 cm
Grave pit width	70 cm
Elevation bottom	47.90
Orientation	3
Stratigraphic relation	above context 250; below context 249

DESCRIPTION
Outline of a pit observed at one level only. No further details. It is possibly a child's grave.

253
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	216 cm
Grave pit width	96 cm
Elevation top	47.90
Elevation bottom	47.93
Orientation	3
Stratigraphic relation	below context 255 and 254 (cutting grave)

DESCRIPTION

DESCRIPTION
Outline of a pit observed at two levels. No further details.

254
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	108 cm
Elevation top	47.90
Elevation bottom	47.93
Orientation	1
Stratigraphic relation	below context 255; above context 253

DESCRIPTION
Outline of a pit observed at two levels. The eastern part of the grave has not been excavated. Skeletal remains indicated: a skull at the location where one would expect one.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

255
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	78 cm
Elevation bottom	47.90
Orientation	359
Stratigraphic relation	above context 253 and 254

DESCRIPTION
Outline of a pit observed at two levels. The eastern part of the grave has not been excavated. Skeletal remains indicated: a skull at the location where one would expect one.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

256
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	75 cm
Orientation	338

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: skull, both upper arms, both legs. The western part of the pit has not been excavated.

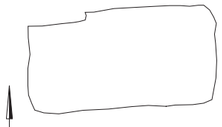
PHYSICAL ANTHROPOLOGY

Find number	1836.1
Sex WEA	indeterminate
Age in years	20 - 40

257
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	91 cm
Orientation	3
Stratigraphic relation	below context 258

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The eastern part of the grave has not been excavated.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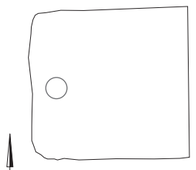
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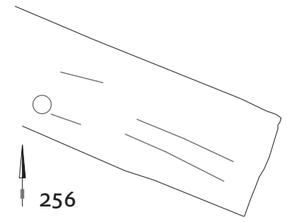
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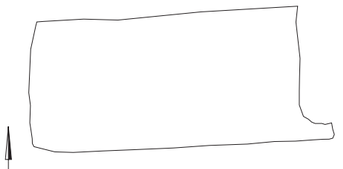
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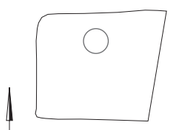
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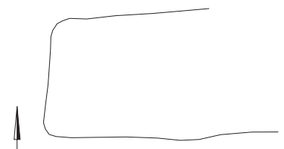

257

258
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	193 cm
Grave pit width	86 cm
Orientation	359
Stratigraphic relation	below context 266; above context 257

DESCRIPTION
Outline of a pit observed at one level only.
Articulated skeletal remains indicated: skull, both upper arms, remains of the pelvis, both legs.

PHYSICAL ANTHROPOLOGY

Find number	1830.1
Sex WEA	indeterminate
Age in years	9.5 – 10.5

DATE (FINDS)
D-F (510/20-610/20)

FINDS
A Ring (belt appendage): copper alloy
Find number: 1832.1
Condition: complete
Type: L/P/V 357
Ring diameter: 57 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

B Glass beads: opaque green, undecorated
Find number: 1831.1
Condition: complete
Shape: globular, compressed
Number of beads: 35
Maastricht date: D-E (510/20-580/90)

C Glass bead: opaque red, undecorated
Find number: 1831.10
Condition: complete
Shape: barrel
Number of beads: 1
Maastricht date: D-E (510/20-580/90)

D Amber beads: transparent red, polished/cut
Find number: 1831.2
Condition: complete
Shape: irregular-shaped
Number of beads: 17
Maastricht date: D-E (510/20-580/90)

E Glass bead: opaque yellow, undecorated
Find number: 1831.3
Condition: complete
Type: S-1.3
Shape: cylinder, pentagonal
Number of beads: 1
Combination group: D-I
Rhineland date: 530-705
Maastricht date: D-E (510/20-580/90)

F Glass beads: opaque white, undecorated
Find number: 1831.4
Condition: complete
Type: S-1.3
Shape: cylinder, pentagonal
Number of beads: 3
Combination group: D-I
Rhineland date: 530-705
Maastricht date: D-E (510/20-580/90)

G Glass beads: opaque undecorated
Find number: 1831.7
Condition: complete
Type: S-1.3?
Base colour: unknown,
Shape: cylinder, pentagonal
Number of beads: 3
Combination group: D-I?
Rhineland date: 530?-705?
Maastricht date: D-E (510/20-580/90)

H Glass bead: opaque red, decorated
Find number: 1831.8
Condition: complete
Type: S-2.11
Shape: cylinder
Number of beads: 1
Combination group: D
Rhineland date: 530-585
Alternative type: FAG c. group II-III (2-5: 400-580/90)
Maastricht date: D-E (510/20-580/90)

I Glass bead: opaque white, undecorated
Find number: 1831.5
Condition: complete
Shape: globular, compressed
Number of beads: 1
Maastricht date: D-E (510/20-580/90)

J Glass beads: opaque blue, undecorated
Find number: 1831.6
Condition: complete
Type: S-1.3
Shape: cylinder, pentagonal
Number of beads: 3
Combination group: D-I
Rhineland date: 530-705
Maastricht date: D-E (510/20-580/90)

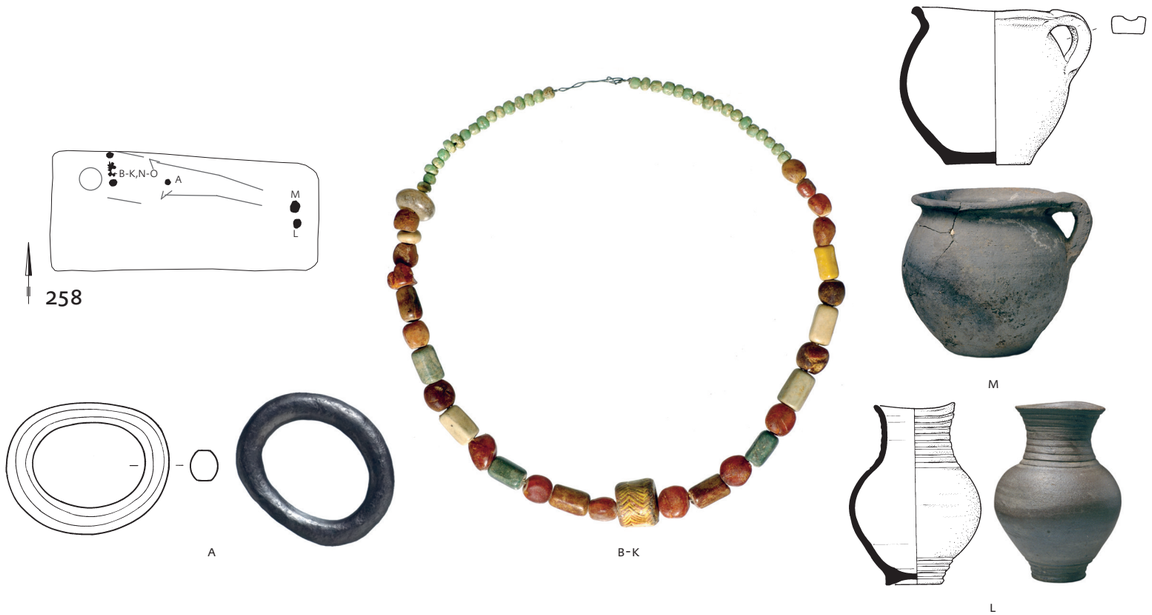
K Glass bead: transparent white, undecorated
Find number: 1831.9
Condition: complete
Shape: globular, compressed
Number of beads: 1
Maastricht date: D-E (510/20-580/90)

L Beaker (pottery): reduced
Find number: 1839.1
Condition: complete
Type: no type identification available
Maximum height: 126 mm

M Jar (pottery): reduced
Find number: 1840.1
Condition: complete
Type: Siegmund Kru 1.3
Maximum height: 111 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: L/P/V 400 (PM-MA1: 440/50-520/30)
Maastricht date: E-F (565-610)

N Shards (pottery)
Find number: 1831.12-13
Condition: 4 fragments
Maastricht date: Roman

O Metal fragment
Find number: 1831.11
Condition: missing



259
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	209 cm
Grave pit width	71 cm
Orientation	358
Stratigraphic relation	below context 266

DESCRIPTION
Outline of a pit observed at one level only.
Articulated skeletal remains indicated: both lower arms, both legs, remains of the pelvis?. Find number 1835-2 does not exist.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Flint with remains of gold and copper alloy (coins)
Find number: 1835.1
Type: Siegmund Ger 6
Length: 27 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

B Coin: gold
Find number: 1835.3
Condition: fragment
Type: indeterminate

C Coin: copper alloy
Find number: 1835.4
Condition: fragment
Type: indeterminate

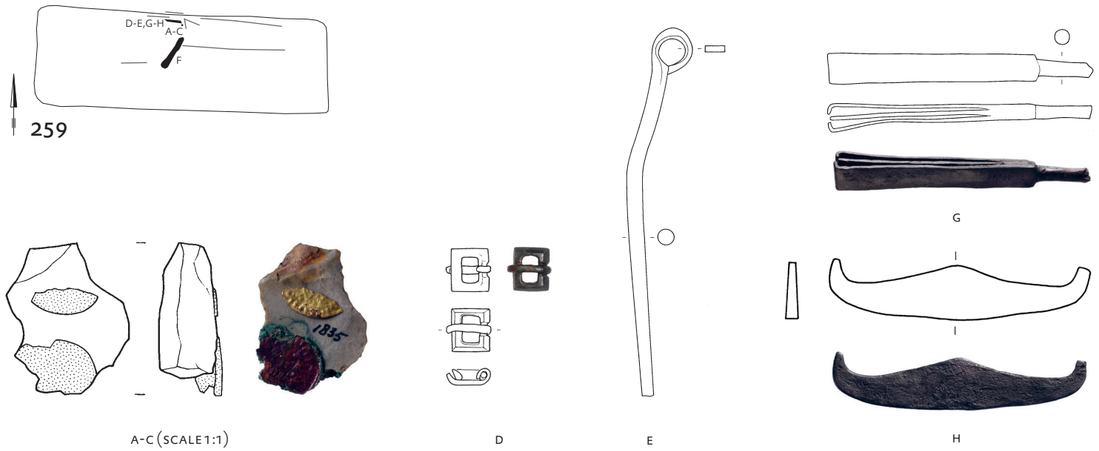
D Buckle (purse): copper alloy, rectangular facetted loop
Find number: 1834.1
Condition: complete
Type: Siegmund Sna 1.1
Loop length: 15 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: L/P/V 124 (MA1-MR1: 470/80-630/40)
Maastricht date: D-E (510/20-580/90)

E Rod with loop
Find number: 1834.4
Condition: tip missing
Length: 132 mm

F Knife: iron
Find number: 1833.1
Condition: under conservation

G Tweezers: copper alloy
Find number: 1834.2
Condition: head missing
Type: L/P/V 322
Length: 93 mm
L/P/V phase: MA 2-MA 3
L/P/V date: 520/30-600/10
Maastricht date: D-F (510/20-610)

H Fire steel: iron
Find number: 1834.3
Condition: a small piece of one end is missing
Type: Siegmund Ger 5
Length: 92 mm



260
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The western part of the grave is disturbed by a younger pit.

261
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	71 cm
Orientation	3
Stratigraphic relation	below context 0 (pit no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The eastern part of the grave was disturbed by a younger pit.

262
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	79 cm
Orientation	4
Stratigraphic relation	below context 0 (pit no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The eastern part of the grave is disturbed by a younger pit.

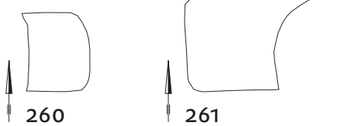
263
GRAVE

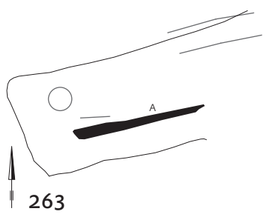
Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	197 cm
Grave pit width	81 cm
Orientation	15
Stratigraphic relation	below context 267

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: skull, upper right arm, both legs. The eastern part of the grave has obviously not been observed. The stratigraphic relation with grave context 264 is not clear.

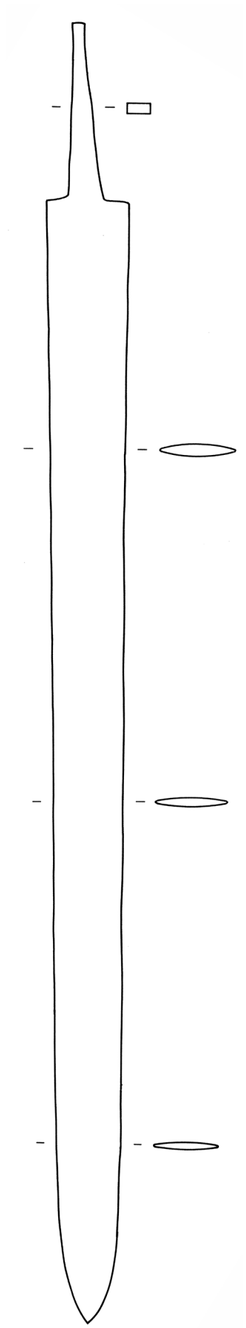
PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Sword: iron
Find number: 1838.1
Condition: broken
Type: L/P/V 95
L/P/V phase: PM-MR3
L/P/V date: 440/50-700/10
Maastricht date: 400->725









264
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	186 cm
Grave pit width	102 cm
Orientation	15
Stratigraphic relation	below context 267; above context 265

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: skull, both legs. The skeleton is situated in the northern part of the large pit. The stratigraphic relation with grave context 263 is not clear.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
C (460/80-510/20)

FINDS
A Knife: iron
Find number: 1837.1
Condition: under conservation

B Spindle whorl: glass, transparent green with white opaque inlays
Find number: 1837.2
Condition: complete
Type: Siegmund Ggh 1.2
Shape: biconical
Number of beads: 1
Rhineland phase: 3-4
Rhineland date: 485-555
Alternative type: FAG S-Ggh 1.2 (3: 460/80-510/25)
Maastricht date: C (460/80-510/25)

265
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	231 cm
Grave pit width	73 cm
Orientation	4
Stratigraphic relation	below context 264 and 269

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: both legs.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

266
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	263 cm
Grave pit width	70 cm
Elevation bottom	47.70
Orientation	9
Stratigraphic relation	below context 0 (pit no context number yet); above context 258 and 259

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The eastern part is intersected by a younger context of which the fill is described with 'light green'.

267
POSSIBLE GRAVE

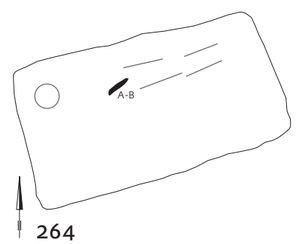
Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	84 cm
Elevation bottom	47.70
Orientation	15
Stratigraphic relation	above context 263 and 264; below context 0 (pit, no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated.

268
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	81 cm
Elevation bottom	47.70
Orientation	25
Stratigraphic relation	below context 269 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. It is not evident that this context is a grave. The context seems to be older than context 269.

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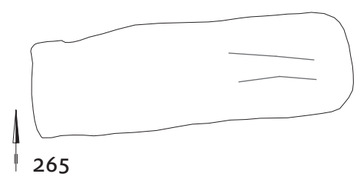
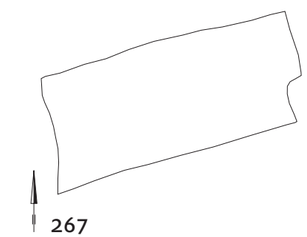
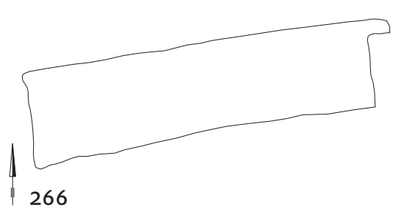
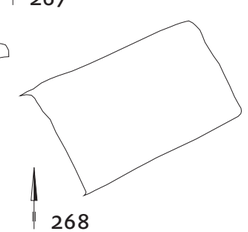








269
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	85 cm
Elevation bottom	47.70
Orientation	25
Stratigraphic relation	above context 265 and 268

DESCRIPTION
Outline of a pit observed at one level only.
No skeletal remains indicated. See remark on stratigraphy at context 268.

270
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.70
Orientation	15

DESCRIPTION
Outline of a pit not observed. It is not evident that a grave is concerned. The beads and two long bones east of these are situated in relation to one another in such a way that they could belong to a single burial. Skeletal remains indicated: two long bones, probably of legs. In formation on bead from documentation, however, missing. It cannot be determined which of the beads without find number may belong to this grave.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Bead
Find number: 8888-270.1
Condition: missing
Base material: unknown

271
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.70
Stratigraphic relation	below context 272 (cutting grave)

DESCRIPTION
No outline of a pit observed. Only articulated skeletal remains indicated: left leg, right lower leg, right arm. On the field drawing it is marked that two skeletons are present in this place and that an axe belongs to the lower skeleton. However, one forgot to indicate which skeleton is the upper one and which is the lower one. There is hardly any clear indication of a stratigraphic relation of the skeletons on the drawing. The northern set of long bones of the lower leg are drawn in such a way that it is suggested that context 271 (only a skeleton) is older than context 272 (grave pit and skeleton).

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
C-E (460/80-580/90)

FINDS
A Francisca: iron
Find number: 1825.1
Condition: missing or mixed up with 1823
Type: Siegmund FBA 1.2/1.3
Rhineland phase: 3-5
Rhineland date: 485-570
Alternative type: L/P/V 2/3 (PM-MA3: 440/50-600/10)
Maastricht date: C-E (460/80-580/90)

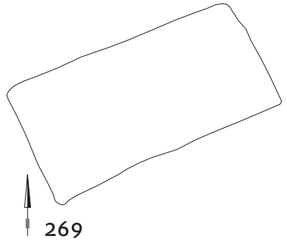
272
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	195 cm
Grave pit width	75 cm
Elevation bottom	47.70
Orientation	18
Stratigraphic relation	above context 271

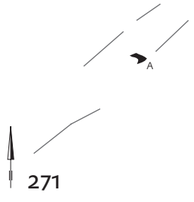
DESCRIPTION
Outline of a pit observed at one level only.
Articulated skeletal remains indicated: skull, right leg, lower left leg. An extra skull is indicated north of the left knee. See also context 271.

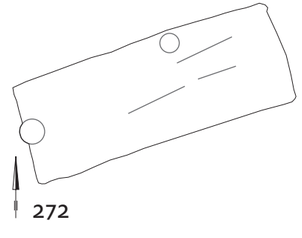
PHYSICAL ANTHROPOLOGY
Information on one individual only (skull fragments, the other skull recorded under another find number?).

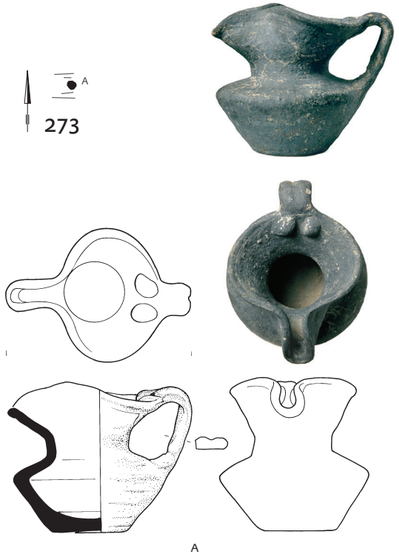
Find number	1824.1
Sex WEA	female
Age in years	20 – 80











273
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.70

DESCRIPTION
No outline of a pit observed. The grave has been destroyed almost completely. Only remains of articulated long bones indicated. A jug has been placed in between.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Jug (pottery): reduced, carinated, undecorated, oil/remains at lip and wall
Find number: 1828.1
Condition: complete
Type: no type identification available
Maximum height: 108 mm

274
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	47.41
Elevation bottom	47.41
Orientation	26

DESCRIPTION
Outline of a pit observed. The northeastern corner of the pit is situated outside the southern part of excavation trench. This part has been opened up first, later a northern addition to the trench was made. A pot has been found there later. Complete articulated skeleton indicated (except collarbones and vertebral column). The skeleton is situated in the northern part of a large pit. The right hand was placed on the pelvis. A color slide of this grave indicates that the southern part of the pit may have been smaller than is indicated on the drawing.

PHYSICAL ANTHROPOLOGY
No human remains available for examination, although find number 1772 seems to include skeletal material (missing?).

DATE (FINDS)
E-F (565-610/20)

FINDS
A Disc brooch: round, silver casing with garnets, one zone.
Find number: 1792.1
Condition: pin missing
Type: Siegmund Fib 1.3
Diameter: 19 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz 2003, E3.21 (560/70-600/10)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: E-F (565-610)

B Disc brooch: round, silver casing with garnets, one zone.
Find number: 1782.1 (not indicated on field drawing)
Condition: one garnet and pin missing
Type: Siegmund Fib 1.3
Diameter: 20 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz 2003, E3.21 (560/70-600/10)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: E-F (565-610)

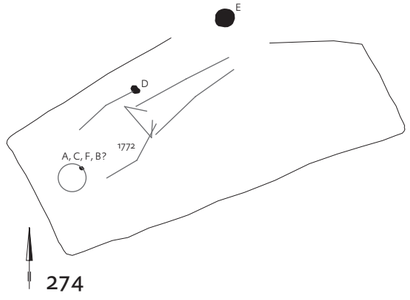
C Earring: silver, possibly with applied polygon
Find number: 1792.2
Condition: one end missing
Ring diameter: 39 mm
Maastricht date: C-H (460/80-670/80)

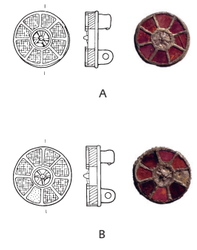
D Ring (belt appendage): iron
Find number: 1798.1
Condition: complete
Type: L/P/V 357
Ring diameter: 58 mm
L/P/V phase: MA 2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)

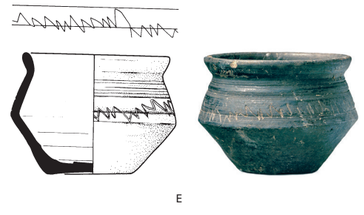
E Biconical pot (pottery)
Find number: 1793.1
Condition: complete
Type: Siegmund Kwt 2.31
Maximum height: 89 mm
Rhineland phase: 5
Rhineland date: 555-570
Alternative type: FAG Kwt 3A (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)

F Amber beads: transparent red, polished/cut
Find number: 1792.3
Condition: complete
Shape: irregular-shaped
Number of beads: 10
Maastricht date: B-E (400-580/90)

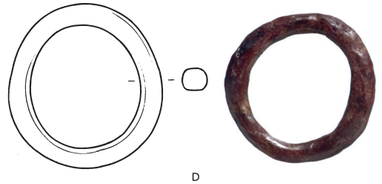
G Shard (pottery)
Find number: 1772.1
Condition: fragment













275
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	59
Elevation bottom	47.41
Orientation	5
Stratigraphic relation	below context 0 (pit, no context number)

DESCRIPTION
Outline of a pit observed at one level only. The eastern end of the pit lies outside the excavation trench, the west end does not seem to have been observed. It has to be supposed that grave context 274 intersects this grave. Articulated skeletal remains indicated: both legs. The grave is also intersected by a large, younger pit.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Shard: (pottery)
Find number: 1770.1
Condition: fragment

276
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	221 cm
Grave pit width	100 cm
Elevation bottom	47.37
Orientation	11
Stratigraphic relation	below context 0 (pit, no context number yet) and 277 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated. The grave is intersected by a large younger pit.

277
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	237 cm
Grave pit width	90 cm
Elevation bottom	47.37
Orientation	11
Stratigraphic relation	above context 276

DESCRIPTION
Outlines of a pit and fill of a coffin observed at one level only. Complete articulated skeleton indicated. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

-	Find number	1808.1
	Sex WEA	female
	Age in years	40 - 49
	Female stature in cm	160.1
-	Find number	1808.2
	Sex WEA	indeterminate
	Age in years	0 - 15

DATE (FINDS)
E-H (565-670/80)

FINDS
A Metal fragment: knife?
Find number: 1807.1

B Glass beads: opaque yellow, undecorated
Find number: 1807.7
Condition: complete
Type: S-33.5
Shape: biconical
Number of beads: 4
Combination group: I
Rhineland date: 640-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: E-H (565-670/80)

C Glass beads: opaque green, undecorated
Find number: 1807.8
Condition: complete
Shape: globular, compressed
Number of beads: 3
Maastricht date: E-H (565-670/80)

D Glass bead: opaque red, undecorated
Find number: 1807.6
Condition: complete
Shape: cylinder, short
Number of beads: 1
Maastricht date: E-H (565-670/80)

E Glass bead: opaque green, decorated
Find number: 1807.5
Condition: broken
Type: Koch 1977, group 7?
Shape: biconical
Number of beads: 1
Maastricht date: E-H (565-670/80)

F Glass bead: opaque red, undecorated
Find number: 1807.4
Condition: broken
Type: S-35.6
Shape: biconical
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-H (565-670/80)

G Glass bead: transparent blue, undecorated
Find number: 1807.9
Condition: segment missing?
Type: S-47.7
Shape: double/multiple
Number of beads: 1
Combination group: G-H
Rhineland date: 585-670
Maastricht date: E-H (565-670/80)

H Glass bead: opaque white, undecorated
Find number: 1807.10
Condition: segment missing?
Type: S-32.2
Shape: double/multiple
Number of beads: 1
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-H (565-670/80)

I Amber beads: transparent red, polished/cut
Find number: 1807.3
Condition: complete
Shape: irregular-shaped
Number of beads: 15
Maastricht date: E-H (565-670/80)

J Glass bead: opaque white, undecorated
Find number: 1807.11
Condition: complete
Type: S-1.3
Shape: cylinder, pentagonal
Number of beads: 1
Combination group: D-I
Rhineland date: 530-705
Maastricht date: E-H (565-670/80)

K Shard (glass)
Find number: 1807.2
Condition: 1 fragment

L Shard (pottery)
Find number: 1807.12
Condition: 1 fragment
Maastricht date: Roman

M Shard (glass)
Find number: 1807.13
Condition: 1 fragment
Maastricht date: Roman

278
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	63 cm
Elevation bottom	47.37
Orientation	19

DESCRIPTION
Outline of a pit observed at one level only. The eastern end has not been observed. Articulated skeletal remains indicated: both lower arms, upper right leg.

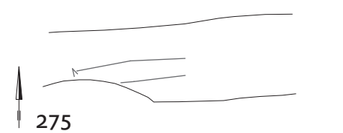
PHYSICAL ANTHROPOLOGY
No human remains available for examination.

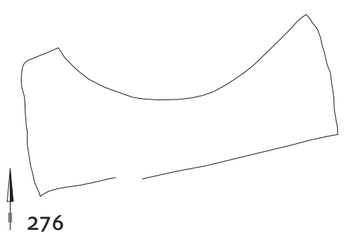
DATE (FINDS)
H-J (640/50->725)

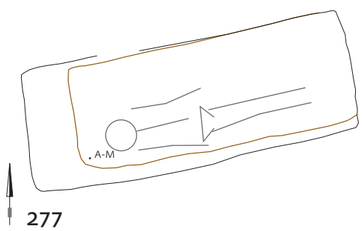
FINDS
A Plate buckle: iron, triangular plate with bichrome animal style(?) inlays
Find number: 1817.1
Condition: tongue missing, decoration partly missing
Type: FAG Gür 4.8A
Loop length: 42 mm
Plate length: 51 mm
FAG phase: 8
FAG date: 640/50-670/80
Alternative type: L/P/V 190 (MR2-MR3: 630/40-700/10)
Maastricht date: H (640/50-670/80)

B Plate: iron, triangular plate with bichrome animal style(?) inlays
Find number: 1817.2
Condition: decoration partly missing, eye partly missing
Type: FAG Gür 4.8A
Plate length: 39 mm
FAG phase: 8
FAG date: 640/50-670/80
Alternative type: L/P/V 190 (MR2-MR3: 630/40-700/10)
Maastricht date: H (640/50-670/80)

C Plate: iron, triangular plate with bichrome animal style(?) inlays
Find number: 1817.4
Condition: two eyes missing?, decoration partly missing
Type: FAG Gür 4.8A
Plate length: 40 mm
FAG phase: 8
FAG date: 640/50-670/80
Alternative type: L/P/V 190 (MR2-MR3: 630/40-700/10)
Maastricht date: H (640/50-670/80)

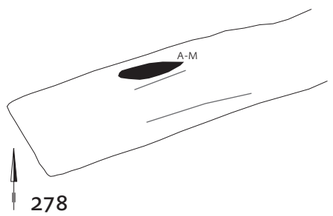


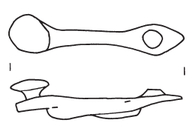


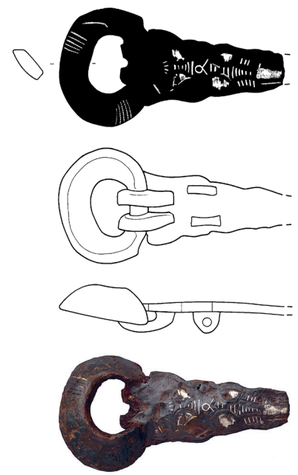


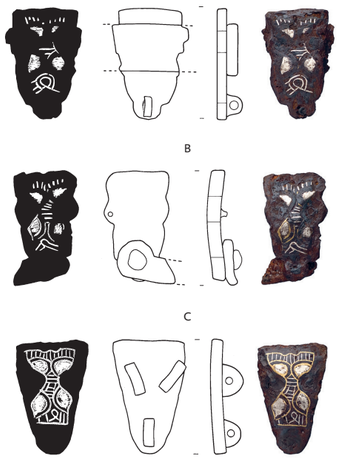

A


B-J




E


A



D Plate: iron, triangular plate with bichrome animal style(?) inlays
Find number: 1817.3
Condition: complete
Type: FAG Gür 4.8A
Plate length: 40 mm
FAG phase: 8
FAG date: 640/50-670/80
Alternative type: L/P/V 190 (MR2-MR3: 630/40-700/10)
Maastricht date: H (640/50-670/80)

E Mount: iron
Find number: 1817.12
Type: mount (German: *Tragbügel*) possibly part of the suspension of a seax
Rhineland phase: 8-10
Rhineland date: 670/80-740
Maastricht date: I-J (670/80->725)

F Seax: iron
Find number: 1817.10
Condition: complete
Type: FAG Sax 3
Blade length: 495 mm
Grip length: 175 mm
FAG phase: 8-10
FAG date: 670/80-740
Maastricht date: I-J (670/80->725)

G Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1817.5
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 21 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

H Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1817.6
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

I Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1817.7
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

J Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1817.8
Condition: pin partly missing
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

K Scabbard nails
Find number: 1817.11
Number: 3

L Knife: iron
Find number: 1817.9
Condition: tip and part of blade missing
Blade length: 108 mm

M Metal fragment: iron
Find number: 1817.13

279
FIND

Trench	6
Context type	find
Elevation bottom	47.41

DESCRIPTION
A pot and a knife without any context are indicated on the field drawing.

DATE (FINDS)
C-E (460/80-580/90)

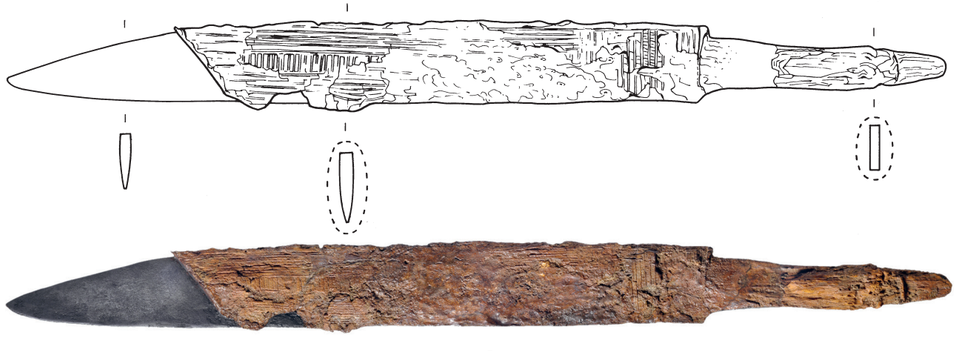
FINDS
A Knife: iron
Find number: 1797.2
Condition: complete
Grip length: 44 mm
Blade length: 104 mm



F (SCALE 1:2)



G-J



F



K

B Dish (pottery): oxidized, undecorated
Find number: 1797.1
Condition: complete
Type: Siegmund Sha 2.31
Maximum height: 81 mm
Rhineland phase: 4-4
Rhineland date: 530-555
Alternative type: L/P/V 304 (MA3-second half MR2: 560/70-645/55)
Alternative type: FAG S-Sha 2.31 (3-5: 460/80-580/90)
Maastricht date: C-E (460/80-580/90)

280
DISCARDED CONTEXT

281
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	62 cm
Elevation bottom	47.33

DESCRIPTION
Outline of a pit observed at one level only.
The eastern end is outside the excavation trench.
No skeletal remains indicated.

282
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	227 cm
Grave pit width	105 cm
Elevation bottom	47.33
Orientation	3

DESCRIPTION
Outline of a pit observed at one level only.
Articulated skeletal remains indicated: skull, part of the pelvis, both legs. The stratigraphic relation with skeleton context 283 is not known.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1802.1
Sex WEA	indifferent
Age in years	40 – 61
- Find number	1802.2
Sex WEA	indeterminate
Age in years	20 - 80

FINDS
A Shards (pottery)
Find number: 1813.1-3
Condition: 5 fragments
Maastricht date: Roman

283
GRAVE

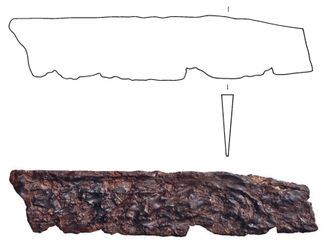
Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.35
Orientation	15

DESCRIPTION
No outline of a pit observed. Articulated skeletal remains indicated: skull, lower right arm, right leg, upper left leg.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
C-G (460/80-640/50)

FINDS
A Shear: iron
Find number: 1811.1
Condition: tips missing
Type: L/P/V 355
Length: 173 mm
L/P/V phase: MA1-MR3
L/P/V date: 470/80-700/10
Maastricht date: C-G (460/80-640/50)



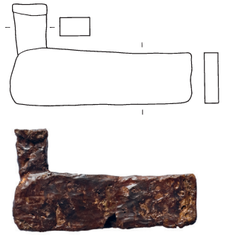
L



279A



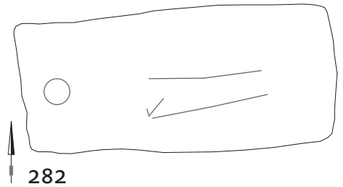
281



M



279B



282

B Pot (pottery)
Find number: 1806.1
Condition: missing

C Bead
Find number: 1812.1
Condition: missing

D Indeterminate fragments: iron
Find number: 1811.2

284
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.35
Orientation	13

DESCRIPTION
No outline of a pit observed. Complete articulated skeleton indicated. The hands seem to have been placed on the pelvis.

PHYSICAL ANTHROPOLOGY

Find number	1814.1
Sex WEA	male
Age in years	20 - 25
Male stature in cm	173.5

DATE (FINDS)
G-H (610/20-670/80)

FINDS
A Counter plate: iron, triangular plate with bichrome animal style inlays
Find number: 1815.1
Condition: decoration partly missing
Type: Siegmund Gür 4.7
Plate length: 69 mm
Rhineland phase: 9
Rhineland date: 640-670
Alternative type: L/P/V 188/189 (MR2-MR3: 630/40-700/10)
Alternative type: FAG S-Gür 4.7 (8: 640/50-670/80)
Maastricht date: H (640/50-670/80)

B Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1815.2
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

C Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1815.3
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

D Rivet (seax scabbard): copper alloy with pearl rim
Find number: 1815.4
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

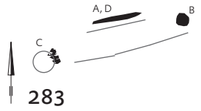
E Rivet (seax scabbard): copper alloy, with pearl rim
Find number: 1815.5
Condition: complete
Type: FAG S-Sax 4.4
Diameter: 20 mm
FAG phase: 8
FAG date: 640/50-670/80
Maastricht date: H (640/50-670/80)

F Seax scabbard mount: copper alloy
Find number: 1815.6
Condition: nail missing
Type: FAG S-Sax 4.5
Length: 58 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

G Nails (seax scabbard): copper alloy
Find number: 1815.7
Number: 31

H Brick
Find number: 1815.8
Condition: 1 small fragment (near left lower leg)
Maastricht date: Roman

I Stone
Find number: 1815.9

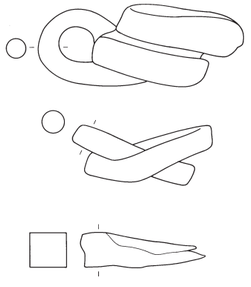


283



284


A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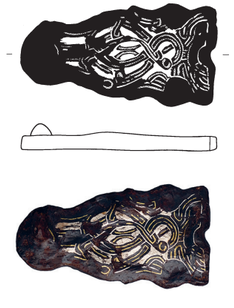

A

285
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.35
Orientation	24

DESCRIPTION
No outline of a pit observed. Complete articulated skeleton indicated except the right lower leg. A long bone, not in an articulated position, is further to the east. The right hand was placed on the chest.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1818.1
Sex WEA	female
Age in years	20 - 25
Female stature in cm	154.9
- Find number	1818.2
Sex WEA	male
Age in years	40 - 80

DATE (FINDS)
E (565-580/90)

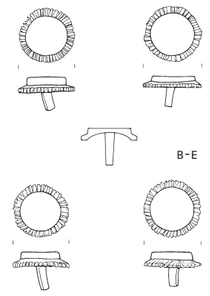
FINDS
A Glass beads: opaque
Find number: 1819.4
Condition: corroded
Base colour: unknown
Shape: barrel
Decoration technique: unknown
Number of beads: 4
Maastricht date: E (565-580/90)

B Amethyst bead: transparent undecorated
Find number: 1819.3
Condition: complete
Type: S-5.2
Shape: almond
Number of beads: 1
Rhineland phase: H
Rhineland date: 610-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E (565-580/90)

C Glass beads: transparent blue, undecorated
Find number: 1819.2
Condition: complete
Type: S-47.1
Shape: globular, compressed
Number of beads: 4
Combination group: A
Rhineland date: 485-555
Alternative type: FAG c. group I (3: 460/80-510/25)
Maastricht date: E (565-580/90)

D Glass bead: opaque
Find number: 1819.1
Condition: corroded
Base colour: unknown,
Shape: cube
Decoration technique: unknown
Number of beads: 1
Maastricht date: E (565-580/90)

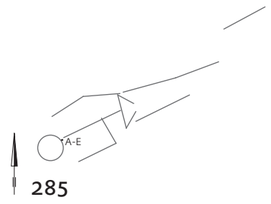
E Glass beads: transparent green, undecorated
Find number: 1819.5
Condition: complete
Type: S-group 46 (1-5)
Shape: globular, compressed
Number of beads: 2
Combination group: A/H-I
Rhineland date: 485-555-610-705
Maastricht date: E (565-580/90)





F


G



285


A-E

286
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	223 cm
Grave pit width	100 cm
Elevation bottom	47.35
Orientation	5

DESCRIPTION
Outline of a pit observed at one level only. Traces of planks of the bottom of a coffin have been indicated. We did not indicate these vague traces in the plan of the grave. Almost complete, articulated skeleton indicated (except lower legs). The hands were placed along the body.

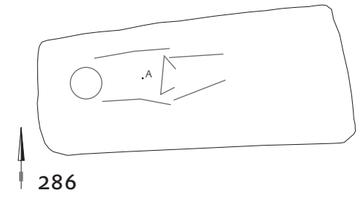
PHYSICAL ANTHROPOLOGY

Find number	1809.1
Sex WEA	female
Age in years	40 - 61

DATE (FINDS)
C-D (460/80-565)

FINDS
A Buckle: copper alloy, oval hollow loop with cast decoration and shield tongue
Find number: 1810.1
Condition: complete
Type: L/P/V 114
Loop length: 33 mm
L/P/V phase: MA1
L/P/V date: 470/80-520/30
Maastricht date: C-D (460/80-565)

B Shards (pottery)
Find number: 1773.1-3
Condition: 3 fragments
Maastricht date: Roman



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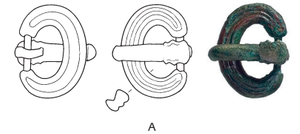

A

287
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	231 cm
Grave pit width	112 cm
Elevation bottom	47.40
Orientation	25
Stratigraphic relation	above context 296; below context 0 (pit, no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: both upper arms, vertebral column, small part of a long bone of a leg. The eastern part of the grave is intersected by a younger pit.

PHYSICAL ANTHROPOLOGY

Find number	1801.1
Sex WEA	indeterminate
Age in years	20 - 80

DATE (FINDS)
E-F (565-610/20)

FINDS
A Biconical pot: reduced, roulette stamp decoration
Find number: 1784.1
Condition: complete
Type: Siegmund Kwt 3.11
Maximum height: 116 mm
Rhineland phase: 6-7A
Rhineland date: 570-c. 600
Maastricht date: E-F (565-610/20)

B Various shards (pottery)
Find number: 1784.2
Condition: fragments

288
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	216 cm
Grave pit width	85 cm
Elevation bottom	47.42
Orientation	5

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: skull, both legs.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

-	Find number	1800.1
	Sex WEA	indeterminate
	Age in years	1 – 2
-	Find number	1800.2
	Sex WEA	indeterminate
	Age in years	20 - 80

DATE (FINDS)
E-G (565-640/50)

FINDS
A Buckle: copper alloy
Find number: 1789.1
Condition: missing

B Seax
Find number: 1786.2
Condition: under conservation

C Francisca: iron
Find number: 1786.1
Condition: complete
Type: Siegmund FBA 1.2/1.3
Blade length: 190 mm
Rhineland phase: 3-5
Rhineland date: 485-570
Alternative type: L/P/V 2/3 (PM-MA3: 440/50-600/10)
Maastricht date: C-E (460/80-580/90)

D Fire steel?: iron
Find number: 1788.1
Type: Siegmund Ger 5
Maastricht date: C-I (460/80-725)

E Biconical pot: reduced, roulette stamp decoration
Find number: 1785.1
Condition: complete
Type: Siegmund Kwt 3.21
Maximum height: 99 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: FAG Kwt 5B (5-7: 565-640/50)
Maastricht date: E-G (565-640/50)

F Flint
Find number: 1788.2
Type: Siegmund Ger 6
Length: 42 mm
Alternative type: L/P/V 354 (MA1-MR3: 470/80-700/10)
Maastricht date: C-I (460/80-725)

G Shards (pottery)
Find number: 1787.1-5
Condition: 14 fragments
Maastricht date: Roman

289
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	47.44
Orientation	

DESCRIPTION
Outline of the eastern part of a pit observed. It is not clear whether the skeletal remains are related to this outline, if not, the skeleton is probably younger than the underlying pit. See also description of context 293. Skeletal remains indicated: skull, upper left arm, both legs.

PHYSICAL ANTHROPOLOGY

Find number	1799.1
Sex WEA	male
Age in years	40 - 80

290
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	47.45
Stratigraphic relation	below context 0 (pit, no context number yet)

DESCRIPTION
Outline of the eastern part of a pit observed. No skeletal remains indicated. The allotment of the find number on the field drawing to this grave is not entirely certain. The northern limit of the grave pit is intersected by a younger pit.

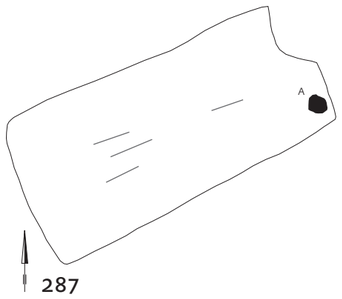
291
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	79 cm
Elevation bottom	47.45
Orientation	4
Stratigraphic relation	below context 0 (pit, no context number yet)

DESCRIPTION
Outline of a grave pit or of the fill of a coffin observed at one level only. Both the eastern and western ends have not been observed. The western end is intersected by a younger pit. It is not possible to decide whether the observed outline is that of a grave pit or the fill of a coffin. North and south of the outline spots of light colored soil are indicated that may have been remains of the fill of a pit that has not been identified as such by the excavators. In that case the outline represented is that of the fill of a coffin. This grave could be comparable with a possible large grave to the north of it. No skeletal remains indicated. Probably there is a pot present in this grave.

DATE (FINDS)
400-510/525

FINDS
A Dish (pottery): terra sigillata undecorated
Find number: 1804.1
Condition: complete
Type: Brulet 1990, type 414 (developed out of type Chenet 314)
Maximum height: 48 mm
Brulet date: 400-500
Maastricht date: 400-500



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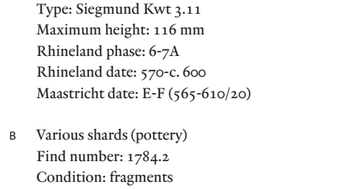

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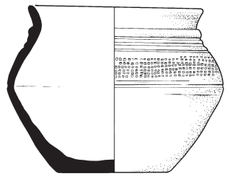
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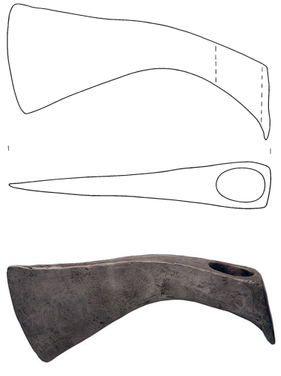
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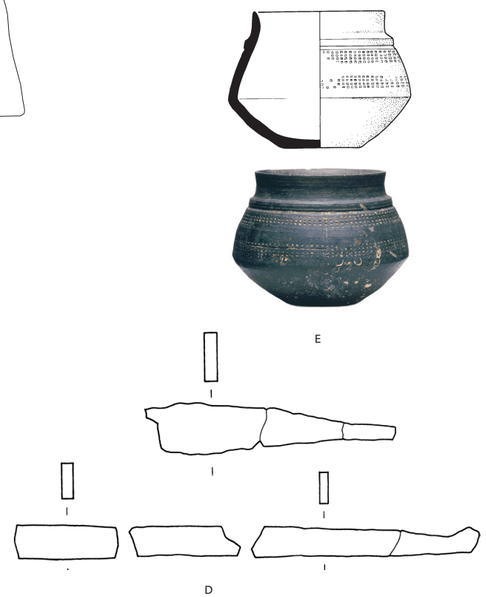
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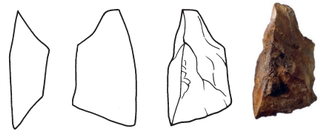
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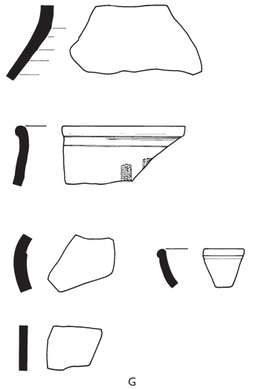
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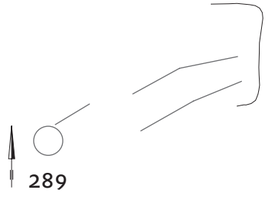
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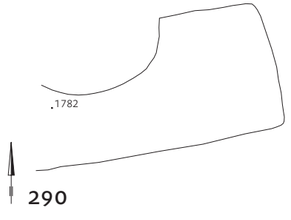

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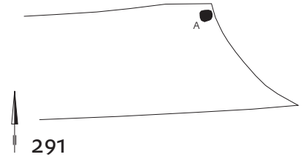

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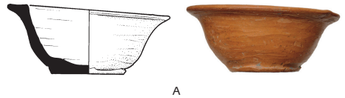
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292
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	76 cm
Elevation bottom	47.76
Orientation	2
Stratigraphic relation	above context 299

DESCRIPTION
Outline of the eastern part a pit observed at one level only. Outside the limits of the excavation trench a number of finds is indicated which may have been found when digging into the wall of the trench. They may belong to this grave. In that case they stand in an odd position in the middle of the grave. The seax is located in an unusual position in the grave. No skeletal remains indicated.

DATE (FINDS)
H-J (640/50-670/80)

FINDS
A Seax: iron
Find number: 1794.2
Condition: a small part of the tip is missing
Type: FAG Sax 2.2
Blade length: 350 mm
Grip length: 123 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

B Knife: iron, angled back
Find number: 1794.1
Condition: complete
Type: Siegmund Ger 1.2
Grip length: 44 mm
Blade length: 124 mm
Rhineland phase: 10-11
Rhineland date: 670-740
Maastricht date: H-J (640/50->725)

C Biconical pot (pottery): oxidized, undecorated
Find number: 1790.1
Condition: complete
Type: Siegmund Kwt 2.43
Maximum height: 90 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Alternative type: FAG S-Kwt 2.43 (6-8: 580/90-670/80)
Alternative type: L/P/V 392 (MA3-MR2: 560/70-660/70)
Maastricht date: F-H (580/90-670/80)

D Pottery
Find number: 1791.1
Condition: missing

293
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	171 cm
Grave pit width	61 cm
Elevation bottom	47.46
Orientation	183
Stratigraphic relation	above context 289 (uncertain relation, not in Harris matrix)

DESCRIPTION
The outline of a pit is vaguely indicated as a dotted line and the fill was colored slightly brighter than the surrounding soil on the field drawing. Complete articulated skeleton indicated. The hands were placed along the body. The skeleton, however, was oriented different from the other skeletons and the legs were flexed slightly. It is possible that the eastern end of the grave pit of context 289 at level 2 should be assigned to this grave.

PHYSICAL ANTHROPOLOGY
Find number	1700.1
Sex WEA	female
Age in years	20 - 35
Female stature in cm	152.5

DATE (FINDS)
E-H (565-670/80)

FINDS
A Possible seax scabbard remains
Find number: 1701.2
Type: small fragments, possibly of seax scabbard mounts

B Knife: iron, sheeth remains
Find number: 1701.1
Condition: grip partly missing
Type: Siegmund Ger 1.2
Grip length: 17 mm
Blade length: 75 mm
Rhineland phase: 10-11
Rhineland date: 670-740
Maastricht date: H-J (640/50->725)

C Plate buckle (purse): copper alloy, fixed plate
Find number: 1702.1
Condition: tongue missing
Type: Siegmund Sna 2.2
Loop length: 19 mm
Plate length: 28 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Alternative type: L/P/V 130 (MA2-MR1: 520/30-630/40)
Maastricht date: E-H (565-670/80)

D Coffin nail
Find number: 1701.3

E Shards (pottery)
Find number: 1701.4-6
Condition: 5 fragments
Maastricht date: Roman

F Shards (pottery)
Find number: 1731.1-2
Condition: 2 fragments
Maastricht date: Roman

294
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	161 cm
Elevation top	47.51
Elevation bottom	47.47
Orientation	7
Stratigraphic relation	below context 0 (cutting pit no context number yet), 295 (cutting grave) and 297

DESCRIPTION
Outline of a pit observed at two levels. The eastern end is intersected by a younger pit. Articulated skeletal remains indicated: skull, ribs (not digitized), both (lower?) arms, both legs. Child?

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
B-F (400-610)

A Finds
Metal remains
Find number: 8888-294.1

B Glass bottle: green
Find number: 1803.1
Condition: complete
Type: Feyeux 2003, 20.0
Maximum height: 96 mm
Feyeux date: 400-600
Alternative type: L/P/V 440 (PM-MA3: 440/50-600/10)
Maastricht date: B-F (400-610)

C Shards (pottery)
Find number: 1706.1
Condition: 2 fragments
Maastricht date: Roman

295
GRAVE

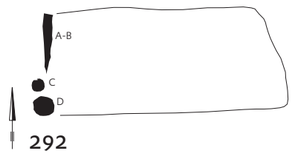
Trench	6
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit width	100 cm
Elevation bottom	47.47
Orientation	6
Stratigraphic relation	below context 296, 297, 298 and 0 (cutting pit no context number yet); above context 294

DESCRIPTION
Outline of a pit and fill of a coffin observed at one level only. The western end is intersected by a younger pit. No skeletal remains indicated.

296
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	47.51
Stratigraphic relation	above context 295; below context 298 (cutting grave) and 0 (cutting pit?)

DESCRIPTION
Outline of the fill of a coffin observed at one level only. Vague observation without much information. The outline of the fill of a coffin has been combined with a line on the field drawing that can be interpreted as the limit of the fill of the grave pit. It is not certain that this combination of the fill of a coffin and that of a grave pit is valid.



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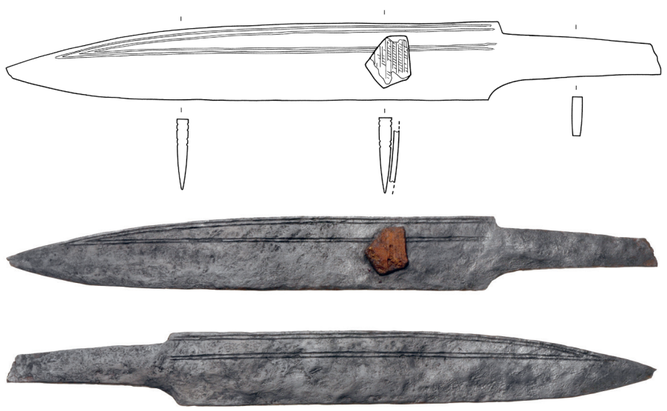
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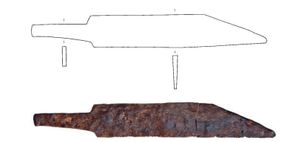
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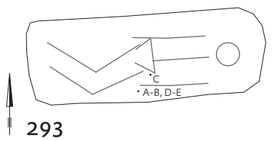

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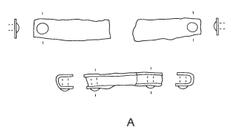
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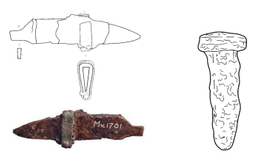
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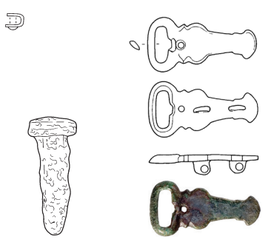
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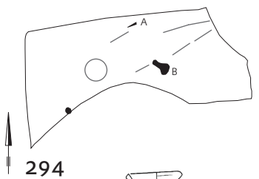

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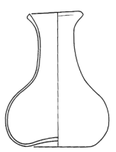
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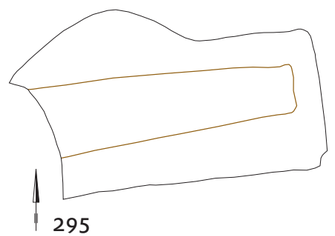
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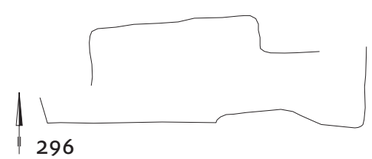

296

FINDS

A Shards (pottery)
Find number: 1712.1
Condition: 2 fragments
Maastricht date: Roman

297
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.51
Stratigraphic relation	above context 294 and 295

DESCRIPTION
No outline of a grave pit observed. Skeletal remains indicated: both legs. The seax is located to the west of these. It is not certain whether the seax and the legs are related. If so, the seax is located at the shoulders.

PHYSICAL ANTHROPOLOGY

Find number	1726.1
Sex WEA	indeterminate
Age in years	0 - 20

DATE (FINDS)
G-H (610/20-670/80)

FINDS

A Seax: iron
Find number: 1703.3
Condition: complete
Type: FAG Sax 2.2
Blade length: 385 mm
Grip length: 148 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

B Rivet: copper alloy, large
Find number: 1703.1
Condition: complete
Diameter: 45 mm

C Seax scabbard mount: copper alloy
Find number: 1703.4
Condition: fragmented
Type: FAG S-Sax 4.5
Length: 55 mm
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

D Seax scabbard mount: copper alloy
Find number: 1703.5
Condition: fragment
Type: FAG S-Sax 4.5
FAG phase: 7-8
FAG date: 610/20-670/80
Maastricht date: G-H (610/20-670/80)

E Scabbard nails: copper alloy
Find number: 1703.6
Number: 5

F Knife
Find number: 1703.2
Condition: grip partly missing
Grip length: 26 mm
Blade length: 120 mm

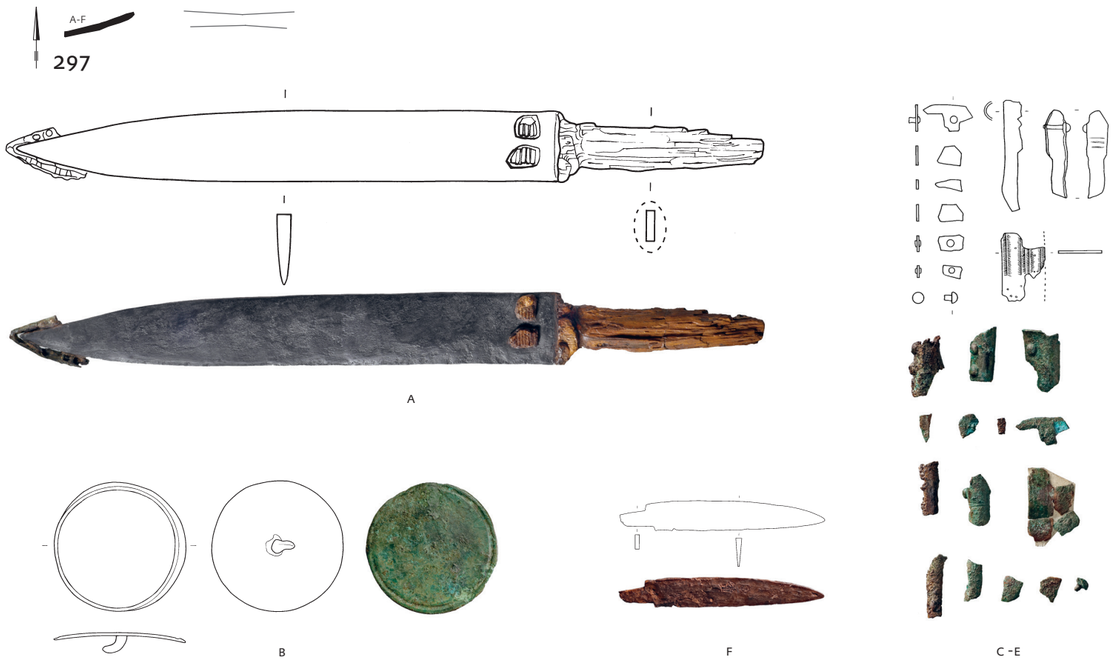
298
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	105 cm
Elevation bottom	47.51
Orientation	8
Stratigraphic relation	above context 295 and 296; below context 0 (cutting pit, no context number yet)

DESCRIPTION
Outline of the grave pit observed at two levels. The eastern and northwestern sides are intersected by younger features. The western part is vague and is probably cut through grave context 296. Skeletal remains indicated: lower right arm, pelvis, both legs.

PHYSICAL ANTHROPOLOGY

Find number	1727.1
Sex WEA	indifferent
Age in years	23 - 55



FINDS

A Shard (pottery)
Find number: 1775.1
Condition: 1 fragment
Maastricht date: Roman

B Shards (pottery)
Find number: 1707.1-3
Condition: 3 fragments
Maastricht date: Roman

299
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	wooden container grave
Elevation bottom	47.47
Orientation	2
Stratigraphic relation	below context 302, 292 (cutting grave) and 300 (cutting grave)

DESCRIPTION
Outline of a pit and fill of a coffin observed at one level only. The stratigraphic relations between the cluster of contexts at this location as they are indicated on the field drawings is not correct. This grave context seems to intersect an older (Roman) pit at level 2. This pit has a small annex at levels 1 and 2, which intersects grave context 300. This grave in its turn seems to be younger than grave context 299. Moreover the skeleton in context 300 (that according to a note on the field drawing lies 20 cm below the surface of the excavation level) is drawn in such a way that it overlays an older Roman pit which is of course correct. The stratigraphic sequence as it is indicated on the field drawings is thus internally inconsistent. Moreover we think that the child drawn at level 1 at the same location does not belong to this grave. All in all we have to conclude that in grave context 299 a pot has been found, but no skeletal remains. Possibly the child of level 1 and this grave are part of a single grave, there is no conclusive evidence to make a choice between both possibilities.

FINDS

A Goblet (pottery): oxidized
Find number: 1816.1
Condition: complete
Type: Pirling/Siepen 100/101
Maximum height: 69 mm
Pirling/Siepen date: 340-400
Maastricht date: 340-400

B Shards (pottery)
Find number: 1780.1-3
Condition: 3 fragments
Maastricht date: Roman

C Shards (pottery)
Find number: 1822.1-5
Condition: 11 fragments
Maastricht date: Roman

300
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	47.46
Orientation	352
Stratigraphic relation	below context 0 (cutting pit, no context number yet), 301 and 303; above context 299

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton present, except for the skull and left upper leg. The hands were probably placed on the pelvis. See remarks on context 299.

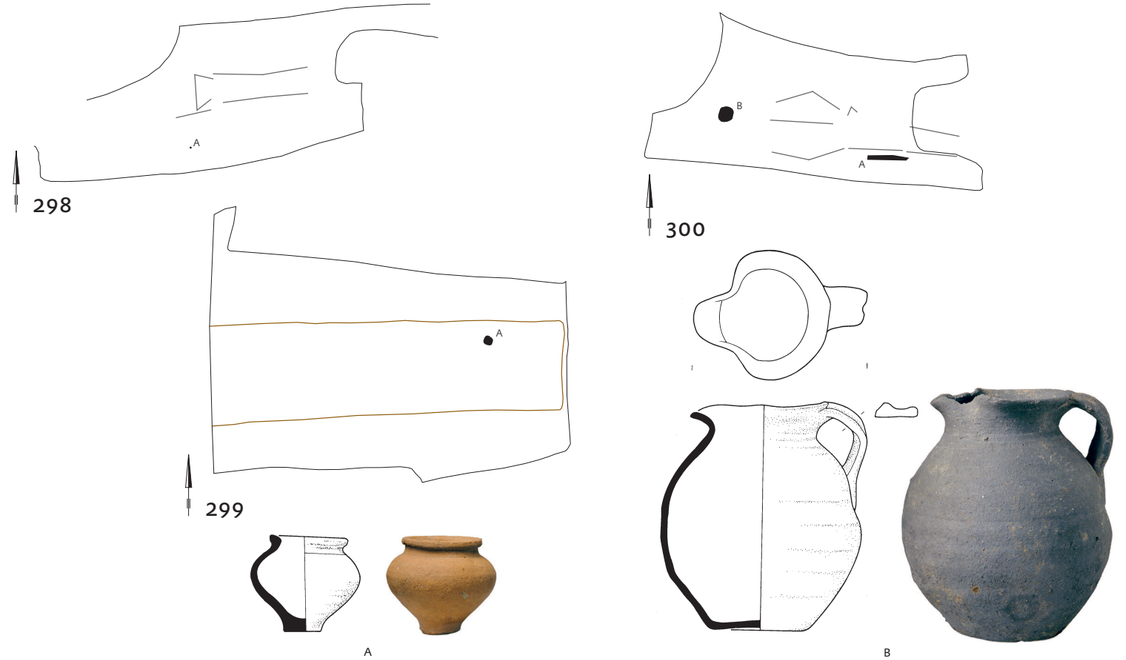
PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
E-G (565-640/50)

FINDS

A Iron lance head
Find number: 1820.1
Condition: missing

B Trefoil jug (pottery): reduced
Find number: 1805.1
Condition: complete
Type: Siegmund Kan 1.2
Maximum height: 162 mm



Rhineland phase: 8
Rhineland date: 610-640
Alternative type: L/P/V 402 (MA1-MR1: 470/80-630/40)
Alternative type: FAG S-Kan 1.2 (5-7: 565-640/50)
Maastricht date: E-G (565-640/50)

C Shards (pottery)
Find number: 1821.1-3
Condition: 12 fragments
Maastricht date: Roman

301
DISARTICULATE HUMAN REMAINS

Trench	6
Burial type	disarticulate human remains no grave structure
Elevation bottom	47.47
Stratigraphic relation	below context 303; above context 300

DESCRIPTION
Above context 300 a collection of bones is indicated which, according to the field drawing, has to be considered as a separate feature. The bones are situated 10 cm above the underlying skeleton.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

302
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	72 cm
Elevation bottom	47.63
Stratigraphic relation	above context 299

DESCRIPTION
The eastern part of the outline of a pit observed at one level only. Articulated skeletal remains indicated: remains of the skull (not digitized), both legs, remains of the pelvis? Child.

PHYSICAL ANTHROPOLOGY

Find number	1725.1
Sex WEA	indeterminate
Age in years	4 – 8

FINDS
A Shards (pottery)
Find number: 1730.1-3
Condition: 7 fragments
Maastricht date: Roman

303
DISARTICULATE HUMAN REMAINS

Trench	6
Burial type	disarticulate human remains no grave structure
Elevation bottom	47.63
Stratigraphic relation	above context 300 and 301

DESCRIPTION
Disarticulate skeletal remains: three(?) skulls, five or six long bones.

PHYSICAL ANTHROPOLOGY
Remains of four individuals were present in this find number.

- Find number	1724.1
Sex WEA	female
Age in years	20 - 40
- Find number	1724.2
Sex WEA	male
Age in years	20 - 40
- Find number	1724.3
Sex WEA	male
Age in years	40 - 80
- Find number	1724.4
Sex WEA	indeterminate
Age in years	11 - 12

FINDS
A Shards (pottery)
Find number: 1729.1

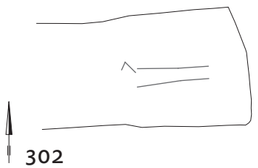
304
DISARTICULATE HUMAN REMAINS

Trench	6
Burial type	disarticulate human remains no grave structure
Elevation bottom	47.44

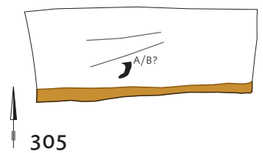
DESCRIPTION
A disarticulate skull (possibly).

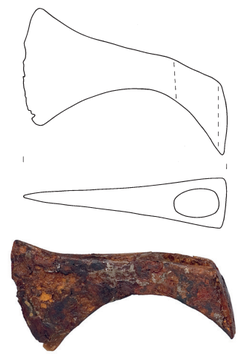
PHYSICAL ANTHROPOLOGY
No human remains available for examination.










A

305
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	wooden container grave
Elevation bottom	47.44
Orientation	1
Stratigraphic relation	below context 0 (cutting pit, no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. The northern part is outside the first part of excavation trench 6, the western end is intersected by a younger pit. It could be that near the southern limit a distinction between the fill of the pit and the fill of a coffin is visible. Skeletal remains indicated: both legs.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
C-E (460/80-580/90)

FINDS
A Francisca: iron
Find number: 1823.1
Condition: pieces of cutting edge are missing
Type: Siegmund FBA 1.2/1.3
Blade length: 148 mm
Rhineland phase: 3-5
Rhineland date: 485-570
Alternative type: L/P/V 2/3 (PM-MA3: 440/50-600/10)
Maastricht date: C-E (460/80-580/90)

B Francisca: iron
Find number: 1823.2
Condition: pieces of edge missing
Type: Siegmund FBA 1.2/1.3
Blade length: 174 mm
Rhineland phase: 3-5
Rhineland date: 485-570
Alternative type: L/P/V 2/3 (PM-MA3: 440/50-600/10)
Maastricht date: C-E (460/80-580/90)

306
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	47.44
Orientation	20

DESCRIPTION
Outline of a pit observed at one level only. The northern part is outside the first part of excavation trench 6. Skeletal remains indicated: parts of the left arm and part of the right arm, both (upper) legs, vertebral column.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

DATE (FINDS)
C-D (460/80-565)

FINDS
A Disc brooch: round, silver casing with garnets, one zone.
Find number: 1796.1
Condition: fastener missing, rim partly missing
Type: Siegmund Fib 1.1.
Diameter: 22 mm
Rhineland phase: 3-4
Rhineland date: 485-555
Alternative type: Vielitz A3.10 (530/40-560/70)
Alternative type: FAG S-Fib 1.1 (3-4A: 460/80-545)
Maastricht date: C-D (460/80-565)

B Metal knob?
Find number: 1777.1
Condition: fragment

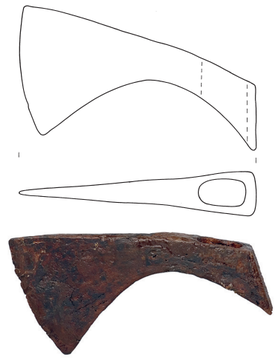
C Glass bead, yellow opaque undecorated
Find number: 1796.2
Condition: weathered
Type: no type identification available
Shape: segmented
Number of beads: 1

307
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	61 cm
Elevation bottom	47.44
Orientation	19
Stratigraphic relation	below context 0 (cutting pit no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. The western part is intersected by a younger pit. It is not certain whether this is a grave.

FINDS
A Shards (pottery)
Find number: 1776.1-4
Condition: 6 fragments
Maastricht date: Roman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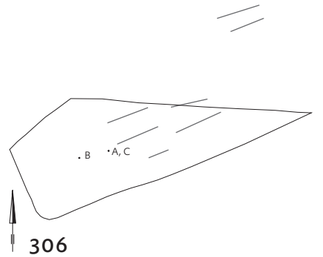
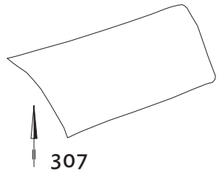



A B



308
GRAVE

Trench	6
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	47.59

DESCRIPTION
No outline of a pit observed. Only articulated skeletal remains: skull and vague indications of the thorax. It is possible that this skeleton is related to grave context 309. In that case the combination 308/309 is younger than the skull 304.

PHYSICAL ANTHROPOLOGY

Find number	1738.1
Sex WEA	male
Age in years	40 - 80

DATE (FINDS)
E-G (565-640/50)

FINDS
A Pin: copper alloy, spoon-shaped head
Find number: 1735.1
Condition: complete
Type: Siegmund Nad 2.2
Length: 175 mm
Rhineland phase: 7
Rhineland date: 585-610
Alternative type: L/P/V 310 (MA1-MA3: 470/80-600/10)
Alternative type: FAG S-Nad 2.2 (565-640/50)
Alternative type: Roth/Theune 1988, 58 (8: 610-670)
Maastricht date: E-G (565-640/50)

B Rock-crystal bead: transparent polished/cut
Find number: 1737.2
Condition: complete
Type: S-5.1
Shape: biconvex
Number of beads: 1
Combination group: C
Rhineland date: 485-555
Alternative type: FAG c. group II (2-5: 400-580/90)
Maastricht date: B-E (400-580/90)

C Shards (pottery)
Find number: 1736.1-3
Condition: 6 fragments
Maastricht date: Roman

309
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	52 cm
Elevation bottom	47.59
Orientation	11

DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed. No skeletal remains are indicated although skeletal remains were present in a find number related to this grave. This context is possibly related to context 308. Outside the drawn area a note says: 'These skeletons were all heavily disturbed'.

PHYSICAL ANTHROPOLOGY

Find number	1732.1
Sex WEA	male
Age in years	40 - 80

DATE (FINDS)
B (400-460/80)?

FINDS
A Glass dish: green, white opaque glass thread under rim
Find number: 1732.1
Condition: broken, pieces missing
Type: Siegmund Gla 1.3
Maximum height: 47 mm
Rhineland phase: 2
Rhineland date: 440-485
Alternative type: Koch 1987, IV H (450-525)
Maastricht date: B (400-460/80)

B Shards (pottery)
Find number: 1732.2-8
Condition: >9 fragments
Maastricht date: Roman

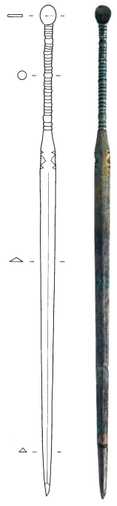
C Indeterminate fragment (iron)
Find number: 1732.9
Condition: 1 fragment

310
GRAVE

Trench	6
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	238 cm
Grave pit width	116 cm
Elevation bottom	47.57
Orientation	22
Stratigraphic relation	below context 0 (cutting pit, no context number yet); above context 411




B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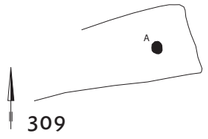


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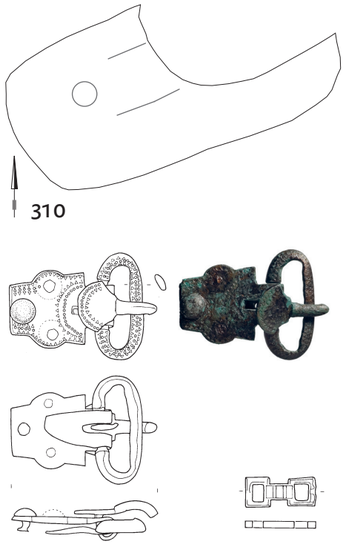


DESCRIPTION
Outline of a pit observed at one level only.
The eastern part is intersected by a younger pit.
Articulated skeletal remains indicated: skull, clavicles (not digitized), fragment of a rib (not digitized), right arm, upper left arm. The finds were located at level 2 and have been assigned to this grave.

PHYSICAL ANTHROPOLOGY

Find number	1734.1
Sex WEA	male
Age in years	20 – 40 (advanced dental attrition possibly 30-40 years)

DATE (FINDS)
E-H (565-670/80)

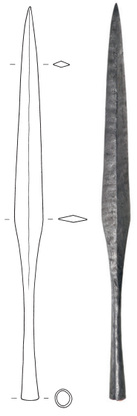
FINDS
A Plate buckle: copper alloy, stamped in geometric decoration, repaired (re-used)
Find number: 1783.1
Condition: two rivets missing
Type: Siegmund Gür 3.2a
Loop length: 39 mm
Plate length: 27 mm
Rhineland phase: 6
Rhineland date: 570-585
Alternative type: FAG Gür 3A (5: 565-580/90)
Maastricht date: E (565-580/90)

B Metal plate plate with two rectangular slots
Find number: 1783.3
Condition: complete
Type: no type identification available
Length: 25 mm

C Lance (head): iron, closed shaft
Find number: 1783.4
Condition: complete
Type: Siegmund Lan 2.5
Length: 284 mm
Rhineland phase: 8B-9
Rhineland date: 625-670
Alternative type: FAG S-Lan 2.5 (7-9: 610/20-710)
Maastricht date: G-I (610/20-725)

D Francisca: iron
Find number: 1783.2
Condition: pieces of edge missing
Type: Siegmund FBA 1.2/1.3
Blade length: 172 mm
Rhineland phase: 3-5
Rhineland date: 485-570
Alternative type: L/P/V 2/3 (PM-MA3: 440/50-600/10)
Maastricht date: C-E (460/80-580/90)

E Shards (pottery)
Find number: 1733.1
Condition: fragments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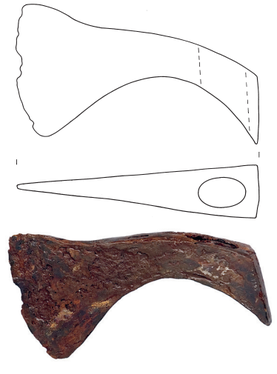

D

311
GRAVE

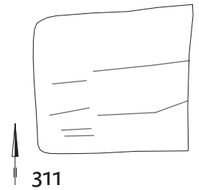
Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	101 cm
Elevation top	47.97
Elevation bottom	47.96
Elevation top post cranial	48.02
Orientation	3
Stratigraphic relation	below context 312

DESCRIPTION
Outline of a pit observed at level 7. The eastern part is outside the excavation trench, however in trench 5 no remains of this grave have been observed. Articulated skeletal remains indicated: both arms.
West of these at the same level some short long bones are indicated that thus cannot have belonged to the same grave. Possibly they are the remains of a higher lying grave.

PHYSICAL ANTHROPOLOGY

Find number	1155.1
Sex WEA	indeterminate
Age in years	20 - 80

FINDS
A Shards (pottery)
Find number: 1155.1-2
Condition: 3 fragments
Maastricht date: Roman

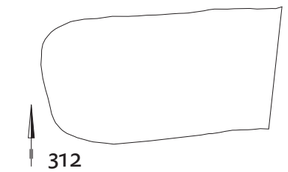


312
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	90 cm
Elevation bottom	47.97
Orientation	5
Stratigraphic relation	above context 311

DESCRIPTION
Outline of a pit observed at level 7. The eastern part is outside the excavation trench, however in trench 5 no remains of this grave have been observed. No further details. Possibly skeletal remains of this grave are found in context 311. One fragment of a long bone indicated (not digitized).

PHYSICAL ANTHROPOLOGY
No human remains available for examination.



313
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	wooden container grave
Elevation top	47.97
Elevation top post cranial	47.97
Orientation	3

DESCRIPTION
Outline of a pit and the fill of a coffin observed at level 7. At level 7a only the outline of a coffin seems to have been observed. Complete articulated skeleton present, the skull is at level 7 the rest at level 7a. The right hand is along the body the left hand was placed on the pelvis. See remarks on the composite drawing under context 314.

PHYSICAL ANTHROPOLOGY

Find number	1156.1
Sex WEA	male
Age in years	20 - 40
Male stature in cm	170.9

DATE (FINDS)
G-I (610/20-725)

FINDS
A Glass beads: opaque green, undecorated
Find number: 1019.3
Condition: complete
Shape: globular, compressed
Number of beads: 9
Maastricht date: B-D (400-565)

B Glass beads: opaque green, undecorated
Find number: 1019.2
Condition: corroded.
Shape: globular, compressed
Number of beads: 9
Maastricht date: B-D (400-565)

C Glass bead: opaque black, decorated
Find number: 1019.4
Condition: complete
Type: S-group 31
Shape: biconical
Number of beads: 1
Combination group: B
Rhineland date: 440-485
Alternative type: FAG c. group II-III (2-5: 400-580/90)
Maastricht date: B-D (400-565)

D Comb: antler, composite single, decorated
Find number: 1019.1
Condition: teeth and connecting plate partly missing
Type: Siegmund Ger 3.12
Length: 116 mm
Rhineland phase: 10
Rhineland date: 670-705
Alternative type: FAG 3.1B (7-9: 610/20-710)
Alternative type: L/P/V 325 (MA1-MA3: 470/80-600/10)
Alternative type: Dijkman/Ervynck 1998, 52.
Maastricht date: G-I (610/20-725)

314
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	wooden container grave with stones outside
Elevation top	47.97
Elevation top skull	47.93
Elevation top post cranial	47.69
Orientation	3
Stratigraphic relation	below context 315 (cutting grave)

DESCRIPTION
Outline of a pit observed at levels 7 and 7a.
The eastern part is outside the excavation trench, however in trench 5 no remains of this grave have been observed. The fill of the coffin is entirely located inside the excavation trench.
Complete articulated skeleton indicated. The hands were placed along the body. At level 7 a stone has been observed in the southern part of the pit. The composite drawing is created on the basis of the evidence from levels 7 and 7a in order to indicate the western limit of the grave.

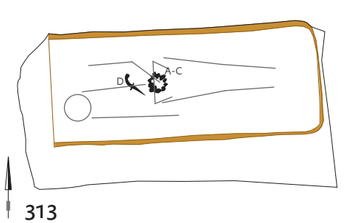
PHYSICAL ANTHROPOLOGY

Find number	1174.1
Sex WEA	female
Age in years	40 - 80
Female stature in cm	158.8

DATE (FINDS)
D-E (510/20-580/90)

FINDS
A Disc brooch: rosette, silver casing with one zone of garnets
Find number: 1172.1
Condition: part missing, fastener missing
Type: Siegmund Fib 1.3
Diameter: 23 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz E.2.12 (530/40-560/70)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: D-E (510/20-580/90)

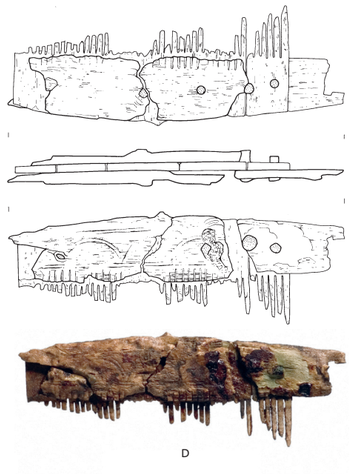
B Glass bead: opaque white, undecorated
Find number: 1172.7
Condition: complete
Shape: cylinder, short
Number of beads: 1
Maastricht date: D-H (510/20-670/80)



313


A, C


B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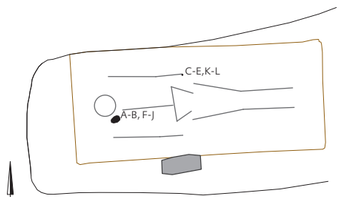
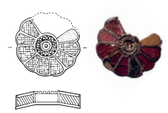


314


A

C Glass bead: transparent green, decorated
Find number: 1173.3
Condition: complete
Type: Koch 1977, 1.13
Shape: annular
Number of beads: 1
Koch phase: Stufe 2-3
Koch date: 545/50-590/600
Maastricht date: E (565-580/90)

D Glass bead: opaque, decorated
Find number: 1173.4
Type: S-2.13
Base colour: miscellaneous
Shape: biconical
Maastricht date: E (565-580/90)

E Glass beads: opaque, decorated
Find number: 1173.2
Condition: complete
Type: S-2.13
Base colour: miscellaneous
Shape: globular, compressed
Number of beads: 3
Alternative type: Koch 1977, M9/11 (Stufe 3: 565-590/600)
Maastricht date: E (565-580/90)

F Glass beads: opaque, undecorated
Find number: 1172.2
Condition: corroded
Base colour: unknown,
Shape: globular, compressed
Number of beads: 2
Maastricht date: D-H (510/20-670/80)

G Glass beads: opaque white, undecorated
Find number: 1172.3
Condition: complete
Shape: globular, compressed
Number of beads: 3
Maastricht date: D-H (510/20-670/80)

H Amber bead: transparent red, polished/cut
Find number: 1172.6
Condition: a piece is missing
Shape: irregular-shaped
Number of beads: 1
Maastricht date: D-H (510/20-670/80)


C-E


B, F-J

I Glass beads: opaque yellow, undecorated
Find number: 1172.4
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 4
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: D-H (510/20-670/80)

J Glass beads: opaque green, undecorated
Find number: 1172.5
Condition: broken
Type: S-1.8
Shape: biconical, long
Number of beads: 2
Combination group: H-I
Rhineland date: 610-705
Alternative type: FAG c. group IV-V (5-10: 565-750)
Maastricht date: D-H (510/20-670/80)

K Indeterminate object: copper alloy
Find number: 1173.1

L Shards (pottery)
Find number: 1173.5
Condition: 1 fragment
Maastricht date: Roman

315
GRAVE

Trench	4
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation top post cranial	47.97
Orientation	1
Stratigraphic relation	above context 314

DESCRIPTION
Outline of a pit not observed. Articulated skeletal remains indicated: upper part of the body, (the lower (eastern) part is outside the excavation trench). Possibly context 78 in trench 5 is related to this skeleton, although the difference in height does not support such a conclusion.

PHYSICAL ANTHROPOLOGY

Find number	1158.1
Sex WEA	female
Age in years	53 - 69

DATE (FINDS)
E-G (565-640/50)

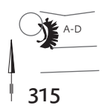
FINDS
A Rod: copper alloy
Find number: 1151.5

B Glass beads: transparent green, undecorated
Find number: 1151.3
Condition: complete
Shape: cylinder, short
Number of beads: 35
Maastricht date: E-G (565-640/50)

C Amethyst beads: transparent, polished/cut
Find number: 1151.1
Condition: complete
Type: S-5.2
Shape: almond
Number of beads: 14
Combination group: H
Rhineland date: 610-670
Alternative type: FAG c. group IV (5-8: 565-670/80)
Maastricht date: E-G (565-640/50)

D Glass bead: transparent orange/ochre, undecorated
Find number: 1151.2
Condition: complete
Shape: annular
Number of beads: 1
Maastricht date: E-G (565-640/50)

E Shards (pottery)
Find number: 1151.6-7
Condition: 2 fragments
Maastricht date: Roman



315


A


B


C-D

F Shard (glass)
Find number: 1151.4
Condition: 1 fragment
Maastricht date: Roman

316
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	112 cm
Elevation bottom	47.95
Orientation	4
Stratigraphic relation	below context 322

DESCRIPTION
Outline of a pit observed at level 7. The eastern part is outside the excavation trench, however in trench 5 no remains of this grave have been observed. No skeletal remains observed.

FINDS
A Shards (pottery)
Find number: 1044.1-5
Condition: 11 fragments
Maastricht date: Roman and 1 unknown

317
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	47.95
Stratigraphic relation	below context 322

DESCRIPTION
Outline of a pit observed at level 7. The eastern part is outside the excavation trench, however in trench 5 no remains of this grave have been observed. No skeletal remains observed.

FINDS
A Shards (pottery)
Find number: 0973.1-2
Condition: 4 fragments
Maastricht date: Roman

318
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	212 cm
Grave pit width	68 cm
Elevation bottom	48.18
Orientation	344

DESCRIPTION
Outline of a pit observed at one level only. Disarticulate skeletal remains observed: some long bones. No further details.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Glass (possibly vessel)
Find number: 0941.1
Condition: missing

319
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	169 cm
Grave pit width	68 cm
Elevation bottom	48.12
Orientation	9

DESCRIPTION
Outline of a pit observed at one level only. No further information. The identification of this feature as a grave is based on the rectangular shape of the feature and the color indicated on the field drawing, which is the same as that of another grave located further to the south.

FINDS
A Shards (pottery)
Find number: 0951.1-3
Condition: 3 fragments
Maastricht date: Roman

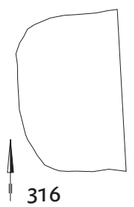
320
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	223 cm
Grave pit width	99 cm
Elevation top	48.12
Elevation bottom	47.80
Orientation	5

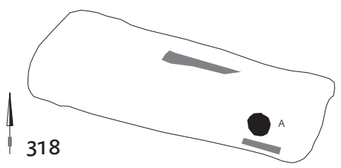
DESCRIPTION
Outline of a pit observed at two levels. The outline is still vague at level 6. The composite drawing is based on a few indications at levels 6 and 7. The stratigraphic relation between grave contexts 320 and 321 is not clear. Articulated skeletal remains indicated: skull, both arms and legs, remains of the pelvis. The hands were placed on the pelvis.

PHYSICAL ANTHROPOLOGY

Find number	1000.1
Sex WEA	male
Age in years	37 - 52
Male stature in cm	173.4


316


317



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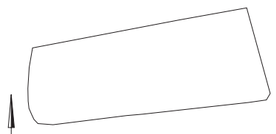
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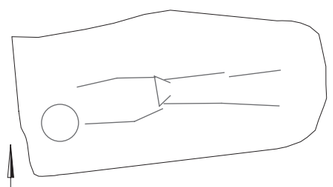

320

FINDS
A Shard/brick? (pottery)
Find number: 0954.1
Condition: 1 fragment
Maastricht date: Roman

321
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	220
Grave pit width	90
Elevation top	48.12
Elevation bottom	47.90
Orientation	13

DESCRIPTION
Outline of a pit observed at two levels. Complete articulated skeleton indicated. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY

Find number	999.1
Sex WEA	male
Age in years	34 - 56
Male stature in cm	166.8

322
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	221 cm
Grave pit width	120 cm
Elevation bottom	48.80
Orientation	359
Stratigraphic relation	above context 316 and 317

DESCRIPTION
Outline of a pit observed at one level only. The eastern part is outside the excavation trench, however in trench 5 no remains of this grave have been observed. No skeletal remains indicated.

323
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	92 cm
Elevation bottom	48.79
Orientation	358

DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed. No skeletal remains indicated. This grave cuts the northern large rectangular dug-in feature.

324
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	95 cm
Elevation bottom	48.79
Orientation	0

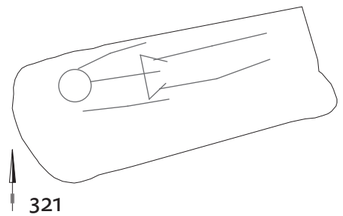
DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed. No skeletal remains indicated. This grave cuts the northern large rectangular dug-in feature.

325
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	100 cm
Elevation bottom	48.80
Orientation	188

DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed. Skeletal remains indicated: a skull in the eastern part of the pit.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.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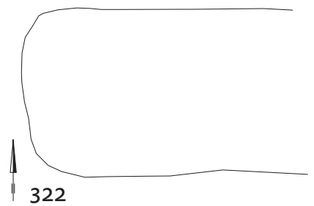
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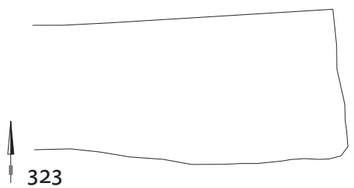
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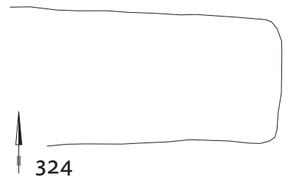
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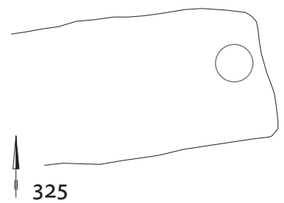
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326
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	113 cm
Elevation bottom	48.77
Orientation	350

DESCRIPTION
Outline of a pit observed at one level only. The eastern part has not been observed. No skeletal remains indicated.

327
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	95 cm
Elevation bottom	48.97
Orientation	5

DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed. No skeletal remains indicated.

PHYSICAL ANTHROPOLOGY

Find number	828.1
Sex WEA	female
Age in years	20 - 40
Female stature in cm	155.0

328
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	97 cm
Elevation bottom	48.78
Orientation	350

DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed. No skeletal remains indicated.

329
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	86 cm
Elevation bottom	48.79
Orientation	182

DESCRIPTION
Outline of a pit observed at one level only. The western part has not been observed, the eastern end is intersected by a younger pit. Skeletal remains indicated: skull in the eastern part of the pit.

330
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	86 cm
Elevation bottom	48.76
Orientation	186
Stratigraphic relation	below context 333

DESCRIPTION
Outline of a pit observed at one level only. Skeletal remains indicated: skull in the eastern part of the pit. Two stones are located south of the skull. The stratigraphic relation with context 331 cannot be established.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

331
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	78 cm
Elevation bottom	48.53
Orientation	359
Stratigraphic relation	below context 333

DESCRIPTION
Outline of a pit observed at one level only. The western end is intersected by a younger grave. Skeletal remains indicated: possibly a skull in the western part of the pit, a long bone, articulated? A stone is located in the south-east corner of the pit.

PHYSICAL ANTHROPOLOGY

Find number	819.1
Sex WEA	male
Age in years	40 - 80

FINDS
A Shard/brick? (pottery)
Find number: 819.1
Condition: 1 fragment
Maastricht date: unknown

B Stone
Find number: 819.2
Condition: 1 fragment

332
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	81 cm
Elevation bottom	48.52
Orientation	354
Stratigraphic relation	below context 334 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. The western end is intersected by a younger grave. Articulated skeletal remains indicated: vertebral column, left ribs (not digitized), left part of pelvis, left upper leg.

PHYSICAL ANTHROPOLOGY

Find number	821.1
Sex WEA	female
Age in years	50 - 70
Female stature in cm	160.8

333
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave with stones
Grave pit width	118 cm
Elevation bottom	48.76
Orientation	7
Stratigraphic relation	above context 330 and 331

DESCRIPTION
Outline of a pit observed at one level only. The western end is outside the excavation trench. No skeletal remains indicated. There is a stone in the north-eastern corner of the grave pit.

334
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	96 cm
Elevation bottom	48.76
Orientation	3
Stratigraphic relation	above context 332

DESCRIPTION
Outline of a pit observed at one level only. The western end is outside the excavation trench. No skeletal remains indicated. The relation with context 333 cannot be established.

335
GRAVE

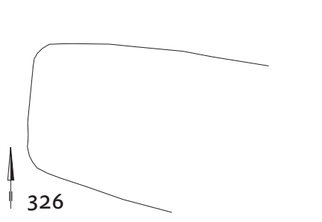
Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	86 cm
Elevation bottom	48.75
Orientation	356

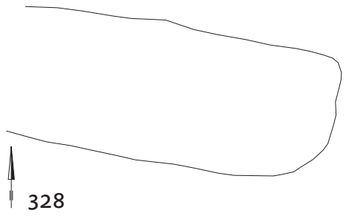
DESCRIPTION
Outline of a pit observed at one level only. The western end is outside the excavation trench. Articulated skeletal remains of at least two persons indicated: almost complete articulated skeleton of a child (?) and both legs and vertebral column? of an adult to the north of it.

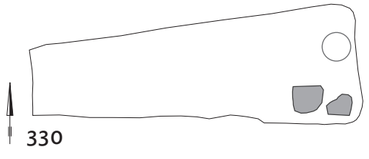
PHYSICAL ANTHROPOLOGY

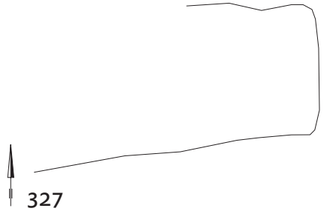
- Find number	820.1
Sex WEA	male
Age in years	61 - 70
Male stature in cm	178.1
Remains of two persons were present in find number 823	
- Find number	823.1
Sex WEA	female
Age in years	51-57
Female stature in cm	162.3
- Find number	823.2 (fragments of the manubrium, thoracic vertebrae and right pelvis)
Sex WEA	indifferent
Age in years	20 – 80

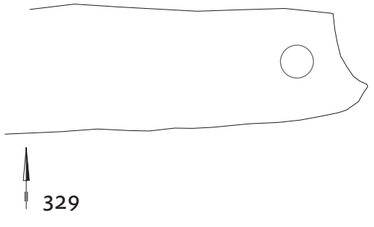
FINDS
A Brick/Shard
Find number: 820.1
Condition: 1 fragment
Maastricht date: Roman

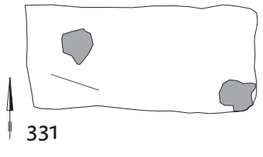


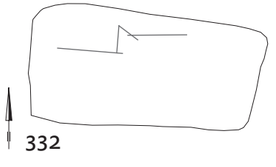


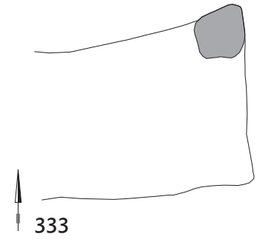




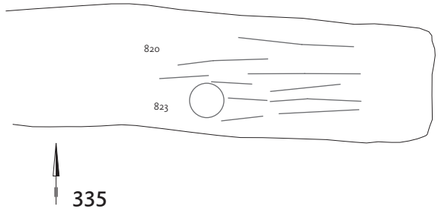












336
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	105 cm
Elevation bottom	48.67
Orientation	178
Stratigraphic relation	below context 337 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. The western end is outside the excavation trench. Skeletal remains indicated: skull in the eastern part of the pit.

PHYSICAL ANTHROPOLOGY

Find number	825.1
Sex WEA	male
Age in years	20 - 40

337
GRAVE

Trench	4
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.67
Orientation	1
Stratigraphic relation	above context 336

DESCRIPTION
No outline of a pit observed. Almost complete articulated skeleton indicated, the skull is missing. The left hand was placed on the pelvis, the right hand along the body. The contents of find number 822 is unknown.

PHYSICAL ANTHROPOLOGY

Find number	824.1
Sex WEA	female
Age in years	40 - 60
Female stature in cm	159.6

338
GRAVE

Trench	4
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.63
Orientation	7

DESCRIPTION
No outline of a pit observed. Almost complete articulated skeleton indicated. The right hand was placed on the pelvis.

PHYSICAL ANTHROPOLOGY

Find number	826.1
Sex WEA	female
Age in years	59 – 70
Female stature in cm	158.5

339
GRAVE

Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	96 cm
Elevation bottom	48.69
Orientation	29

DESCRIPTION
Outline of a pit observed at one level only. The western part is outside the excavation trench, the eastern part is intersected by a younger pit. Articulated skeletal remains indicated: vertebral column, both legs, pelvis, long bone lower arm.

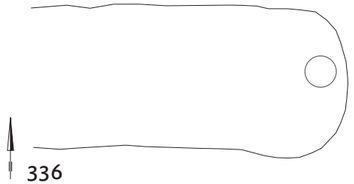
PHYSICAL ANTHROPOLOGY

Find number	827.1
Sex WEA	indifferent
Age in years	40 - 60

340
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	97 cm
Elevation bottom	48.75
Orientation	358

DESCRIPTION
Outline of a pit observed at one level only. The western part is outside the excavation trench. No skeletal remains indicated.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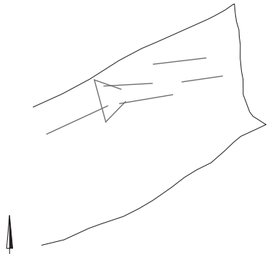
337


338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340

341
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit width	80 cm
Elevation bottom	48.76
Orientation	3

DESCRIPTION
Outline of a pit observed at one level only. The western end has not been observed. No further evidence.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

- Find number	1273.1
Sex WEA	male
Age in years	23 - 60
- Find number	1273.2 (problematic find, probably an administrative mistake related to (miswriting?) 1272/1273. This skeleton however consists mainly of lower legs. For that reason we kept this find number.
Sex WEA	indeterminate
Age in years	19 - 80

342
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	187 cm
Grave pit width	60 cm
Elevation top	46.61
Elevation top post cranial	46,37
Orientation	12

DESCRIPTION
Outline of a pit observed at two levels. The size of the pit is different at both levels. However as no skeleton has been indicated at level 14 we suppose that a single grave is concerned. The size of the pit at level 15 is too short in relation to the length of the skeleton, it is significant that both lower legs are missing. Almost complete articulated skeletal remains indicated: skull and lower legs are missing. The hands were placed along the body. No coffin.

343
POSSIBLE GRAVE

Trench	3
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	108 cm
Grave pit width	57 cm
Elevation bottom	46.41
Orientation	303

DESCRIPTION
Outline of a pit observed at one level only. No skeletal remains indicated.

FINDS
A Shard (pottery)
Find number: 1278.1
Condition: 1 fragment
Maastricht date: Roman

344
POSSIBLE GRAVE

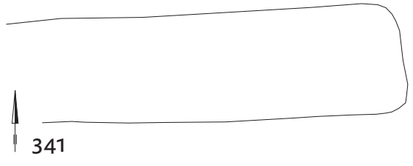
Trench	3
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	166 cm
Grave pit width	62 cm
Elevation bottom	46.42
Orientation	355

DESCRIPTION
Outline of a pit observed at two levels. No skeletal remains indicated.

345
POSSIBLE GRAVE

Trench	3
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	239 cm
Grave pit width	93 cm
Elevation bottom	46.44
Orientation	1

DESCRIPTION
Outline of a pit observed at three levels. No skeletal remains indicated.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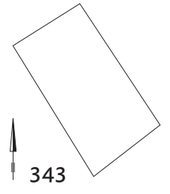
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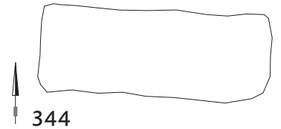
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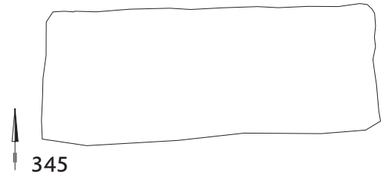
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346
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	wooden container grave
Elevation bottom	46.44
Elevation top post cranial	46.40
Orientation	22
Stratigraphic relation	below context 0 (pit, no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. Articulated skeletal remains indicated: lower part of the body. It is not clear whether the outline is that of a fill of a coffin or of a pit. A dark strip of soil has been recorded, it suggests the presence of a coffin. The head end of the pit is intersected by a younger pit.

PHYSICAL ANTHROPOLOGY

Find number	1282.1 (human remains consist of a left humerus and the pelvis, legs and feet)
Sex WEA	male
Age in years	20 - 80

347
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	wooden container grave
Grave pit length	214 cm
Grave pit width	90 cm
Elevation bottom	46,38
Elevation top post cranial	46,38
Orientation	344
Stratigraphic relation	below context 0 (pit, no context number yet)

DESCRIPTION
Outline of a pit observed at two levels. Complete articulated skeleton indicated. The right hand was probably placed on the pelvis. At level 14 only the northern limit of the grave has been observed in the form of a dark strip of soil of c. 20 cm wide that runs in an angular form. This feature suggests that a coffin was present (the light soil in the interior) and that the dark soil is the fill of the pit.

PHYSICAL ANTHROPOLOGY

Find number	1283.1
Sex WEA	indeterminate
Age in years	12 - 15

^{14}C-DATE
GrA-32709: 1510 ± 30 BP
1 sigma: 535-600 (62.8%)
2 sigma: 430-490 (14.9%) 500-630 (80.5%)

348
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	52 cm
Elevation bottom	46.35
Elevation top post cranial	46,35
Orientation	355
Stratigraphic relation	below context 0 (pit, no context number yet)

DESCRIPTION
Outline of a pit observed at one level only. The pit is intersected at the head end by a younger pit. Articulated skeletal remains indicated: pelvis and both legs.

PHYSICAL ANTHROPOLOGY

Find number	1284.1
Sex WEA	female?
Age in years	35 – 60
Female stature in cm	158.5

349
GRAVE

Trench	3
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	46,58
Orientation	356

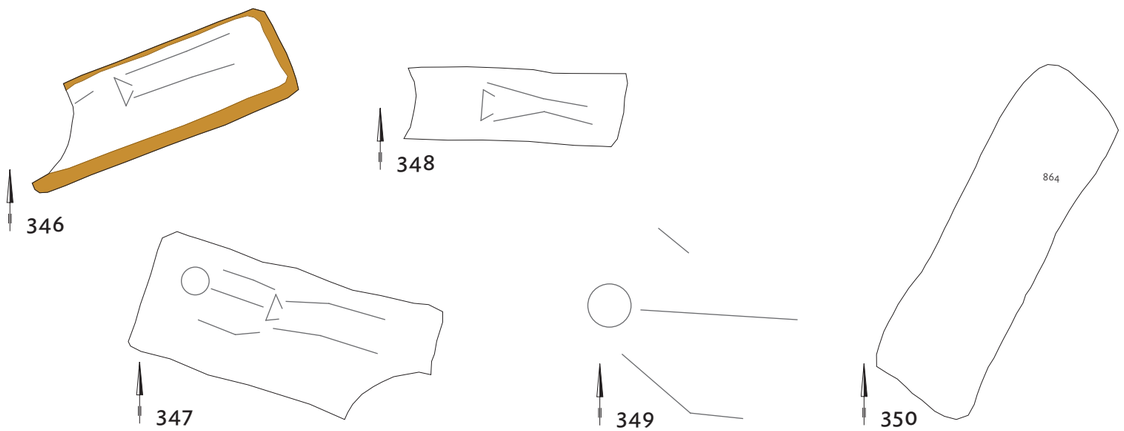
DESCRIPTION
No outline of a pit observed. Articulated skeletal remains indicated: upper body except large part of the left arm.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

350
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	256 cm
Grave pit width	80 cm
Elevation bottom	47.60
Orientation	243

DESCRIPTION
A rectangular outline of a pit has been observed that could be a grave. No skeletal remains indicated. The contents of find number 864 is not known.



351
GRAVE

Trench	3
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	50.50
Orientation	33

DESCRIPTION
No outline of a pit observed. Articulated skeletal remains indicated: two long bones of legs.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

352
GRAVE

Trench	3
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	50.50
Orientation	37

DESCRIPTION
No outline of a pit observed. Articulated skeletal remains indicated: long bones of legs.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

353
GRAVE

Trench	3
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	50.50
Orientation	16

DESCRIPTION
No outline of a pit observed. Articulated skeletal remains indicated: long bones of legs.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

354
DISARTICULATE HUMAN REMAINS

Trench	3
Burial type	disarticulate human remains no grave structure
Elevation bottom	50.50

DESCRIPTION
Stray find of a long bone.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

355
DISARTICULATE HUMAN REMAINS

Trench	3
Burial type	disarticulate human remains no grave structure
Elevation bottom	50.50

DESCRIPTION
Stray find of a long bone.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

356
GRAVE

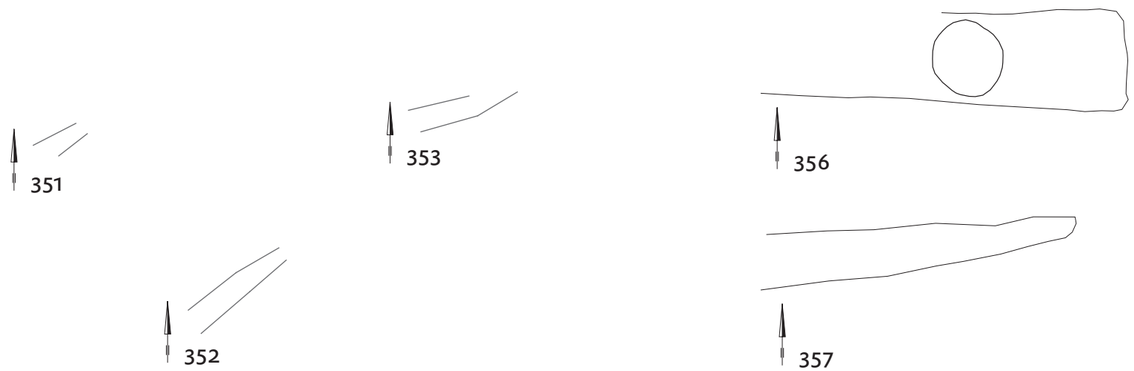
Trench	4
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	70 cm
Elevation bottom	48.76
Orientation	358
Stratigraphic relation	below context 358 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. The western end has not been observed. In the grave a black spot has been recorded of which the meaning is unknown. It is not possible to decide to which grave the skeletal remains belong indicated at the western end of this grave and grave 357.

357
POSSIBLE GRAVE

Trench	4
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.76
Stratigraphic relation	below context 358 (cutting grave)

DESCRIPTION
Outline of a pit observed at one level only. The western end has not been observed. It is not possible to decide to which grave the skeletal remains belong indicated at the western end of this grave and grave 356.



FINDS
Shard (pottery)
A Find number: 0766.1
Condition: 1 fragment
Maastricht date: Roman

Bead, copper alloy?
B Find number: 0766.2
Condition: 2 fragments

358
DISARTICULATE HUMAN REMAINS

Trench	4
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.76
Stratigraphic relation	above context 356 and 357

DESCRIPTION
A quantity of disarticulate skeletal remains, mainly long bones and perhaps a skull.

PHYSICAL ANTHROPOLOGY
- Find number 829.1
Sex WEA male
Age in years 20 - 80
Remains of two individuals were present in find number 830
- Find number 830.1
Sex WEA male
Age in years 37 - 46
Male stature in cm 170.6
- Find number 830.2
Sex WEA indeterminate
Age in years 23 - 55

359
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.85
Orientation	1

DESCRIPTION
Remains of the grave observed at two levels. Outline grave pit observed at level 4. No traces of a coffin. Articulated skeletal remains indicated: remains of the skull, vertebral column, left arm, right part of the pelvis. The northern and eastern parts are outside the excavation trench.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

360
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation top	48.85
Elevation bottom	48.83
Orientation	3

DESCRIPTION
The outline of a pit was vaguely observable at level 4. No traces of a coffin observed. Articulated skeletal remains indicated: skull, vertebral column, clavicles (not digitized), left upper arm, right leg. The northeast corner is part of the stone packing of the Roman road, which was not dug away by the gravediggers at the lower level of the grave pit.

PHYSICAL ANTHROPOLOGY
Find number 69.1
Sex WEA indifferent
Age in years 20 - 80

FINDS
A Shard (pottery)
Find number: 69.1-4
Condition: 8 fragments
Maastricht date: Roman

361
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	112 cm
Elevation top	48.86
Elevation bottom	48.81
Orientation	2

DESCRIPTION
The outline of a pit was vaguely observable at level 4. No traces of a coffin observed. The remains of at least three persons are buried in the grave. On the basis of the drawing it is impossible to attribute the individual parts of skeletons to separate individuals. Skeletal remains observed: three skulls, six upper arms, four lower arm long bones of two arms, four upper legs, three lower leg long bones of at least two legs. Some bones seem to lie in an articulated position. The eastern part of the pit is outside the excavation trench. The contents of find number 49 is unknown.

PHYSICAL ANTHROPOLOGY
Remains of at least six individuals were present in this grave.
- Find number 159.1
Sex WEA female
Age in years 20 - 25
- Find number 166.1
Sex WEA female
Age in years 20 - 40
- Find number 166.2
Sex WEA indeterminate
Age in years 18 - 22
- Find number 168.1
Sex WEA indeterminate
Age in years 1 - 2
- Find number 70.1
Sex WEA female
Age in years 31 - 37
Female stature in cm 165.1
- Find number 70.2
Sex WEA female
Age in years 20 - 80

FINDS
A Glass bead, green
Find number: 0070.1
B Shards (pottery)
Find number: 0070.2-3
Condition: 3 fragments
Maastricht date: Roman

362
DISARTICULATE HUMAN REMAINS

Trench	1
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.77

DESCRIPTION
Stray find of a long bone. The eastern part is outside the excavation trench.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

FINDS
A Shards (pottery)
Find number: 87.1-3
Condition: 3 fragments
Maastricht date: 1 Roman, 2 Merovingian (black burnished and Mayen)

363
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.50
Orientation	0
Stratigraphic relation	below context 364 and 365

DESCRIPTION
The outline of a grave pit was observable at level 5. No traces of a coffin observed. Skeletal remains observed: two more or less articulated long bones. The eastern part of the grave pit is situated outside the excavation trench.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

364
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.72
Orientation	4
Stratigraphic relation	above context 363; below context 365 (cutting grave)

DESCRIPTION
The outline of grave pit was vaguely observable at level 4. No traces of a coffin observed. The eastern part of the grave pit is situated outside the excavation trench. Articulated skeletal remains indicated: skull, collarbones (not digitized), vertebral column, upper and lower arms, pelvis. The hands were placed on the pelvis. The content of find number 211 is not known.

PHYSICAL ANTHROPOLOGY
Find number 77.1
Sex WEA female
Age in years 50 - 65

^{14}C-DATE
GrA-32718: 1275 + 30 BP
1 sigma: 680-725 (31.8%) 735-770 (30.1 %)
2 sigma: 660-810 (95.4%)

FINDS
A Shards (pottery)
Find number: 77.1, 3-7
Condition: 8 fragments
Maastricht date: Roman

B Shard (glass)
Find number: 77.2
Condition: 1 fragment
Maastricht date: Roman

365
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	wooden container grave
Elevation bottom	48.72
Orientation	358
Stratigraphic relation	above context 363 and 364

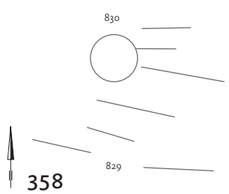
DESCRIPTION
Outline of a pit observed at one level only. Traces of a coffin indicated at the western and northern and southern sides. The eastern part of the grave pit is situated outside the excavation trench. No skeletal remains indicated.

366
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	251 cm
Grave pit width	80 cm
Elevation bottom	48.65
Orientation	357

DESCRIPTION
Outline of a grave pit observed at two levels. The eastern end may be just outside the excavation trench. No traces of a coffin indicated. Almost complete articulated skeleton indicated (except for upper left arm and part of the lower left arm). Four skulls are situated along the southern wall of the pit, a quantity of long bones and remains of a vertebral column and associated ribs in the northwestern corner of the pit.

PHYSICAL ANTHROPOLOGY
Remains of six individuals were present in this find number.
- Find number 171.1
Sex WEA indeterminate
Age in years 0 – 1
- Find number 171.2
Sex WEA male
Age in years 35 - 55
- Find number 172.1
Sex WEA indifferent
Age in years 20 – 40



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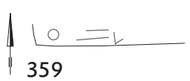
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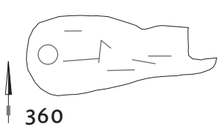
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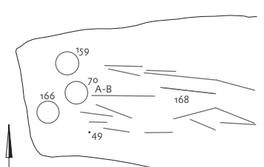

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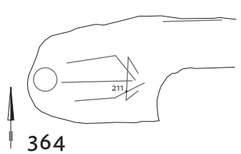


364


365

-	Find number	173.1
	Sex WEA	male
	Age in years	20 - 40
-	Find number	174.1
	Sex WEA	indeterminate
	Age in years	20 - 40
-	Find number	71.1
	Sex WEA	female
	Age in years	40 - 60
	Female stature in cm	169.1

FINDS

A Shards (pottery)
Find number: 52.1-3
Condition: 5 fragments
Maastricht date: Roman

B Shards (pottery)
Find number: 71.1-8
Condition: 16 fragments
Maastricht date: Roman

367
GRAVE

Trench	1
Burial type	inhumation grave
Elevation top	48.87
Elevation bottom	48.64

DESCRIPTION

Outline of a (double?) grave pit observed at one level only. No traces of a coffin indicated. It is not clear whether it concerns a double grave or two separate graves that cannot be distinguished as such. Almost complete articulated skeleton (except the lower legs) in the southern grave. The right hand is placed on the pelvis. In the northern grave there is a skull and the rest of another bone. At the eastern end of the southern grave there is a row of stones that marks the edge of the grave pit. At the north-eastern corner of the northern grave pit there is, at level 4, a quantity of fragments of (probably) Roman roof tiles and some stones. Perhaps it is a small plateau related to this grave. Find number 160 is not indicated on the field drawing.

PHYSICAL ANTHROPOLOGY

-	Find number	160.1
	Sex WEA	indeterminate
	Age in years	1 - 1.
-	Find number	72.1
	Sex WEA	indeterminate
	Age in years	0 - 10
-	Find number	72.2
	Sex WEA	indeterminate
	Age in years	20 - 80
-	Find number	73.1
	Sex WEA	female
	Age in years	41 - 48
	Female stature in cm	161.9

FINDS

A Shards (pottery)
Find number: 72.1-3
Condition: 4 fragments
Maastricht date: Roman

B Shards (pottery)
Find number: 73.1-4
Condition: 4 fragments
Maastricht date: 2 Roman, 1 Merovingian, 1 high medieval

C Indeterminate object (copper allloy)
Find number: 170.1
Condition: 2 fragments
Maastricht date: Roman

368
DISCARDED CONTEXT

369
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.65
Stratigraphic relation	above context 370

DESCRIPTION

Possible grave, which may be identical to a possible grave at level 5 at that location. No skeletal remains indicated. The content of find number 90 is not known.

370
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	63 cm
Elevation bottom	48.65
Orientation	3
Stratigraphic relation	below context 369 (cutting grave)

DESCRIPTION

The outline of a pit was vaguely observable at level 4. No traces of a coffin indicated. Complete articulated skeleton indicated. The right hand was probably placed on the pelvis, the left hand along the body. The content of find number 218 is not known.

PHYSICAL ANTHROPOLOGY

Remains of two individuals were present in this find number.

-	Find number	82.1 (skull fragments and postcranial skeleton)
	Sex WEA	male
	Age in years	34 - 43
	Male stature in cm	167.2
-	Find number	82.2 (skull fragments: occipital and right and left parietal bones)
	Sex WEA	female
	Age in years	40 - 80

FINDS

A Shards (pottery)
Find number: 82.1, 3-8
Condition: 11 fragments
Maastricht date: 8 Roman, 2 Merovingian

B Indeterminate object (iron)
Find number: 82.2
Condition: 5 fragments
Maastricht date: Roman

C Brick
Find number: 82.9
Condition: 1 fragment
Maastricht date: Roman

371
DISARTICULATE HUMAN REMAINS

Trench	1
Burial type	disarticulate human remains no grave structure
Grave type	unknown
Elevation bottom	48.87

DESCRIPTION

At level 3 a skull and two possibly related collarbones are indicated. They may be identical to those in context 370 at level 4 although they are not in exactly the same position. Therefore we decided to consider them as separate contexts.

PHYSICAL ANTHROPOLOGY

No human remains available for examination.

372
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.64

DESCRIPTION

Last remnant of a grave. The complete outline of the grave pit is not known. Skeletal remains indicated: vertebral column and ribs (not digitized).

PHYSICAL ANTHROPOLOGY

Find number	165.1
Sex WEA	indeterminate
Age in years	20 - 80

373
GRAVE

Trench	1
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.65
Orientation	0

DESCRIPTION

No outline of a grave pit observed. Almost complete articulated skeleton indicated except for the lower right leg. A long bone to the right of the upper right leg may not belong to this skeleton. The missing lower right leg is probably situated in context 374. The hands were placed along the body.

PHYSICAL ANTHROPOLOGY

Find number	75.1
Sex WEA	male
Age in years	34 - 59
Male stature in cm	178.3

FINDS

A Shards (pottery)
Find number: 75.1-3
Condition: 3 fragments
Maastricht date: 2 Merovingian, 1 Carolingian

374
GRAVE

Trench	1
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.65
Orientation	7

DESCRIPTION

No grave pit observed. Almost complete articulated skeleton, the lower legs were outside the excavation trench. The right hand was placed on the pelvis, the left hand along the body. This grave probably intersects grave context 373. Along the upper left arm a long bone is present, probably from the skeleton in grave context 373.

PHYSICAL ANTHROPOLOGY

Find number	184.1
Sex WEA	female
Age in years	20 - 80

375
DISARTICULATE HUMAN REMAINS

Trench	1
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.65

DESCRIPTION

A skull and long bone.

PHYSICAL ANTHROPOLOGY

Find number	186.1
Sex WEA	female
Age in years	20 - 80

376
DISARTICULATE HUMAN REMAINS

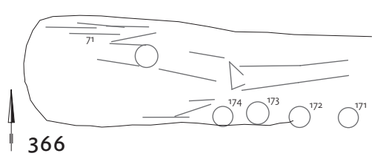
Trench	1
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.65

DESCRIPTION

A skull.

PHYSICAL ANTHROPOLOGY

Find number	185.1
Sex WEA	female
Age in years	20 - 80



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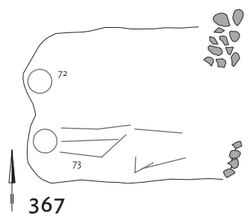

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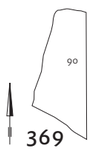

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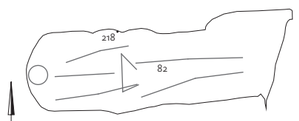

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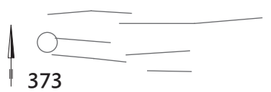
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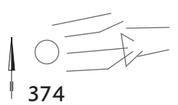
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377
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.65
Orientation	3

DESCRIPTION
Northern and western part of the outline of a pit observed. Articulated skeletal remains indicated: skull, left arm, lower part of the vertebral column, lower right arm, both legs. Both hands were placed on the pelvis.

PHYSICAL ANTHROPOLOGY
Remains of two individuals were present in this find number.

-	Find number	83.1 (only the skull, mandible and post cranial skeleton of a second individual of male sex (based on pelvis and postcranial metrics. Mandible and skull do not fit together)
	Sex WEA	female
	Age in years	30 - 36
-	Find number	83.2
	Sex WEA	male
	Age in years	34 - 56
	Male stature in cm	175.1

FINDS
A Shards (pottery)
Find number: 83.1-8
Condition: 25 fragments
Maastricht date: 22 Roman, 3 Merovingian

B Slag
Find number: 88.9
Condition: 1 fragment

378
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	168 cm
Grave pit width	66 cm
Elevation bottom	48.85
Orientation	3

DESCRIPTION
Outline of a pit observed at one level only. It is not certain that the entire length of the pit has been documented. Articulated skeletal remains indicated: skull, upper left arm, right arm, upper part of the vertebral column, clavicles (not digitized), remains of ribs (not digitized), part of the pelvis, both legs.

PHYSICAL ANTHROPOLOGY

Find number	179.1
Sex WEA	female
Age in years	20 - 40
Female stature in cm	169.0

379
GRAVE

Trench	1
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.48
Orientation	355
Stratigraphic relation	above context 380

DESCRIPTION
Almost complete articulated skeleton indicated, except lower arms. No outline of a grave pit observed.

PHYSICAL ANTHROPOLOGY

Find number	97.1
Sex WEA	female
Age in years	40 - 80
Female stature in cm	178.0

380
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	80 cm
Orientation	359
Stratigraphic relation	below context 379

DESCRIPTION
Only the western part of the grave pit has been observed. The eastern part is outside the excavation trench and partly not observed. Articulated skeletal remains indicated: skull, left arm. Possibly another skull in the eastern part of the pit (find number 93). The stratigraphic relations with contexts 381 and 382 are not clear.

PHYSICAL ANTHROPOLOGY

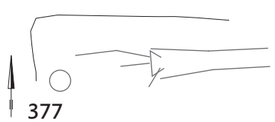
-	Find number	176.1
	Sex WEA	male
	Age in years	40 - 80
	Male stature in cm	179.5
-	Find number	93.1
	Sex WEA	male
	Age in years	30 - 60

FINDS
A Shards (pottery)
Find number: 93.1-3
Condition: 3 fragments
Maastricht date: 2 Roman, 1 Carolingian (Mayen)

381
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	48.48
Orientation	2

DESCRIPTION
Outline of a pit only observed at the southern and western side. The eastern part of the pit is outside the excavation trench. Skull indicated. Possibly older than context 380.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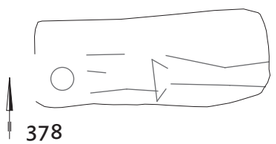
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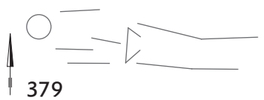
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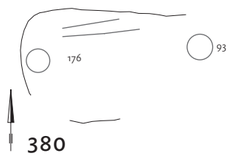

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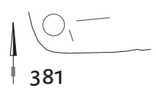
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PHYSICAL ANTHROPOLOGY

Find number	177.1
Sex WEA	female
Age in years	19 - 28

382
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.48

DESCRIPTION
Outline of a pit only observed at the northern and western side. The eastern part of the pit is outside the excavation trench. No skeletal remains indicated. Possibly older than context 380.

383
GRAVE

Trench	1
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.42

DESCRIPTION
No outline of a grave pit observed. Only articulated long bones of the left leg (and arm?) and lower right leg, however no find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.


382


383

384
DISARTICULATE HUMAN REMAINS

Trench	1
Burial type	disarticulate human remains no grave structure

DESCRIPTION
Stray find of a skull.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

385
GRAVE

Trench	1
Burial type	articulated skeleton no grave structure
Grave type	unknown
Elevation bottom	48.45
Orientation	2

DESCRIPTION
No outline of a pit observed. Only articulated long bones of legs indicated. Against the eastern wall of the excavation trench. No find number.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

386
DISARTICULATE HUMAN REMAINS

Trench	1
Burial type	disarticulate human remains no grave structure
Elevation bottom	48.27

DESCRIPTION
Stray find of a skull.

PHYSICAL ANTHROPOLOGY
No human remains available for examination.

387
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	59 cm
Elevation top	48.57
Elevation bottom	48.15
Orientation	2

DESCRIPTION
Outline of a pit observed at level 4, at level 5 still vague outline of the pit. Almost complete articulated skeleton indicated. The right hand was placed on the chest.

PHYSICAL ANTHROPOLOGY

Find number	183.1
Sex WEA	male
Age in years	20 - 40

388
GRAVE

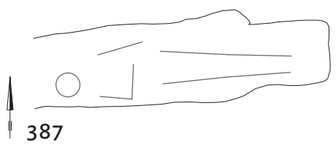
Trench	1
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	73 cm
Elevation top	48.48
Elevation bottom	48.15
Orientation	2

DESCRIPTION
Outline of a pit observed at one level only. Almost complete articulated skeleton indicated, except for the lower legs. The left hand was placed on the pelvis, the right hand possibly too. The eastern part of the pit is outside the excavation trench. South of the skeleton are two stones placed against the wall of the pit.

PHYSICAL ANTHROPOLOGY

Find number	106.1


385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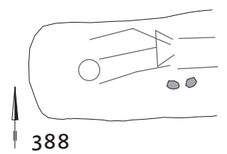

388

Sex WEA male
Age in years 20 - 25
Male stature in cm 170.4

FINDS

A Shard (glass)
Find number: 106.3
Condition: 1 fragment

B Shards (pottery)
Find number: 106.1-2, 5-14
Condition: 36 fragments
Maastricht date: 29 Roman, 4 Merovingian, 3 Carolingian

C Brick
Find number: 106.15
Condition: 1 fragment

Indeterminate object (iron)
Find number: 106.4
Condition: 1 fragment

389
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	228 cm
Grave pit width	99 cm
Elevation bottom	48.15
Orientation	357

DESCRIPTION

Outline of a pit observed at one level only. No skeletal remains indicated. Originally a copper alloy find was given the find number 163 on the field drawing, but that number has been struck through with a pencil.

FINDS

A Shards (pottery)
Find number: 162.1-7
Condition: 46 fragments
Maastricht date: Roman

B Indeterminate object (iron, nails?)
Find number: 162.8
Condition: 5 fragments

390
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave with stones
Grave pit width	57 cm
Elevation bottom	48.55
Orientation	3

DESCRIPTION

Outline of grave pit observed at two levels. The composite drawing is based on level 4. Articulated skeletal remains indicated: skull, lower part of the vertebral column, pelvis, both legs. Three stones and a fragment of Roman brick are situated against the wall of the pit south of the pelvis and right leg.

PHYSICAL ANTHROPOLOGY

Remains of two individuals were present in this find number.

-	Find number	180.1
	Sex WEA	male
	Age in years	61 - 66
	Male stature in cm	177.2
-	Find number	180.2 (an isolated mandible, admixture of bone)
	Sex WEA	male
	Age in years	20 - 80

391
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	trench grave
Grave pit length	203 cm
Grave pit width	89 cm
Elevation top	48.40
Elevation bottom	48.13
Orientation	7

DESCRIPTION

Outline of a pit observed at three levels. The composite drawing is based on level 5. No skeletal remains indicated.

FINDS

A Crucible
Find number: 132.1
Condition: 1 fragment
Maastricht date: unknown

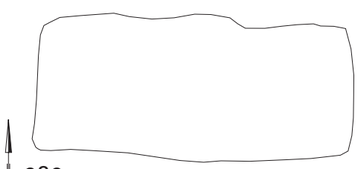
B Slag
Find number: 151.10
Condition: 1 fragment

C Slag
Find number: 132.6
Condition: 2 fragments

D Stone
Find number: 151.11-12
Condition: 2 fragments

E Shards (pottery)
Find number: 132.2-5
Condition: 5 fragments
Maastricht date: Roman

F Shards (pottery)
Find number: 151.1, 2-9
Condition: 83 fragments
Maastricht date: Roman



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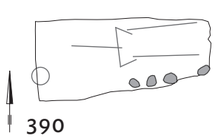

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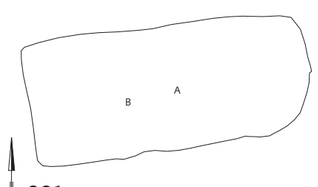


391

392
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	50 cm
Elevation top	48.38
Elevation bottom	48.13
Orientation	12

DESCRIPTION

Outline of a pit observed at two levels (5 and 6). At level 3 a few lumps of limestone were observed at this spot. The excavators interpreted these as the foundation of a grave monument. This may well be correct. At levels 5 and 6 it has also been observed. The field drawing of level 5 indicates that after the removal of the limestone, part of the skeleton was discovered. Articulated skeletal remains indicated: skull, vertebral column, lower left arm, upper legs. The left hand was placed along the body. The eastern end of the outline of the pit may not have been the original limit of the pit in view of the fact that the lower legs have not been observed.

PHYSICAL ANTHROPOLOGY

Find number	182.1
Sex WEA	male
Age in years	40 - 80
Male stature in cm	170.8

^{14}C-DATE

GrA-32705: 1285 + 30 BP
1 sigma: 670-720 (41.4%) 740-770 (26.8%)
2 sigma: 660-780 (95.4%)

393
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	81 cm
Elevation bottom	48.10
Orientation	1

DESCRIPTION

Outline of a pit observed at two levels. The composite drawing is based on level 5. The eastern end of the grave pit is outside the excavation trench. Articulated skeletal remains indicated: skull, both arms and both upper legs and parts of the lower legs. Both hands were placed on the pelvis.

PHYSICAL ANTHROPOLOGY

Remains of two individuals were present in this find number.

-	Find number	103.1 (the find number is possibly an administrative mistake, 103 is a set of ribs, such sets are usually found in situ, in 130 no ribs are indicated, so ribs and skeleton might be of one individual)
	Sex WEA	indeterminate
	Age in years	20 - 80
-	Find number	130.1
	Sex WEA	male
	Age in years	30 - 60

FINDS

A Crucible
Find number: 130.2
Condition: 3 fragments
Maastricht date: unknown

B Shards (pottery)
Find number: 130.3-4, 6-10
Condition: 9 fragments
Maastricht date: 7 Roman, 1 Merovingian, 1 Carolingian

C Shards (pottery)
Find number: 147.1, 3-9
Condition: 34 fragments
Maastricht date: Roman

D Shard (glass)
Find number: 130.1
Condition: 1 fragment
Maastricht date: unknown

E Indeterminate object (iron)
Find number: 130.5
Condition: 6 fragments
Maastricht date: unknown

F Indeterminate object (iron)
Find number: 147.2
Condition: 6 fragments
Maastricht date: unknown

G Indeterminate object (copper alloy)
Find number: 145.1
Condition: 1 fragment
Maastricht date: unknown

394
GRAVE

Trench	1
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	77 cm
Elevation top	48.15
Elevation bottom	48.05
Orientation	5

DESCRIPTION

Outline of a pit observed at two levels. Articulated skeletal remains indicated (under the foundation): skull, both arms and upper legs. The eastern end of the pit is outside the excavation trench. Above this grave, at level 3, a few lumps of limestone have been observed which were interpreted by the excavators as a foundation of a grave monument. This seems a plausible interpretation. The limestone is indicated at levels 5 and 6 as well.

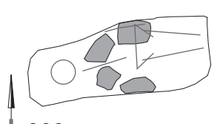
PHYSICAL ANTHROPOLOGY

Find number	167.1
Sex WEA	indeterminate
Age in years	indeterminate

FINDS

A Shards (pottery)
Find number: 146.1-4
Condition: 13 fragments
Maastricht date: 13 Roman

B Shards (pottery)
Find number: 167.1-3
Condition: 7 fragments
Maastricht date: 3 Roman, 4 Merovingian (burnished oxidized and coarse ware)



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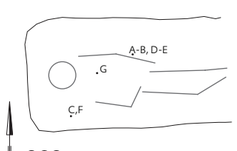

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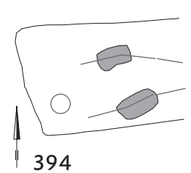


394

395
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	stone built grave

DESCRIPTION
A number of stones are found at levels 5 and 6. The excavators suggest that they are the remains of a sarcophagus. However, they are rather the remains of a stone burial chamber.

396
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave

DESCRIPTION
A number of stones at levels 5 and 6. The excavators suggest that the tufa blocks are the remains of a sarcophagus, however, the stones were given a blue color on the field drawing suggesting that they are of a different type of stone.

397
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	stone built grave

DESCRIPTION
A number of stones at levels 5 and 6. The excavators suggest that the stones (tufa at level 6) are the remains of a sarcophagus or stone built coffin. They are situated against the eastern wall of the excavation trench. It is however most likely that they are related to the deep dug in pits in that part of the site.

398
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	stone built grave

DESCRIPTION
A number of stones at level 6. The arrangement of the stones suggests that they form the western end of a stone setting around a grave. Against the eastern wall of the excavation trench. It is however most likely that they are related to the deep dug in pits in that part of the site.

399
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	stone built grave

DESCRIPTION
A number of stones at level 6. The arrangement of the stones suggests that they form the western end of a stone setting around a grave. Against the eastern wall of the excavation trench. It is however most likely that they are related to the deep dug in pits in that part of the site.

400
POSSIBLE GRAVE

Trench	1
Burial type	possible inhumation grave
Grave type	stone built grave

DESCRIPTION
A number of stones at level 6. The arrangement of the stones suggests that they form the eastern end of a stone setting around a grave. Against the western wall of the excavation trench. It is however most likely that they are related to the deep dug in pits in that part of the site.

401
DISARTICULATE HUMAN REMAINS

Trench	5
Burial type	disarticulate human remains no grave structure

DESCRIPTION
Disarticulate bone material. Maybe these bones are deposited in the eastern end of context 87. This is difficult to establish because the outline of the grave pit was clearly observed

PHYSICAL ANTHROPOLOGY
Remains of five individuals were present in this find number.

- Find number	1401.1
Sex WEA	female
Age in years	53 - 59
Female stature in cm	166.7
- Find number	1401.2
Sex WEA	female
Age in years	36 - 42
Female stature in cm	160.2
- Find number	1401.3
Sex WEA	indeterminate
Age in years	35 - 55
- Find number	1401.4
Sex WEA	indeterminate
Age in years	8 - 10
- Find number	1401.5
Sex WEA	indeterminate
Age in years	10 - 20

402
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	59 cm
Elevation bottom	46.20
Orientation	50

DESCRIPTION
Outline of a pit observed at one level only. The northern part of the pit is outside the excavation trench. Articulated skeletal remains indicated: skull, both upper arms, vertebral column and ribs (not digitized).

PHYSICAL ANTHROPOLOGY

Find number	1285.1
Sex WEA	indifferent
Age in years	20 – 25

^{14}C-DATE
GrA-32707: 1540 + 30 BP
1 sigma: 430-490 (36.2%) 510-520 (1.6%) 530-570 (30.4%)
2 sigma: 430-600 (95.4%)

403
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	trench grave
Grave pit width	49 cm
Elevation bottom	46.21
Orientation	51

DESCRIPTION
Outline of a pit observed at one level only. The northern part of the pit is outside the excavation trench. Articulated skeletal remains indicated: skull, both upper arms, vertebral column and ribs (not digitized). There is a lot of space between the skull and the short southern end of the grave pit.

PHYSICAL ANTHROPOLOGY

Find number	1286.1
Sex WEA	male
Age in years	30 – 60

^{14}C-DATE
GrA-32712: 1570 + 30 BP
1 sigma: 430-540 (68.2%)
2 sigma: 420-560 (95.4%)

404
POSSIBLE GRAVE

Trench	3
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	46.21
Orientation	49

DESCRIPTION
Outline of a pit observed at one level only. Only the south-eastern corner of the pit was observed, the rest is outside the excavation trench.

405
DISARTICULATE HUMAN REMAINS

Trench	3
Burial type	disarticulate human remains no grave structure
Elevation bottom	46.61

DESCRIPTION
Stray find of a skull.

PHYSICAL ANTHROPOLOGY

Find number	1279.1
Sex WEA	indeterminate
Age in years	12 - 18

406
GRAVE

Trench	3
Burial type	inhumation grave
Grave type	trench grave
Grave pit length	180 cm
Grave pit width	85 cm
Elevation bottom	46.38
Elevation top post cranial	46.38
Orientation	55

DESCRIPTION
Outline of a pit observed at one level only. Complete articulated skeleton indicated. The hands were placed along the body. No coffin indicated.

PHYSICAL ANTHROPOLOGY

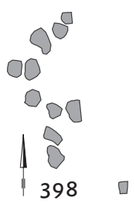
Find number	1272.1
Sex WEA	indifferent
Age in years	- 25 - 34

^{14}C-DATE
GrA-32708: 1530 + 30 BP
1 sigma: 430-490 (25.9%) 530-580 (42.3%)
2 sigma: 430-600 (95.4%)





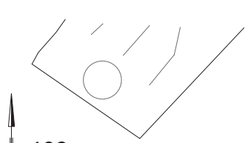


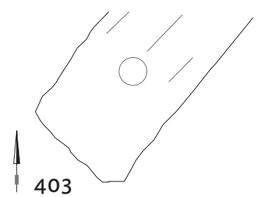




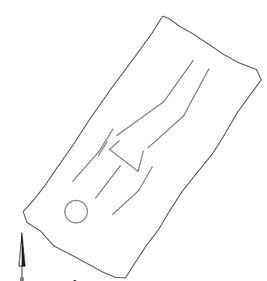












FINDS

A Shards (pottery)
Find number: 1272.1
Condition: fragments
Maastricht date: Roman

B Indeterminate object: iron
Find number: 8888-406.1
Condition: missing

407
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	sarcophagus grave
Orientation	8

DESCRIPTION

Sarcophagus. This sarcophagus was found in the southern extension of trench 5. In view of the height of the top of the sarcophagus indicated on the field drawing it must have been observed at level 3. However, around this sarcophagus no grave pit has been indicated, which should have been visible at level 3. At level 3 graves are indicated on this spot, one of which contains a skeleton at the location of the sarcophagus. If the height of excavation level 4 in the southern extension of trench 5 is at the same level as level 4 in the northern part of the trench this situation of the sarcophagus is impossible. In that case level 4 in the extension lies only 2 cm under level 3. The installation of the sarcophagus would have destroyed the lower lying graves. It is thus not possible to establish the stratigraphic relation between the sarcophagus and the graves at that location. It is possible that the sarcophagus has not been found at that location or level 4 in the extension lies at a lower height. Photograph 21636 shows that skeletal remains were found in the sarcophagus, but these do not seem to have been recovered or recorded.

DATE (FINDS)

D-H (510/20-670/80)

FINDS

A Glass globular beaker: brown
Find number: 1522.1
Condition: complete
Type: FAG S-Gla 3.2
Maximum height: 95 mm
FAG phase: 4-8
FAG date: 510/25-670/80
Alternative type: Feyeux 2003, 90.0 (500-700)
Maastricht date: D-H (510/20-670/80)

408
FIND

Trench	5
Context type	find

DESCRIPTION

On the drawing of level 3 of the southern extension of trench 5 a glass beaker is indicated. See for remarks on the height of the excavation level and the allocation to a grave drawn at level 4 (context 10) context 407. Not indicated on general plan.

DATE (FINDS)

B-F (400-610)

FINDS

A Glass bottle: green
Find number: 1521.1
Condition: broken, pieces missing
Type: Feyeux 2003, 20.0
Maximum height: 71 mm
Feyeux date: 400-600
Alternative type: L/P/V 440 (PM-MA3: 440/50-600/10)
Maastricht date: B-F (400-610)

409
FIND

Trench	5
Context type	find

DESCRIPTION

Stray find of a grinding stone
Find number: 1520

410
GRAVE

Trench	5
Burial type	inhumation grave
Grave type	trench grave
Elevation bottom	47.93
Stratigraphic relation	above context 198; below context 204

DESCRIPTION

Outline of a pit observed at one level only. Complete articulated skeleton indicated. The hands were placed along the body. North of the left knee is a pot. The skeletal remains have find number 1715, they seem to be missing.

PHYSICAL ANTHROPOLOGY

No human remains available for examination.

FINDS

A Black pot (pottery)
Find number: 1682.1
Condition: missing

411
POSSIBLE GRAVE

Trench	6
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	47.43
Orientation	12
Stratigraphic relation	below context 310

DESCRIPTION

Outline of a pit observed at one level only. The northern part of the grave pit has hardly been observed because of disturbances by younger pits.

412
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.32
Orientation	7
Stratigraphic relation	above context 214; below context 414 and 415

DESCRIPTION

Outline of a pit observed at one level. The find of a pottery vessel has been assigned to this feature.

413
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.32
Orientation	4
Stratigraphic relation	above context 222; below context 415 (pit)

DESCRIPTION

Outline of a pit observed at one level. On the field drawing it is indicated that the fill is light brown with charcoal.

414
POSSIBLE GRAVE

Trench	5
Burial type	possible inhumation grave
Grave type	trench grave
Elevation bottom	48.32
Orientation	1
Stratigraphic relation	above context 412; below context 415 (pit)

DESCRIPTION

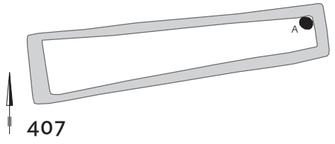
Outline of a pit observed at one level. On the field drawing it is indicated that the fill is black.

415
PIT

Trench	5
Context type	pit
Elevation top	48.32
Stratigraphic relation	below context 208; above context 412, 413 and 414

DESCRIPTION

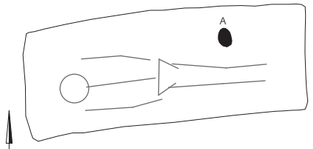
Outline of a pit observed at one level only. No further information available.



407


408A





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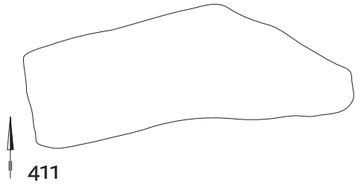
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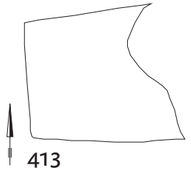
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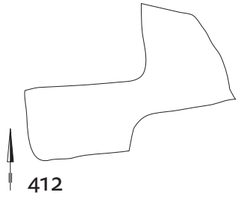
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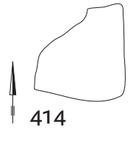
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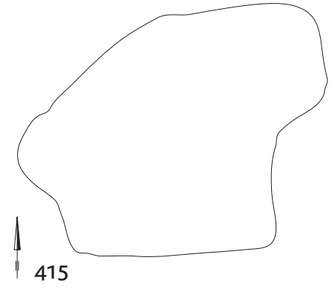

415

FINDS WITHOUT CONTEXT (CONTEXT 0)



0980.1

Rivet: copper alloy
Find number: 0980.1
Condition: complete
Type: no type identification available
Diameter: 21 mm



1024.1

Glass bead: opaque blue, melon bead, undecorated
Find number: 1024.1
Condition: broken, part missing
Type: melon bead
Shape: barrel, melon (ripped)
Number of beads: 1
Rhineland phase: Roman
Maastricht date: Roman



1040.1

Mount: copper alloy?
Decorated with stamped in circles and dots, hollow, four rivets
Find number: 1040.1
Condition: missing (ancient photograph Ypey)
Type: no type identification available



1040.2

Strap end: copper alloy?
Find number: 1040.2
Condition: missing (ancient photograph Ypey)
Type: no type identification available



1040.3

Counter plate inside a strap guide: copper alloy?
Counter plate decorated with cast strongly profiled lines, three rivets
Strap guide decorated with stamped in circles
Find number: 1040.3
Condition: missing (ancient photograph Ypey)
Type: no type identification available



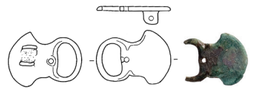
1078.1

Coin: copper alloy
Find number: 1078.1
Condition: Complete, damaged
Type: As; Domitianus
Diameter: 13 mm
Phase: Roman
Date: 82 AD
Maastricht date: Roman



1106.1

Ring (belt appendage): copper alloy
Find number: 1106.1
Condition: complete
Type: no type identification available
Ring diameter: 20 mm
Rest: metal (part of brooch?)
Find number: 1171.1
Condition: fragments
Type: no type identification available



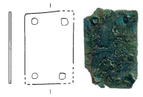
1175.1

Plate buckle: copper alloy
Find number: 1175.1
Condition: Tongue missing, loop broken
Type: L/P/V 131
Loop length: 16 mm
Plate length: 15 mm
L/P/V phase: MA3-MR2
L/P/V date: 560/70-630/40
Maastricht date: E-G (565-640/50)



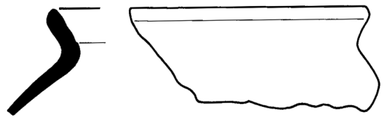
1175.2

Biconical pot: reduced, roulette stamp decoration
Find number: 1175.2
Condition: complete
Type: Siegmund Kwt 3.12
Maximum height: 142 mm
Rhineland phase: 6 (7)
Rhineland date: 570-585 (610)
Maastricht date: E-F (565-610/20)



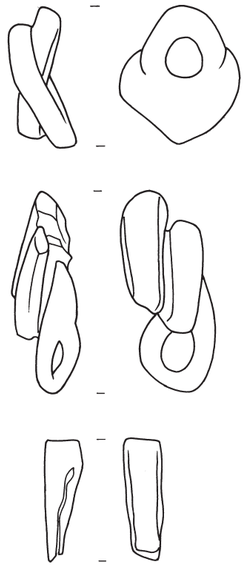
1175.3

Back plate: copper alloy
Find number: 1175.3
Condition: fragments missing
Type: no type identification available
Plate length: 29 mm



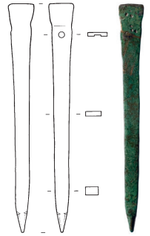
1175.4

Shard: pottery
Find number: 1175.4
Condition: fragment
Type: no type identification available



1181.1

Iron: indeterminate fragments
Find number: 1181.1
Condition: 3 fragments
Type: no type identification available



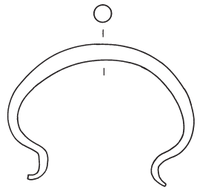
1221.1

Indeterminate object (mount?): copper alloy
Find number: 1221.1
Condition: Complete
Type: no type identification available
Length: 81 mm



1259.1

Copper alloy: fragment
Find number: 1259.1
Condition: fragment
Type: no type identification available



1265.1

Handle (of copper alloy bowl?): copper alloy
Find number: 1265.1
Condition: complete
Type: no type identification available



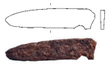
1274.1

Copper alloy: fragment
Find number: 1274.1
Condition: fragment
Type: no type identification available



1322.1

Knife: iron
Find number: 1322.1
Condition: blade partly missing.
Type: no type identification available
Grip length: 90 mm
Blade length: 77 mm



1322.2

Fragment: iron
Find number: 1322.2
Condition: fragment
Type: no type identification available



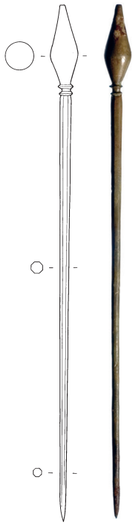
1322.3

Indeterminate fragment: iron
Find number: 1322.3
Condition: fragment
Type: no type identification available



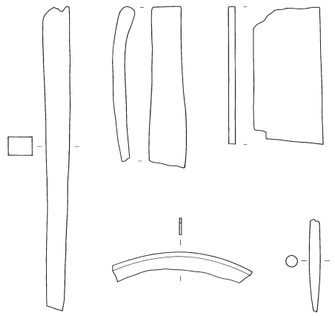
1322.4

Rod: iron
Find number: 1322.4
Condition: complete?
Type: no type identification available



1330.1

Decorative pin: iron
Find number: 1330.1
Condition: complete
Type: no type identification available
Length: 184 mm
Rhineland date: Roman
Maastricht date: Roman



1330.2

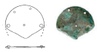
Indeterminate fragments: iron
Find number: 1330.2
Condition: fragments
Type: no type identification available

Shards (9): pottery
Find number: 1330.3
Condition: Fragments
Type: no type identification available
Fragment: wood
Find number: 1330.4
Condition: fragment
Type: no type identification available



1361.1

Glass bead: opaque black, decorated
Find number: 1361.1
Condition: complete
Type: S-group 31
Shape: Globular, compressed
Decoration: threads, opaque red and white, combed.
Number of beads: 1
Combination group: B
Rhineland date: 440-485
Alternative type: Koch group 50
Alternative type: FAG II-III (2-5:400-580/90)
Maastricht date: B-E (400-580/90)



1384.1

Disc: copper alloy
Find number: 1384.1
Condition: complete
Type: no type identification available

Fragment: glass
Find number: 1384.2
Condition: fragment
Type: no type identification available



1487.1, 2

Rivet: copper alloy, decorated
Find number: 1487.1
Condition: complete
Type: Siegmund Gür 2.10
Diameter: 9 mm
Rhineland phase: 4
Rhineland date: 530-555
Maastricht date: D (510/20-565)

Rivet: copper alloy, decorated
Find number: 1487.2
Condition: complete
Type: Siegmund Gür 2.10
Diameter: 9 mm
Rhineland phase: 4
Rhineland date: 470/80-520/30
Maastricht date: D (460/80-565)



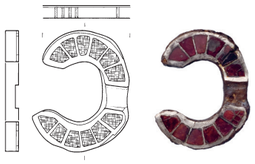
1487.3

Belt stud: copper alloy
Find number: 1487.3
Condition: part missing or broken
Type: L/P/V 195
L/P/V phase: MA1-MA1
Rhineland date: 470/80-520/30
Maastricht date: C-D (460/80-565)



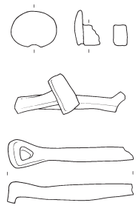
1487.4

Knife: iron
Find number: 1487.4
Condition: complete
Type: no type identification available
Grip length: 78 mm
Blade length: 101 mm



1487.5

Buckle: silver, garnet inlay
Find number: 1487.5
Condition: rod and tongue missing
Type: L/P/V 142
Loop length: 43 mm
L/P/V phase: MA1-MA1
L/P/V date: 470/80-520/30
Maastricht date: C-D (460/80-565)



1487.6

Ring rod: iron
Find number: 1487.6
Condition: complete
Type: L/P/V 353
L/P/V phase: MA 2-MR 3
L/P/V date: 520/30-700/10
Maastricht date: D-I (510/20-725)



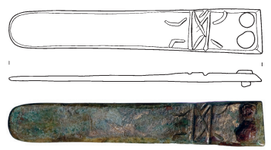
1487.7

Indeterminate objects: iron
Find number: 1487.7
Condition: fragments
Type: no type identification available



1526.1

Coin: copper alloy
Find number: 1526.1
Condition: complete, damaged
Type: Dupondius/As; Crispina
Diameter: 12 mm
Phase: Roman
Date: 177-183 AD
Maastricht date: Roman



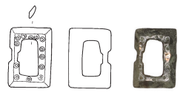
1576.1

Strap end: copper alloy
Find number: 1576.1
Condition: complete
Type: no type identification available
Length: 90 mm
Maastricht date: E-F (565-610)



1618.1

Indeterminate fragments: iron
Find number: 1618.1
Condition: fragments
Type: no type identification available



1618.2

Buckle (purse): copper alloy, dot-in-circle decoration
Find number: 1618.2
Condition: tongue missing
Type: Siegmund Sna 1.1
Loop length: 21 mm
Rhineland phase: 5-5
Rhineland date: 555-570
Alternative type: L/P/V 124 (MA1-MR1: 470/80-630/40)
Maastricht date: D-E (510/20-580/90)



1645.1

Biconical pot: reduced, roulette stamp and groove decoration
Find number: 1645.1
Condition: complete
Type: Siegmund Kwt 3.12
Maximum height: 86 mm
Rhineland phase: 6 (7)
Rhineland date: 570-585 (610)
Maastricht date: E-F (565-610/20)



1659.1

Seax: iron
Find number: 1659.1
Condition: restored (completed)
Type: FAG Sax1
Grip length: 68 mm
Blade length: 169 mm
FAG phase: 3-7
FAG date: 510/25-580/90
Maastricht date: D-E (510/20-580/90)



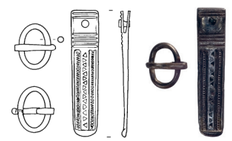
1691.1

Ribbed beaker (pottery): reduced
Find number: 1691.1
Condition: complete
Type: L/P/V 398
Maximum height: 100 mm
L/P/V phase: MR1-MR2
L/P/V date: 600/10-660/70
Maastricht date: G-H (610/20-670/80)



1692.1

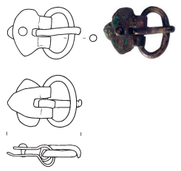
Beaker with barbotine decoration
Find number: 1692.1
Condition: neck and handles missing, foot reconstructed
Type: Dragendorff 53
Maximum height: 152 mm
Phase: Roman
Date: 150-250
Maastricht date: 150-250



1739.1, 3

Simple buckle: copper alloy
Find number: 1739.1
Condition: complete
Type: Siegmund Sna 2.2
Loop length: 16 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Maastricht date: E-H (565-670/80)

15



1739.2

Plate buckle: copper alloy
Find number: 1739.2
Condition: Complete
Type: Siegmund Sna 2.2
Loop length: 18 mm
Plate length: 7 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Maastricht date: E-H (565-670/80)

Strap end: copper alloy
Find number: 1739.3
Condition: complete
Type: Siegmund Sna 2.2
Plate length: 44 mm
Rhineland phase: 7-8
Rhineland date: 585-640
Maastricht date: E-H (565-670/80)



1739.4

Rivet
Find number: 1739.4
Condition: complete
Type: no type identification available
Diameter: 7 mm



1739.5

Indeterminate fragment: iron
Find number: 1739.5
Condition: fragment
Type: no type identification available
Length: 59 mm



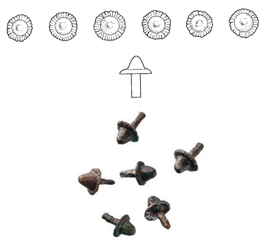
1740.1

Ring (belt appendage): copper alloy
Find number: 1740.1
Condition: complete
Type: no type identification available
Ring diameter: 33 mm



1755.1

Biconical pot: oxidized, single stamp and groove decoration
Find number: 1755.1
Condition: complete, but restored
Type: Siegmund Kwt 4.11.
Maximum height: 142 mm
Rhineland phase: 7(end)-8A
Rhineland date: 585-610
Alternative type: Fag Kwt 5B (5-7: 565-640/50)
Alternative type: L/P/V 385 470/80- 520/30 (520/30-560/70)
Maastricht date: E-G (565-640/50)



1755.2-6, 8

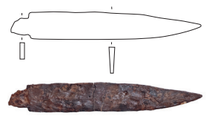
Rivet: copper alloy
Find number: 1755.2
Condition: complete
Type: Unique specimen?
Alternative type: St. Jakob bei Polling (Dannheimer 1974)
Alternative type: 600-700
Maastricht date: G-I (610/20-725)

Rivet: copper alloy
Find number: 1755.3
Condition: complete
Type: Unique specimen?
Alternative type: St. Jakob bei Polling (Dannheimer 1974)
Alternative type: 600-700
Maastricht date: G-I (610/20-725)

Rivet: copper alloy
Find number: 1755.4
Condition: complete
Type: Unique specimen?
Alternative type: St. Jakob bei Polling (Dannheimer 1974)
Alternative type: 600-700
Maastricht date: G-I (610/20-725)

Rivet: copper alloy
Find number: 1755.5
Condition: complete
Type: Unique specimen?
Alternative type: St. Jakob bei Polling (Dannheimer 1974)
Alternative type: 600-700
Maastricht date: G-I (610/20-725)

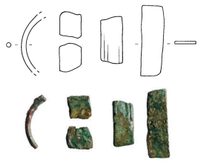
Rivet: copper alloy
Find number: 1755.6
Condition: complete
Type: Unique specimen?
Alternative type: St. Jakob bei Polling (Dannheimer 1974)
Alternative type: 600-700
Maastricht date: G-I (610/20-725)



1755.7

Knife: iron
Find number: 1755.7
Condition: Grip partly missing
Type: no type identification available
Grip length: 15 mm
Blade length: 121 mm

Rivet: copper alloy
Find number: 1755.8
Condition: complete
Type: Unique specimen?
Alternative type: St. Jakob bei Polling (Dannheimer 1974)
Alternative type: 600-700
Maastricht date: G-I (610/20-725)



1755.9

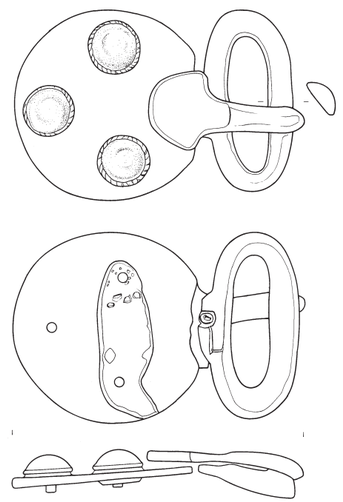
Indeterminate fragments: copper alloy
Find number: 1755.9
Condition: fragments
Type: no type identification available, some may have been parts of fibulae

Unidentifiable object (under restoration/missing)
Find number: 1755.10
Condition: under restoration
Type: no type identification available



1755.4, 11

Shards: pottery
Find number: 1755.11
Condition: 6 fragments
Type: no type identification available





1771.1

Plate buckle: iron, round plate, 3 rivets with copper alloy inlay
Find number: 1771.1
Condition: complete
Type: FAG Gür 4.1/2
Loop length: 66 mm
Plate length: 65 mm
FAG phase: 5-6
FAG date: 565-610/20
Alternative type: L/P/V 148 (MA3-MR1: 560/70-630/40)
Maastricht date: E-F (565-610)



1771.2

Rod: iron
Find number: 1771.2
Condition: corroded, fragmented
Type: no type identification available



1779.1

Copper alloy: fragment
Find number: 1779.1
Condition: fragment
Type: no type identification available



1827.1

Glass bead: Blue transparent, undecorated
Find number: 1827.1
Condition: complete
Type: S-1.2
Shape: long, cylindrical
Number of beads: 1
Combination group: B-C
Rhineland date: 440-555
Alternative type: FAG c. group II (2-5: 400-580/90)
Maastricht date: E-H (565-670/80)

Glass bead: white opaque, undecorated
Find number: 1827.2
Condition: complete
Type: S-1.3
Shape: cylinder, pentagonal
Number of beads: 1
Combination group: D-I
Rhineland date: 530-705
Maastricht date: E-H (565-670/80)

Glass bead: white opaque, decorated
Find number: 1827.3
Condition: complete
Type: S-32.7
Shape: globular, compressed
Number of beads: 4
Combination group: E-H
Rhineland date: 530-670
Alternative type: FAG c.group IV (5-8: 565-670/80)
Alternative type: Koch 34,4-34,5 (3: 565-590/600)
Maastricht date: E-H (565-670/80)

Glass bead: yellow opaque, decorated
Find number: 1827.4
Condition: complete
Type: S-33.9
Shape: globular, compressed
Number of beads: 1
Combination group: B-F
Rhineland date: 440-640
Maastricht date: E-H (565-670/80)

Glass bead: yellow opaque, undecorated.
Find number: 1827.5
Condition: complete
Type: S-33.3
Shape: globular, compressed
Number of beads: 9
Combination group: (D-H) E-G
Rhineland date: 530-670
Maastricht date: E-H (565-670/80)

Glass bead: yellow opaque, decorated.
Find number: 1827.6
Condition: complete
Type: no type identification available (decoration colour indeterminate)
Shape: globular, compressed
Number of beads: 1
Maastricht date: E-H (565-670/80)

Glass bead: yellow/red? opaque, decorated
Find number: 1827.7
Condition: complete, base colour corroded, might have been red.
Type: S-35.8?
Shape: globular compressed
Number of beads: 8
Combination group: F-H
Rhineland date: 570-670
Alternative type: FAG c. group III (3-5: 460/80-580/90)
Alternative type: Koch 1977, 34 (Stufe 1-4: 525/30-620/30)
Maastricht date: E-H (565-670/80)

Glass bead: yellow opaque, decorated.
Find number: 1827.8
Condition: complete, decoration colour corroded, might have been red.
Type: S-33.7?
Shape: globular compressed
Number of beads: 2
Combination group: D-H
Rhineland date: 530-670
Alternative type: FAG c.group III (3-5: 460/80-580/90)
Maastricht date: E-H (565-670/80)

Glass bead: indeterminate, opaque, undecorated.
Find number: 1827.9
Condition: complete
Type: no type identification available
Shape: globular compressed
Number of beads: 1
Maastricht date: E-H (565-670/80)



1829.1

Biconical pot: reduced, groove decoration
Find number: 1829.1
Condition: complete
Type: Siegmund Kwt 2.32.
Maximum height: 92 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: FAG Kwt 2A (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)



1838.1

Biconical pot: oxidized, single stamp decoration
Find number: 1838.1
Condition: complete
Type: Siegmund Kwt 2.21.
Maximum height: 61 mm
Rhineland phase: 3-4
Rhineland date: 485-555
Alternative type: FAG Kwt 2B (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)



1838.2

Biconical pot: reduced, undecorated
Find number:
Condition: complete
Type: Siegmund Kwt 2.43.
Maximum height: 94 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Alternative type: FAG S-Kwt 2.43 (6-8: 580/90-670/80)
Alternative type: L/P/V 392 (560/70-660/70)
Maastricht date: F-H (580/90-670/80)



1838.3

Biconical pot: reduced, groove decoration
Find number: 1838.3
Condition: complete
Type: Siegmund Kwt 2.32.
Maximum height: 92 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: FAG Kwt 2A (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)



1838.4

Bowl: reduced, undecorated
Find number: 1838.4
Condition: complete
Type: Siegmund Sha 2.5?
Maximum height: 64 mm
Rhineland phase: 7-8?
Rhineland date: 585-640?
Maastricht date: F-G? (580/90-640/50)



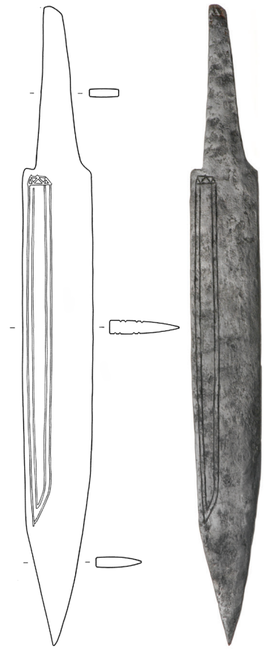
1838.5

Bowl: reduced, undecorated
Find number: 1838.5
Condition: complete
Type: Siegmund Sha 2.21.
Maximum height: 75 mm
Rhineland phase: 5-8
Rhineland date: 555-610/40
Alternative type: L/P/V 403 (second half MA2-MA3: 540/50-600/10)
Alternative type: FAG S-Sha 2.21 (4-7: 510/25-640/50)
Maastricht date: D-G (510/20-640/50)



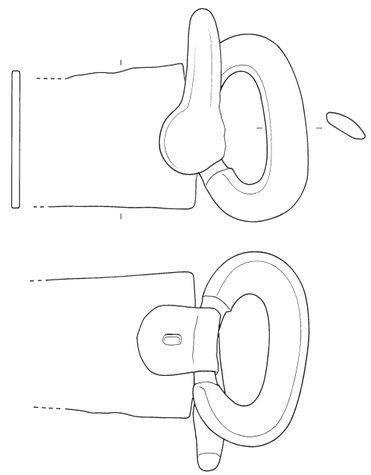
1838.7

Glass dish
Find number: 1838.7
Condition: complete
Type: Feyeux 2003, 81.3K
Maximum height: 47 mm
Feyeux date: 500-600
Maastricht date: D-E (510/20-580/90)



1843.3

Seax: iron
Find number: 1843.3
Condition: complete
Type: Fag Sax2.1
Blade length: 337 mm
Grip length: 119 mm
Rhineland phase: 6-7
Rhineland date: 580/90-640/50
Maastricht date: F-G (580/90-640/50)





1843.1

Plate buckle: iron
Find number: 1843.1
Condition: plate partly missing
Type: Siegmund Gür 4.5.
Loop length: 68 mm
Plate length: 53 mm
Rhineland phase: 8-8
Rhineland date: 610-640
Maastricht date: G (610/20-640/50)

Lance (head): iron, split shaft
Find number: 1843.4
Condition: complete
Type: Siegmund Lan 1.1.a
Length: 256 mm
Rhineland phase: 4-6
Rhineland date: 530-585
Alternative type: FAG S-Lan1.1.a (4-5: 510/25-580/90)
Maastricht date: D-E (510/20-580/90)



1843.2

Rivet: copper alloy, semi-perforated
Find number: 1843.2
Condition: complete
Type: Fag S-Sax 4.1
Diameter: 13 mm
Rhineland phase: 7-8
Rhineland date: 610/20-670/80
Alternative type: L/P/V 69 (MR1-MR2: 600/10-660/70)
Maastricht date: G-H (610/20-670/80)

Francisca/Axe: iron
Find number: 1846.1
Condition: under restoration (missing)
Type: no type identification available



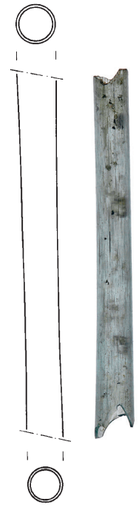
1849.1

Ring (belt appendage): copper alloy
Find number: 1849.1
Condition: complete
Type: no type identification available
Ring diameter: 17 mm



1849.2

Ring (belt appendage): copper alloy
Find number: 1849.2
Condition: complete
Type: no type identification available
Ring diameter: 19 mm



1849.3

Glass: cylindrical tube, blue
Find number: 1849.3
Condition: parts missing
Type: no type identification available
Maximum height: 135 mm

Ring (belt appendage?): copper alloy
Find number: 1849.4
Condition: fragment
Type: L/P/V 357
L/P/V phase: MA2-MR 1
L/P/V date: 520/30-630/40
Maastricht date: D-G (510/20-640/50)



1849.5

Mount: copper alloy
Find number: 1849.5
Condition: complete
Type: no type identification available



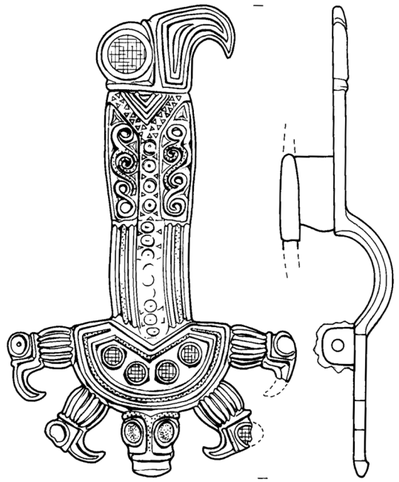
1849.6

Fragment of ring?: iron
Find number: 1849.6
Condition: fragment
Type: no type identification available



1850.1

Equal armed brooch: copper alloy
Find number: 1850.1
Condition: missing (ancient photograph Ypey)
Type: L/P/V 291
Length: 54 mm
L/P/V phase: MR3
L/P/V date: 660/70-700/10
Maastricht date: I-J (670/80->725)





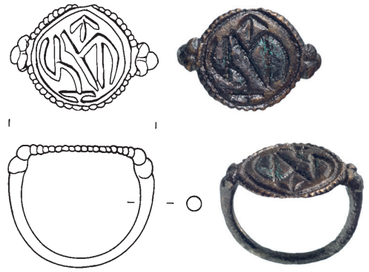
2965.1 (SCALE 1:1)

Bow brooch: silver, gilded, garnet and glass inlay
Find number: 2965.1
Condition: some glass/garnet stones missing
Type: L/P/V 268
Length: 85 mm
L/P/V phase: MA1-MA2
L/P/V date: 470/80-560/70
Maastricht date: C-D (460/80-565)



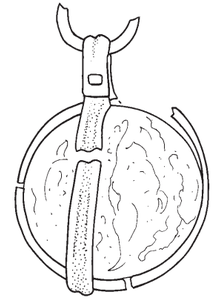
8888.1

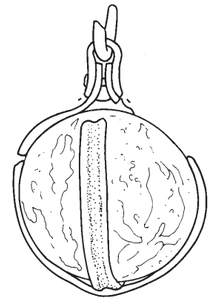
Comb case: connecting plate, antler
Find number: 8888.1
Condition: damaged, fragment
Type: Siegmund Ger 3.23.
Length: 104 mm
Rhineland phase: 4-7
Rhineland date: 530-610
Maastricht date: D-F (510/25-610/20)

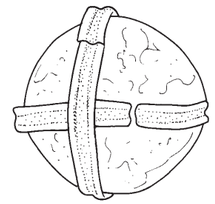


8888.2 (SCALE 1:1)

Finger ring: copper alloy
Find number: 8888.2
Condition: complete
Type: Siegmund Ger 2.6
Ring bezel diameter: 18 mm
Rhineland phase: 8-9
Rhineland date: 610-670
Maastricht date: G-H (610/20-670/80)



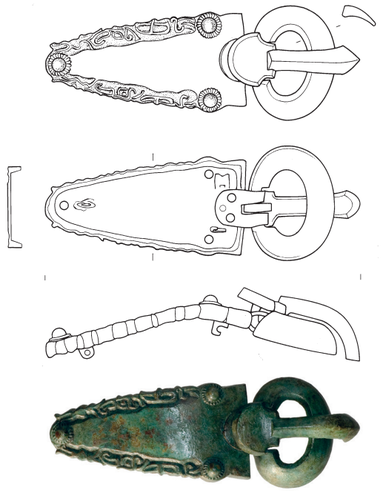






8888.3 (SCALE 1:1)

Amulet: (iron?) ball in silver casing
Find number: 8888.3
Condition: casing and suspension partly missing
Type: Siegmund Ggh 2.
Diameter iron ball: 32 mm
Rhineland phase: 4-8
Rhineland date: 530-640
Alternative type: FAG S-Ggh.2. (3-7: 460/80-640/50)
Maastricht date: C-G (460/80-640/50)



8888.4

Plate buckle: copper alloy, hollow plate, cast decoration
Find number: 8888.4
Condition: complete
Type: unique specimen?
Loop length: 40 mm
Plate length: 70 mm
Date: 520/30-560/70
Maastricht date: D (510/20-565)



8888.5

Disc: lead
Find number: 8888.5
Condition: complete
Type: no type identification available

Bird brooch: missing, probably gold with filigree and garnets
Find number: 8888.6
Condition: missing
Type: unique specimen?
Alternative type: Thiry; bird brooches with *Filigrain- und Cabochonverzierung*
Alternative type: 550-600
Maastricht date: E-F (565-610/20)



8888.7

Rod: copper alloy
Find number: 8888.7
Condition: complete?
Type: no type identification available



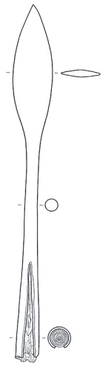
1683.1

Bowl/dish, red
Siegmund Sha2.21
Rhineland phases: 5- 8
Rhineland date: 555-610/640



1687.2

Rivet (seax?), copper alloy



1843.4

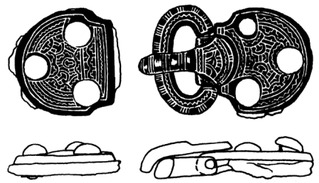
Lance head, iron, split shaft
Siegmund Lan1.1a
Rhineland phases: 4-6
Rhineland date: 530-585



8888-6

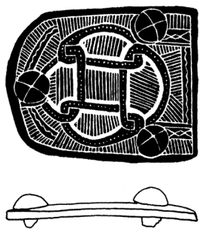
Bird brooch, gold, filigree
Thiry bird brooch group: *Filigran- und Cabochonverzierung*
Thiry date: 550-600

FINDS FROM THE SPOIL HEAPS



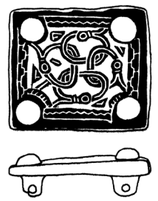
01.1

Plate buckle: iron, round plate with silver inlay imitating garnet inlay (mushroom ornaments), three (copper alloy?) rivets.
Find number: spoil heap find 01.1
Condition: missing
Type: Siegmund Gür 4.1 or 4.2
Loop length: 39 mm
Plate length: 35 mm
Rhineland phase: 7
Rhineland date: 585-610
Counter plate: iron, round plate with silver inlay imitating garnet inlay (mushroom ornaments), thr (copper alloy?) rivets
Find number: spoil heap find 01.2
Condition: missing
Type: Siegmund Gür 4.1 or 4.2
Plate length: 37 mm
Rhineland phase: 7
Rhineland date: 585-610



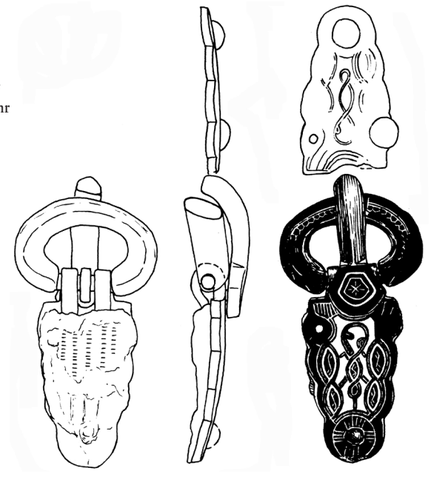
01.2

Counter plate: iron, tongue shaped plate with silver inlay in 'Faltenband' style. The bands are dotted bands. The rest of the plate is decorated with tripes and zig zag lines and plated lines that create the impression of bands.
Find number: spoil heap find 02.1
Condition: missing
Plate length: 68 mm



03.1

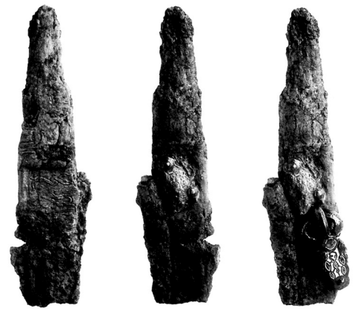
Back plate: iron, rectangular with bichrome animal style inlay
Find number: spoil heap find 03.1
Condition: missing
Type: Siegmund Gür 4.7
Length: 50 mm
Rhineland phase: 9
Rhineland date: 640-670



04.1, 2

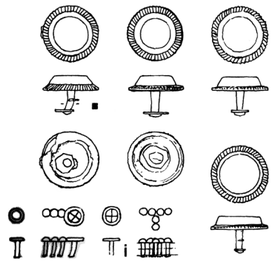
Plate buckle: iron, triangular plate with (bichrome?) inlay of a single braid. This plate buckle was attached to the seax (4), together with a counter plate, which was not cleaned and restored. Drawings or photographs of the cleaned counter plate are not available.
Find number: spoil heap find 04.1
Condition: missing
Type: Siegmund 4.7/8
Plate length: 59 mm
Buckle length: 50 mm
Rhineland phase: 9
Rhineland date: 640-670

Counter plate: iron, triangular plate with (bichrome?) inlay of a single braid.
Find number: spoil heap 04.2
Condition: missing
Type: Siegmund 4.7/8
Plate length: 58 mm
Rhineland phase: 9
Rhineland date: 640-670



04.3

Seax: iron, with leather scabbard remains with decoration
Find number: 04.3
Condition: missing



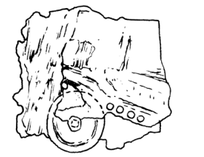
04.4

Seax rivets (4x) and scabbard nails: copper alloy, found attached to seax 04.3. The rivets have carved edges, which may point to a relatively late date.
Find number: 04.4
Diameter: 20 mm
Condition: missing



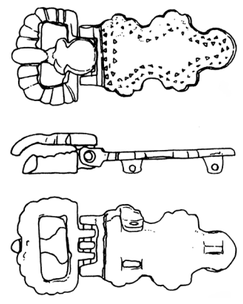
04.5

Scabbard edge reinforcement: copper alloy, L-shaped with three nails, found attached to seax 04.3.
Find number: 04.5
Length: 82 mm
Condition: missing



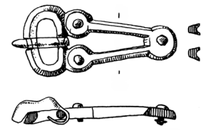
04.6

Back plate, with seax rivet (copper alloy) and 4 scabbard nails corroded to it
Find number: 04.6
Condition: missing
Length plate: 45 mm
Diameter rivet: 20 mm



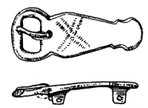
05.1

Plate buckle: irregular ('baroque') outline with stamped in decoration of triangles, hinged construction, ribbed buckle loop, and three eyes on the back of the plate. Probably copper alloy.
Find number: 05.1
Condition: missing
Type: LPV 164
Plate length: 56 mm
Plate width: 30 mm
Loop length: 35 mm
LPV phase: MA3-MR1
LPV date: 560/70-630/40



06.1

Plate buckle: copper alloy, fixed plate, open work
Find number: 06.1
Condition: missing
Plate length: 40 mm
Loop length: 26 mm



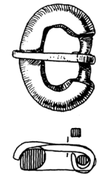
07.1

Plate buckle (shoe): (copper alloy?), fixed plate
Find number: spoil heap find 07.1
Condition: missing:
Plate length: 33 mm
Loop length: 19 mm



08.1

Plate buckle (shoe): (copper alloy?), fixed plate
Find number: spoil heap find 08.1
Condition: missing
Plate length: 27 mm
Loop length: 21 mm



09.1

Simple buckle:
Find number: spoil heap find 09.1
Condition: missing:
Loop length: 38 mm



10.1

Simple buckle: copper alloy
Find number: spoil heap find 10.1
Condition: missing
Loop length: 39 mm



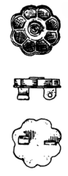
11.1

Belt stud: copper alloy?
Find number: spoil heap find 11.1
Condition: missing
Length: 23 mm



12.1

Strap end: copper alloy with stamped in decoration of stripes and dots
Find number: spoil heap find 12.1
Condition: missing
Length: 53 mm



13.1

Disc brooch: rosette, one zone of garnets, silver middle field (counterpart of 1484, context: 95)
Find number: 13.1
Condition: missing
Type: Siegmund Fib 1.3
Diameter: 18 mm
Rhineland phase: 4-5
Rhineland date: 530-570
Alternative type: Vielitz 2003, D10.34? (480/500-600/10)
Alternative type: FAG S-Fib 1.3 (4: 510/25-565)
Maastricht date: C-F? (460/80-610)



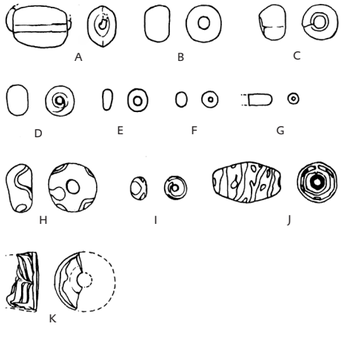
14.1

Rivet head/mount?: copper alloy with engraved animal style decoration
Find number: spoil heap find 14.1
Condition: missing
Diameter: 35 mm



15.1

Pin:
Find number: spoil heap find 15.1
Condition: missing
Length: 82 mm



16.1-11

A Bead: rock crystal
Find number: 16.1
B Glass bead: red/brown opaque
Find number: 16.2
C Glass bead: blue (cobalt) opaque
Find number: 16.3
D Glass bead: dark blue opaque
Find number: 16.4
E Glass bead: light yellow opaque
Find number: 16.5
F Glass bead: light yellow opaque
Find number: 16.6
G Glass bead: green opaque
Find number: 16.7
H Glass bead: light green transparent, with white undulating thread
Find number: 16.8
I Glass bead: red opaque, with yellow crossing thread
Find number: 16.9
J Glass bead: brown opaque, with yellow decoration
Find number: 16.10
K Glass bead: light blue transparent, with combed threads (white?) and a cobalt blue edge band
Find number: 16.11



17.1

Knob (of bow brooch?): copper alloy
Find number: spoil heap find 17.1
Condition: missing
Length: 17 mm



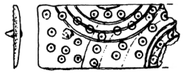
18.1

Knob (of bow brooch?): copper alloy
Find number: spoil heap find 18.1
Condition: missing
Length: 6 mm



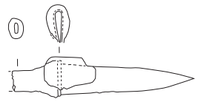
19.1

La Tene bracelet: fragment
Find number: spoil heap find 19.1
Condition: missing
Length: 23 mm



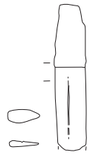
20.1

Connection plate of comb: antler
Find number: spoil heap find 20.1
Condition: missing
Length: 50 mm



21.1

Knife: iron, with band of sheet metal (iron) around grip base, remains of wood and leather/wood of the scabbard (underneath the band of iron).
Find number: spoil heap find 21.1
Condition: missing
Length: 130 mm



22.1

Knife: iron
Find number: spoil heap find 22.1
Condition: missing
Length: 105 mm



23.1

Lance head or iron socket of wooden lance shaft?: iron (with wood remains in shaft?)
Find number: spoil heap find 23.1
Condition: missing
Length: 156 mm



24.1

Bone awl?
Find number: spoil heap find 24.1
Condition: missing
Length: 87 mm



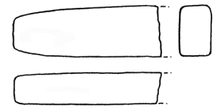
25.1

Slotted plate: copper alloy?
Find number: spoil heap find 25.1
Condition: missing
Length: 23 mm



26.1

Ribbed beaker: pottery
Find number: spoil heap find 26.1
Condition: missing
Type: LPV 398
Length: -
LPV phase: MR1-MR2
LPV date: 600/601-660/670
See for discussion: Theuws/Van Haperen 2012, 103-104.



27.1

Touch stone: lydite
Find number: spoil heap find 27.1
Condition: missing
Length: 53 mm
It is mentioned that it was found with the seax.

Appendices

Appendix 2.1
Catalogue of all the excavations and observations in and around the Vrijthof square in Maastricht since the beginning of the nineteenth century (numbers with an asterisk* will be discussed more in detail in chapter 2).

In the catalogue the following information is given for each entry: 1) the year concerned, the nature of the find context and the location, the responsible archaeologist or institution, the coordinates and the number of the file in the archive of the Municipal Archaeological Service Maastricht; 2) all literature; 3) a short characterization of the observations. The numbers of each catalogue entry are indicated on the map in figure 2.11.

1* 1821: Demolition, former hospital of Saint Servatius on the corner of Platielstraat-Vrijthof-Bredestraat.
Coordinates: X 176.272 - Y 317.692.
Municipal Archaeological Service, file 13.
- Van Heylerhoff 1825, 110; Van Heylerhoff 1829, 105-111; Habets 1882a, 84-86; Byvanck 1947, 7; Hardenberg 1962, 33-36; Panhuysen/Leupen 1990, 441, 446; Hulst 1994, 17.
- After the demolition of the Saint-Servatius hospital foundations were laid for new buildings. During construction works walls were discovered that 'looked very old'. They were built with crude sandstone blocks, which are unfamiliar in Maastricht. Moreover stonework of 'towers' or circular walls were discovered standing in mud-like soil which contained a large quantity of antiquities, such as fragments of stone sculpture with a height of more than one 'aune' (= one 'el' = 1 metre). Fine pieces of sculpture of drapery and well-preserved capitals of columns, various pieces of pottery and jugs, oxidized horse shoes and spurs, a paddle and lots of posts of oak with cross beams were found. All this suggests according to Heylerhoff that the muddy terrain is the remnant of a moat filled with water encircling a castle (Heylerhoff 1829). Van Heylerhoff interpreted the remains as the quarters of a Roman commander, which was later used by the ancestors as well as the offspring of Charlemagne. Habets further developed the theories of Van Heylerhoff.

2 1857: Stray finds, Henric van Velde keplein.
Coordinates: X 176.150 - Y 317.630.
Municipal Archaeological Service, file 68.
- Schaepkens 1858, 372.
- *'Des objets de toilette déterrés à proximité des églises de Saint-Servais et de Saint-Jean, aux encloîtres dans les tranchées pratiquées pour l'établissement des conduits de gaz, des médailles romaines mises au jour par les mêmes travaux, sont autant de souvenirs qui refont de temps en temps l'époque reculée d'où l'ancien Mosae Trajectum tire son origine.'* (Grave) finds of the Roman period found during the construction of a gas pipe.

3 1864: Stray find, Henric van Veldekeplein / Sint Servaasklooster 33.
Coordinates: X 176.100 - Y 317.618.
Municipal Archaeological Service, file 68.
- N. N. 1864, 362 (Dons no. 7); Habets 1882a, 83; Goossens 1926, 52; Byvanck 1947, 8; Sprenger 1948, 33.
- *'M(ême) de l'avocat Boots: trois urnes cinéraires, trouvées, en creusant le terrain pour établir les fondations de la maison de M. l'avocat van Oppen, aux encloîtres Saint-Servais en cette ville.'* While constructing the foundations for the house of Mr. Van Oppen Roman objects from a fourth-century (?) grave were found.

4 1867: Stray find, Sint Servaasklooster 32.
Coordinates: X 176.118 - Y 317.556.
Municipal Archaeological Service, file 67.
- Habets 1882a, 83-84; Goossens 1926, 59; Byvanck 1947, 8; Sprenger 1948, 33.
- While constructing a garden remains of a grave with a Roman lamp with the atelier stamp *LCVPPI* were found.

5 1868: Stray find, Platielstraat, westside.
Coordinates: X 176.278 - Y 317.700.
Municipal Archaeological Service, file 16.
- Habets 1882a, 86; Sprenger 1948, 29.
- Find of a Roman lamp with the atelier stamp SOLLVS F. during construction of a sewer.

6 22 August 1890: Research in the central aisle of the church of Saint Servatius (P. Doppler).
Coordinates: X 176.129 – Y 317.698.
- Doppler 1890, 9-10; Flament 1890, 187-224; Panhuysen 1991, 456-457.
- Research (digging) to find the monument for Monulfus and Gondulfus, which was buried in 1628.

7 31 August 1903: Research in the central aisle of the church of Saint Servatius (P. Doppler).
Coordinates: X 176.129 – Y 317.698.
- Doppler 1903, 377-387; Doppler 1904, 7-8; Panhuysen 1991, 455-456.
- Research (digging), on the basis of an eighteenth-century document, to find the grave and lead grave cross of the eleventh-century provost Geldulfus, which were discovered before the 14th of February 1702.

8 1908: Stray find, Kruisherengang 10 (outside the map in fig. 2.11).
Coordinates: X 175.855 - Y 317.685.
Municipal Archaeological Service, file 90.
- N. N. 1909, 498 (1908); Rutten 1909, 9-10; Goossens 1926, 52; Byvanck 1947, 9; Sprenger 1948, 33.
- Roman pottery, considered to be grave finds. *'Een kruikje en schoteltje (Romeinsch) in bruikleen gegeven door het gemeentebestuur van Maastricht en gevonden in den Kruisheerengang aldaar. […] alsmede een Romeinsch lepeltje en eene Romeinsche munt […]'*

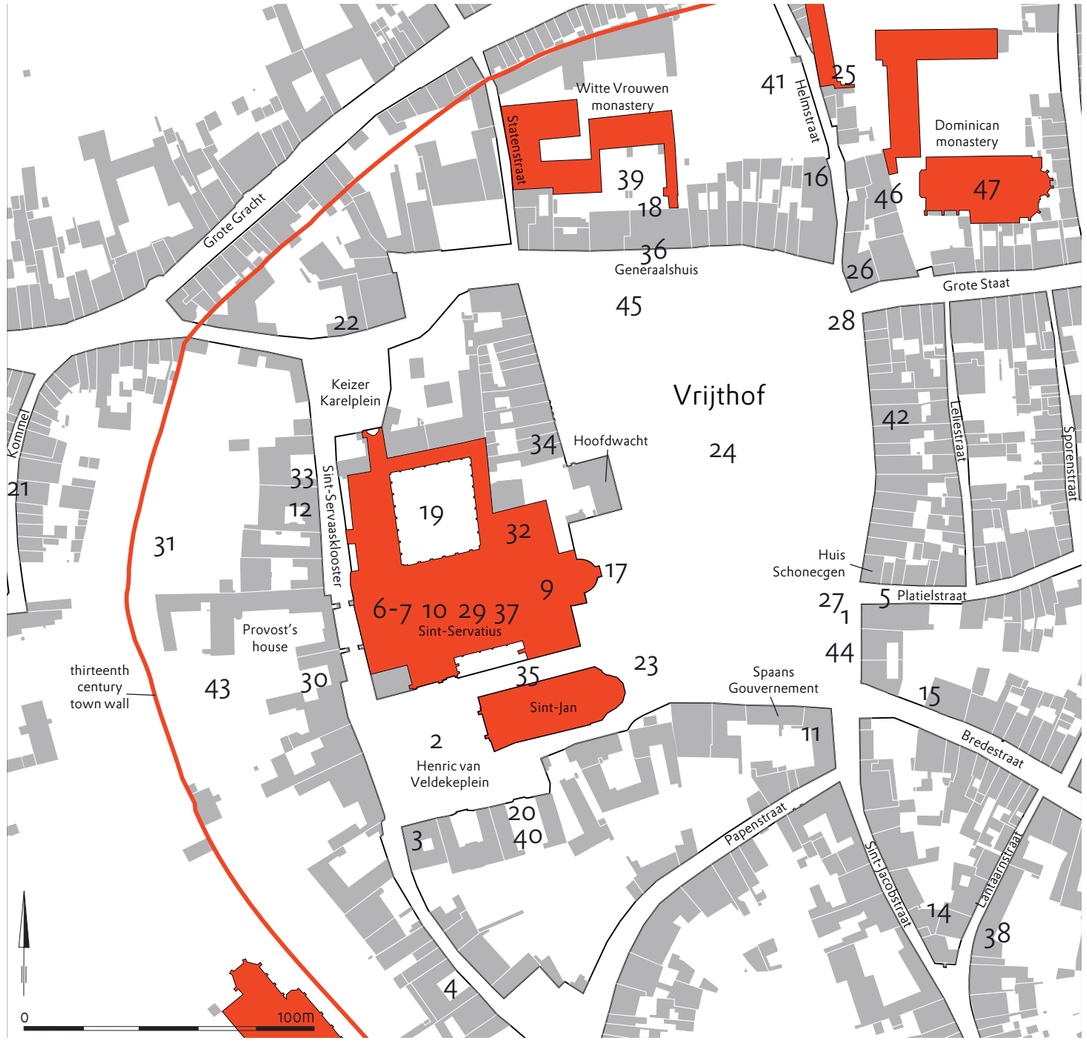
9 ca. 1915: Research in the church of Saint Servatius (J. Kalf).
Coordinates: X 176.129 – Y 317.698.
- Kalf 1915-1916, 13-15; Kalf 1916, 17-44.
- Many trial pits were dug in the floors of the crypts and the church and holes in the walls were cut in order to carry out architectural history research.

10 July-August 1919: Research in the central aisle of the church of Saint Servatius (Municipal Committee for Monuments, W. Goossens).
Coordinates: X 176.129 – Y 317.698.
- Flament 1890, 187-224; Goossens 1920, 64-65.
- Research (digging) of the grave chamber of the bishops Monulfus and Gondulfus during which for the first time a grave with Frankish grave goods was found.

11* 16 July – 15 October 1920: Observations at Jacobstraat 2, between Vrijthof and Papenstraat (W. Goossens).
Coordinates: X 317.645 - Y 176.250.
Municipal Archaeological Service, file 108.
- N. N. 1920, 13, 78; Diary W. Goossens, RHCL Maastricht, RAL cat.no. 16.0536, archive Goossens, Ch. 37, 503, 516, 520, 522, 523, 524, 525; Hulst 1994, 17-18.
- Large medieval walls (with a width of 80 to 120 cm) of black sandstone (Dutch: kolenzandsteen) with sandy yellow mortar were observed at a depth of four to six metres below the surface. No finds from the early Middle Ages or Roman period were mentioned.

12 11 October 1926: Observation at Keizer Karelplein / Sint Servaasklooster 8 (W. Goossens).
Coordinates: X 176.055 - Y 317.764.
Municipal Archaeological Service, file 66.
- N. N. 1926, 70; Goossens 1927, 55-59; Byvanck 1947, 8; Sprenger 1948, 33.

Fig. 2.11
Mapping of the excavations and observations in and around the Vrijthof square in Maastricht. The background map is the cadastral map of 1830.



- A cremation grave built of *tegulae* and with grave goods of the third century was found in the cellar of the Limburgse Bankvereeniging

13 1930: Stray find, De Kommel / Kruisherengang (Bijzondere Scholen) (outside the map in fig. 2.11).
Coordinates: X 175.855 - Y 317.685.
Municipal Archaeological Service, file 90.
- N. N. 1930, 60.
- Medieval pottery

14 1931: Stray find, corner of Lantaarnstraat / Kapoenstraat / Sint Jacobstraat 13.
Coordinates: X 176.305 - Y 317.575.
Municipal Archaeological Service, file 134.
- Nyst 1932, 24; Vermeulen 1935, 62; De Boone [1960], 176.
- During construction work on the site of the former Maastricht School of Music (1884-1924), pottery – mainly medieval, but also Roman and Merovingian material – was found. *'Een en twintig stuks Romeinsche, Frankische en Middeleeuwsche voorwerpen gevonden bij het maken der gebouwen op het terrein der oude Muziekschool te Maastricht. Geschonken door de heeren Meese en Godfroy aldaar.'*

15 1932: Stray find, Bredestraat 30.
Coordinates: X 176.285 - Y 317.670.
Municipal Archaeological Service, file 125.
- Sprenger 1948, 29.
- Various finds (medieval pottery), including a Roman bronze cock (bird).

16 1932: Stray find, Helmstraat 14.
Coordinates: X 176.240 - Y 317.865.
Municipal Archaeological Service, file 130.
- N. N. 1932, 72; Sprenger 1948, 29.
- Building of Hotel Du Casque. Roman finds, including fourth-century samian ware.

17 10 April 1934: Observation at Vrijthof southwest (J. Sprenger).
Coordinates: X 176.190 - Y 317.715.
Municipal Archaeological Service, file 64.
- Sprenger 1934, 35.
- Two north-south oriented foundations of limestone (Dutch: *mergel*) were discovered east of the apse of Saint-Servatius Church at a depth of 140-170 cm. They were 90 and 120 cm wide. Many skeletal remains were found between the foundations and to the west of the westernmost one.

18 26 October 1952: Stray find, Vrijthof 47 (J. Sprenger).
Coordinates: X 176.180 - Y 317.840.
Municipal Archaeological Service, file 81.
- Report in file.
- Skeletal remains were found beneath the floor of the former police station (now Vrijthof Theatre) on its western side, in a layer with Roman pottery fragments. According to the writer of the report it concerned an inhumation grave from the third century, for which there are however no convincing arguments.

19 1953-1954: Excavation of the Cloister, Saint-Servatius church (ROB).
Coordinates: X 176.098 – Y 317.714.
Documentation RACM/ROB.
- Timmers 1955, 77-84; Glazema/Ypey [1956], 44-92; Verwers 1986, 56-71; Soeters 1989a; Soeters 1989b.
- Full-scale excavation was carried out because the cloister garden was going to be restructured. Hundreds of burials from the late Roman period up to the end of the *Ancien Régime* were found, as well as building remains of a cloister older than the present one and a small early medieval chapel.

20 1955: Stray finds, Henric van Veldekeplein 25.
Coordinates: X 176.140 - Y 317.610.
Municipal Archaeological Service, file 86.
- Renaud 1958, 1-8; Renaud 1983, 22-30; Baumgartner/Krueger 1988, 237 etc., especially 261, no. 288.
- Important glass finds from the thirteenth century were discovered during reconstruction of the former Music Hall, the Staar-building.

21 Winter 1957-1958: Stray find, De Kommel.
Coordinates: X 175.940 - Y 317.725.
Municipal Archaeological Service, file 90.
- Triens of MADELINUS (Dorestat).

22 August 1958: Observation at Keizer Karelplein 12 (J. Sprenger).
Coordinates: Y 176.070 - X 317.820.
Municipal Archaeological Service, file 97.
- Sprenger 1958a, 177-182
- A pavement and layers of raised soil were found. They were wrongly interpreted as remains of the Roman road (Tongres – Cologne).

23 1961 : Observation at Vrijthof southwest (J. Renaud, ROB).
Coordinates: X 176.205 - Y 317.700.
Municipal Archaeological Service, file 63.
- Renaud 1961, *94.
- Medieval limestone foundations were discovered during the construction of sewers.

24* 19 May 1969 – 1 April 1970: Excavation at Vrijthof (J. Bloemers, ROB).
Coordinates: X 176.220 - Y 317.750.
Documentation RACM/ROB; Municipal Archaeological Service, file 65 (copy).
- N. N. 1969, 11-12; Bloemers 1970a, *140-*142; Bloemers 1971-1972, 52-54; Bloemers 1973a, 244-252; Bloemers 1974, 10-12; Ypey 1978, 573-585.
- Remains of the Roman road Tongres – Maastricht were found, as well as remains of buildings in wood and stone along this road (first – third centuries). Moreover a Merovingian cemetery with lots of grave goods, a Carolingian cemetery, remains of early medieval habitation, a black layer of the ninth to fourteenth century, and remains of late medieval and modern-period habitation were found.

25 1969-1970: Observation Helmstraat / Entre-Deux (J. Felder, NHMM).
Coordinates: X 176.270 - Y 317.875.
Municipal Archaeological Service, file 62.
- Notes in file.
- Post-Glacial-period streambed.

26 1969-1970: Observation at the corner of Grote Staat 58 / Helmstraat (J. Bloemers, ROB).
Coordinates: X 176.270 – Y 317.820.
Documentation RACM/ROB; Municipal Archaeological Service, file 61.
- Bloemers 1971-1972, 49.
- A disturbance of all layers up to c. 2.60 m and even up to 3.40 m below the surface was observed. Only in one location was the former stratigraphy intact; all layers were of Roman origin.

27 13 May and 16 September 1971: Observation at Vrijthof southeast (H. van Ommeren (observation and notification); J. Bloemers, ROB).
Coordinates: X 176.260 - Y 317.700.
Municipal Archaeological Service, file 63.
- Bloemers 1971-1972, 52.
- Two east-west oriented foundations of limestone of late medieval date (possibly of the Saint Servatius hospital) were found during construction of an underground pedestrian tunnel between the underground parking lot and Platielstraat.

28 13 May and 16 September 1971: Observation at Vrijthof northeast (H. van Ommeren [notification]; J. Bloemers, ROB).
Coordinates: X 176.260 - Y 317.795.
Municipal Archaeological Service, file 63.
- Bloemers 1971-1972, 52.
- Some skeletons of the Merovingian cemetery were observed during construction of an underground pedestrian tunnel between the underground parking lot and the Grote Staat.

29 1974: Architectural analysis of Saint Servatius Church. (C. van de Veken).
Coordinates: X 176.129 – Y 317.698.
- Van de Veken 1974; Van de Veken 1976.
- Includes a comprehensive architectural history research with trial pits and interesting conclusions and hypothesis.

30* 1980 (11 February – 7 March, 12 – 30 May, 29 July- 5 August): Excavation at Servaasklooster 18 (T. Panhuysen, Town of Maastricht).
Coordinates: X 176.060 - Y 317.660.
Municipal Archaeological Service, file 218.
- N. N. 1924, 34; N. N. 1930, 36 (no. 3); N. N. 1980, 21; Engelen 1980, 11; Panhuysen 1982, 49; Panhuysen 1984, 78-81, especially 80; Ypey 1985, 6 etc.; Panhuysen 1986, 125-146; Tagage/Mes 1987, 14-22; Panhuysen 2005; Verduin 2008.
- At least fourteen (east-west oriented) graves with grave goods were found, of which two date from the fourth century, one from the fifth century and more than five from the years around AD 600. The remains of a possibly late Roman or early medieval moat were present, into the fill of which at least one (and possibly three) north-south oriented inhumation graves from the late Merovingian period were dug. Above this fill was a heavy construction of two contemporaneous parallel walls and a ramp to the west of it. The construction may date between the late ninth to early eleventh century. It is situated on a site that slopes down in a northerly direction. The original surface has been destroyed in the southern (higher lying) part of the site. In the eleventh and twelfth centuries various buildings of the monastery of Saint-Servatius had been erected on the site.

31 2-6 February 1981: Excavation at De Kommel (T. Panhuysen/P. Boyens, Town of Maastricht).
Coordinates: X 175.995 - Y 317.727.
Municipal Archaeological Service, file 231.
- Panhuysen 1984, 97-101.
- A section through the thirteenth-century town wall and moat was made.

32 1981-1982 (5 October – 19 January): Excavation of the Chapters chapel of Saint-Servatius Church (T. Panhuysen/P. Boyens, Town of Maastricht).
Coordinates: X 176.139 – Y 317.730.
Municipal Archaeological Service, file 228.
- Panhuysen 1981a, 3; Panhuysen 1981b, 5-7; Panhuysen 1981c, 17; Panhuysen 1982, 21-55; Panhuysen 1984, 82-95.
- Late medieval burials were excavated in the old chapel as well as walls of the former wing of the cloister, heavy foundations in a polygonal form of an older church, early medieval walls and Merovingian graves.

33 16 March 1982: Stray find, Sint Servaasklooster.
Coordinates: X 176.071 - Y 317.749.
Municipal Archaeological Service, file 228.
- A bowl of coarse grey-yellow pottery of late Roman date was found at a depth of 80 cm below the pavement. The find-spot was located at 15 metres from the northwest corner of the nineteenth-century cloister wing with the chapel for daytime prayers. This bowl possibly originates from a grave.

34 4 March 1983: Observation at Vrijthof 27 (Town of Maastricht).
Coordinates: X 176.132 - Y 317.756.
Municipal Archaeological Service, file 246.
- A cesspit was found with a diameter of 1 to 1.5 metres belonging to a seventeenth-century house. It was six metres deep and was filled with building debris. The remains of walls found cannot originate from the cloister wing, which is situated at the rear limit of the parcel of Vrijthof no. 27 and adjacent buildings. In the northwest corner of the cellar remains of medieval walls of black sandstone (Dutch: kolenzandsteen), flintstone and round stones were observed.

35 29 May 1985: Observation at Het Vagevuur (Town of Maastricht).
Coordinates: X 176.125 - Y 317.678.
Municipal Archaeological Service, file 261.
- An early medieval stone sarcophagus was discovered during the construction of a water basin to the south of Saint-Servatius Church. Dug in from 50.90 m +NAP in the natural loam. The bone remains were not in situ. Disturbed soil down to 52.20 m +NAP, and on top of that up to the surface (at 53.50 m +NAP) a layer containing a lot of building debris.

36 9 September 1985: Observation at Vrijthof 47 (Town of Maastricht).
Coordinates: X 176.184 - Y 317.839.
Municipal Archaeological Service, file 47.
- Cesspit, layer with Roman material below 46.70 m +NAP down to 46.00 m +NAP. Below the house-front observation of very hard loam mortar on top of the natural loam (47.60 m +NAP) which descends from 48.30 m +NAP to the south to 47.70 m +NAP to the north (sample, resembles mortar from the ninth and tenth centuries).

37 18 November 1985 – 31 August 1989: Excavation of Saint-Servatius Church (T. Panhuysen & P. Boyens, Town of Maastricht).
Coordinates: X 176.129 – Y 317.698.
Municipal Archaeological Service, file 263.
- Panhuysen 1981-1991, 3, 5 7, 17, 181-182, 189, 200-201, 205-206, 216-217, 221-223, 239-240, 309-322, 383-386; Panhuysen/Dijkman 1987, 207-211; Panhuysen/Dijkman/Boyens 1988, 380-384; Panhuysen 1990a, 541-553; Panhuysen 1990b, 391-394; Panhuysen *et al.* 1990, 218-223; Panhuysen 1991, 15-24; De La Haye 1993, 29-40; Panhuysen/De La Haye/Gauthier 2002, 106-115.
- The almost complete interior surface of the eleventh-century church was excavated. An older construction phase from c. 1000 was discovered. Moreover a basilica-type church from the late Merovingian/Carolingian period, walls of a Merovingian church from the sixth century and (monastic?) building remains, a late antique mausoleum and c. 250 graves were discovered.

38 17 August – 18 September 1988: Excavation at Lantaarnstraat 5-7-9 (T. Panhuysen/P. Boyens, Town of Maastricht).
Coordinates: X 176. 325 - Y 317.560.
Municipal Archaeological Service, file 259.
- Panhuysen/Dijkman/Boyens 1988, 384-387.
- Originally the site conditions were strongly influenced by a northern branch of the river Jeker as a consequence of which it was not suited for habitation. A Roman waste pit was observed. Since late Merovingian times the site was inhabited: a pavement, a fireplace and waste pits of that period were observed. Merovingian and Carolingian pottery fragments were found as well as a 'black layer' with finds from the ninth to fourteenth centuries. Layers from the fifteenth century through which new cesspits were constructed covered a large cesspit from the fourteenth century.

39* 1988-1989: Excavation at Generaalshuis / Vrijthof Theatre (T. Panhuysen/R. Hulst, Town of Maastricht).
Coordinates: X 176.180 - Y 317.865.
Municipal Archaeological Service, file 286.
- Panhuysen *et al.* 1990, 226-230 (Vrijthof 46); Van Iterson/Setola 1992, 9-11, 49-51; Dijkman 1993; Hulst 1994.
- A large-scale excavation took place between the thirteenth-century town wall to the north and the Vrijthof Square to the south. The town wall and one walltower were investigated. The complete architectural history of the monastery of the Witte Vrouwen (founded after 1224) could be investigated including an architectural history analysis of existing buildings from the sixteenth and seventeenth centuries, which were subsequently demolished. Older than the monastery were huge foundations of the northern part of a monumental building from the early eleventh and twelfth centuries, possibly a *palatium*. Hardly any remains or finds from the Roman to Carolingian periods were found.

40 22 May 1997: Excavation at Henric van Veldekeplein / location of the Staar Music Hall (T. Panhuysen/R. Hulst, Town of Maastricht).
Coordinates: X 176.155 - Y 317.595.
Municipal Archaeological Service, file 291.
- Heavily disturbed site. Only a few features with twelfth century pottery fragments and one Carolingian pottery fragment were present.

41 26 January – 6 February 1998: Excavation at Helmstraat 8 (T. Panhuysen/R. Hulst, Town of Maastricht).
Coordinates: X 176.222 - Y 317.887.
Municipal Archaeological Service, file 308.
- Excavations in the garden area of the Witte Vrouwen monastery (thirteenth to seventeenth centuries).

42 3 December 1998: Stray find, Vrijthof 6 (Town of Maastricht).
Coordinates: X 176.281 - Y 317.775.
- Rapport CIR, Groningen, ref. CIO/434-2001/HD, 28/9/2001.
- Skeletal remains (1998.MAVR.6/1-1-1) were found at a depth of 3.5 to 4 metres below the surface underneath a cellar floor (48.50-49.00 m +NAP). It is dated: 1260 ± 45 BP (GrA 18792).

43 1 October 2001: Drilling for archaeological purposes at Sint Servaasklooster 14 (Town of Maastricht).
Coordinates : X 176.020 - Y 317.720.
Municipal Archaeological Service, file 313.
- Drilling of various cores between the monastery complex along the street and the location of the thirteenth-century town wall with negative results

44 21 November 2001: Observation at Vrijthof southeast (Town of Maastricht).
Coordinates: X 176.260 - Y 317.700.
Municipal Archaeological Service, file 314.
- Two wall fragments of the Saint-Servatius hospital were observed. One wall of black sandstone (Dutch: kolenzandsteen) was oriented north-south and another wall of blocks of limestone (Dutch: mergel) was oriented east-west.

45* 19 March – 9 April 2003: Excavation at the northwest entrance to the Vrijthof underground parking lot (Town of Maastricht; F. Theuws/M. Dijkstra/J. Flamman, AAC).
Coordinates: X 176.179 - Y 317.814.
- Panhuysen 2003; Dijkstra/Flamman 2004.
- This excavation had as its major goal the analysis of the stratigraphic sequence of the subsequent Roman roads, its post-Roman use and its relation with the surrounding landscape. Thirteen phases were identified: phases 1 to 7: the subsequent surfaces of the Roman road; phase 9: a renewal of the road in the twelfth/thirteenth century; phase 10: fifteenth/sixteenth century; final deposition (raised soil) and levelling in the seventeenth century; latest phase is mid-eighteenth century.

46 April 2005: Excavation at Dominicanenplein (Town of Maastricht; J. Arts, BAAC).
Coordinates: X 176.265 - Y 317.870.
- Panhuysen 2004; Wetzels 2006, 183-203; Arts 2007.
- This excavation had as its goal research into the landscape of this part of the town. A gully dating from the last Ice Age was found which ran from the Vrijthof square (to the southwest of the excavation) through this site to the northeast by way of the present Market square. A few remains of Roman habitation were discovered to the north of the Roman road. Two west-east oriented graves were present, one of a child (^{14}C date 600-655) and one of a man (^{14}C date 660-770), at a level of 45.94 and 46.14 m +NAP. The surface level at the time of these graves was only at 46.20/46.40+ NAP. Next to these graves a few contemporary postholes and refuse pits with animal remains were found which were located on an open site. The site was used as an arable field in Carolingian times. From the (early?) eleventh century a stone-built cellar was discovered next to Spilstraat as well as a north-south oriented gully or moat dug to a maximum width of 3.60 m and depth of 1.50 to 2 metres next to Helmstraat of which the function is not clear. From the twelfth/thirteenth centuries date a number of street pavements, ditches, pits, and cellars. The Dominican monastery occupied the site from the end of the thirteenth century.

47 April 2006: Excavation at the Dominican Church (E. Wetzels, Town of Maastricht; J. Arts, BAAC).
Coordinates: X 176.328 - Y 317.853.
- Wetzels 2006, 183-203; Mark/Bink/Panhuysen/Wemerman 2007.
- Research into the history of the site before the Dominican Church was built. The oldest layers were at a height of 46.90+ NAP and date from the Roman period. They are located on a natural levee that borders the Roman road to the south of it and slopes down in a westerly direction. No features dating to the Early Middle Ages were observed. In the eleventh and twelfth centuries the surface was raised 1.30 m. Remains of buildings that were older than the Dominican Church were also discovered.

Appendix 8.1
A list of trench graves in the Merovingian cemetery.

context	context type	length pit	maximum width pit	surface
7	inhumation grave	2,47	1,15	2,8
11	inhumation grave	2,11	0,97	2,0
12	inhumation grave	1,93	0,75	1,4
13	inhumation grave	2,5	1,25	3,1
15	inhumation grave	2,15	0,84	1,8
16	inhumation grave	2,15	0,84	1,8
17	inhumation grave	3,19	1,12	3,6
18	inhumation grave	1,92	0,89	1,7
21	inhumation grave	2,37	0,75	1,8
24	inhumation grave	1,55	0,61	0,9
47	inhumation grave	1,67	0,91	1,5
49	inhumation grave		1	0,0
55	inhumation grave		0,72	0,0
56	inhumation grave	3,11	0,91	2,8
58	inhumation grave		0,9	0,0
64	inhumation grave	2,32	0,89	2,1
67	inhumation grave		0,54	0,0
73	inhumation grave	2,56	0,76	1,9
75	inhumation grave	2,41	0,81	2,0
76	inhumation grave		0,98	0,0
77	inhumation grave			0,0
78	inhumation grave		0,72	0,0
79	inhumation grave		0,79	0,0
88	inhumation grave			0,0
94	inhumation grave	2,07		0,0
97	inhumation grave	2,05	0,87	1,8
98	inhumation grave	2,01	0,58	1,2
99	inhumation grave	2,1	0,8	1,7
100	inhumation grave	1,47	0,99	1,5
102	inhumation grave			0,0
103	inhumation grave	2	0,49	1,0
109	inhumation grave		0,75	0,0
113	inhumation grave	2,74	0,65	1,8
114	inhumation grave	2,2	0,93	2,0
123	inhumation grave	1,83	0,91	1,7
124	inhumation grave	1,93		0,0
127	inhumation grave	2,26	0,7	1,6
128	inhumation grave	1,89	0,73	1,4
130	inhumation grave	2,23	0,79	1,8
131	inhumation grave	2,15	0,68	1,5
132	inhumation grave	1,93	0,75	1,4
134	inhumation grave	2,02	0,83	1,7
138	inhumation grave	2,02	0,8	1,6
140	inhumation grave	2,25	0,54	1,2
141	inhumation grave	2	0,81	1,6
142	inhumation grave			0,0
147	inhumation grave	2,46	0,88	2,2
149	inhumation grave		0,7	0,0
152	inhumation grave	2,24	0,89	2,0
158	inhumation grave		0,87	0,0
166	inhumation grave	2,1	0,65	1,4
168	inhumation grave	2,26	0,58	1,3
169	inhumation grave	1,98	0,76	1,5
171	inhumation grave		0,66	0,0
198	inhumation grave	2,22	0,84	1,9
199	inhumation grave		0,5	0,0
200	inhumation grave	1,19	0,45	0,5
202	inhumation grave	2,02	0,81	1,6
207	inhumation grave		0,56	0,0
208	inhumation grave	2,28	1,12	2,6
213	inhumation grave	1,51	0,56	0,8
215	inhumation grave		0,86	0,0
222	inhumation grave	1,55	0,61	0,9
225	inhumation grave	1,77	1,15	2,0
226	inhumation grave	2,17	0,82	1,8
227	inhumation grave	2,28	0,79	1,8
233	inhumation grave		0,82	0,0
235	inhumation grave	1,61	0,82	1,3
239	inhumation grave	2,43	0,62	1,5
242	inhumation grave		0,98	0,0
245	inhumation grave	2,3	0,8	1,8
250	inhumation grave	2,02	0,9	1,8
254	inhumation grave		1,08	0,0
255	inhumation grave		0,78	0,0
256	inhumation grave		0,75	0,0
258	inhumation grave	1,93	0,86	1,7
259	inhumation grave	2,09	0,71	1,5
263	inhumation grave	1,97	0,81	1,6
264	inhumation grave	1,86	1,02	1,9
265	inhumation grave	2,31	0,73	1,7
272	inhumation grave	1,95	0,75	1,5
274	inhumation grave	2,58		0,0
275	inhumation grave		0,59	0,0
278	inhumation grave		0,63	0,0
282	inhumation grave	2,27	1,05	2,4
287	inhumation grave	2,31	1,12	2,6
288	inhumation grave	2,16	0,85	1,8
289	inhumation grave			0,0
290	inhumation grave			0,0
291	inhumation grave		0,79	0,0
292	inhumation grave		0,76	0,0
293	inhumation grave	1,71	0,61	1,0
294	inhumation grave	1,61		0,0
298	inhumation grave		1,05	0,0
300	inhumation grave			0,0
302	inhumation grave		0,72	0,0
306	inhumation grave			0,0
309	inhumation grave		0,52	0,0
310	inhumation grave	2,38	1,16	2,8
311	inhumation grave		1,01	0,0
318	inhumation grave	2,12	0,68	1,4
320	inhumation grave	2,23	0,99	2,2
321	inhumation grave	2,21	0,9	2,0
325	inhumation grave		1	0,0
329	inhumation grave		0,86	0,0
332	inhumation grave		0,81	0,0
335	inhumation grave		0,86	0,0
336	inhumation grave		1,05	0,0
339	inhumation grave		0,96	0,0
342	inhumation grave	1,87	0,6	1,1
348	inhumation grave		0,52	0,0
350	inhumation grave	2,56	0,8	2,0
356	inhumation grave		0,7	0,0
359	inhumation grave			0,0
360	inhumation grave			0,0
361	inhumation grave		1,12	0,0
363	inhumation grave			0,0
364	inhumation grave			0,0
366	inhumation grave	2,51	0,8	2,0
370	inhumation grave		0,63	0,0
372	inhumation grave			0,0
377	inhumation grave			0,0
378	inhumation grave	1,68	0,66	1,1
380	inhumation grave		0,8	0,0
381	inhumation grave			0,0
387	inhumation grave		0,59	0,0
392	inhumation grave		0,5	0,0
393	inhumation grave		0,81	0,0
394	inhumation grave		0,77	0,0
402	inhumation grave		0,59	0,0
403	inhumation grave		0,49	0,0
406	inhumation grave	1,8	0,85	1,5
410	inhumation grave			0,0

Appendix 8.2
A list of possible inhumation graves in the Merovingian cemetery.

context	context type	length pit	maximum width pit	surface
4	possible inhumation grave	1,63	0,83	1,4
5	possible inhumation grave	2,22	0,97	2,2
6	possible inhumation grave	3	0,93	2,8
8	possible inhumation grave	2,63	0,88	2,3
9	possible inhumation grave	1,97	0,9	1,8
10	possible inhumation grave	2,09	0,81	1,7
28	possible inhumation grave		0,81	0,0
32	possible inhumation grave	2,65	0,93	2,5
34	possible inhumation grave	1,92		0,0
35	possible inhumation grave	2,36	0,9	2,1
61	possible inhumation grave	1,93	0,59	1,1
63	possible inhumation grave			0,0
72	possible inhumation grave	1,91	0,77	1,5
91	possible inhumation grave	1,64	0,75	1,2
117	possible inhumation grave	1,28	0,62	0,8
129	possible inhumation grave	2,19	0,72	1,6
135	possible inhumation grave		0,66	0,0
136	possible inhumation grave			0,0
144	possible inhumation grave	1,7	0,69	1,2
145	possible inhumation grave		0,99	0,0
146	possible inhumation grave		0,6	0,0
150	possible inhumation grave		0,83	0,0
151	possible inhumation grave		0,66	0,0
175	possible inhumation grave			0,0
176	possible inhumation grave			0,0
180	possible inhumation grave	1,6	0,7	1,1
181	possible inhumation grave		0,88	0,0
185	possible inhumation grave	2,67	0,88	2,3
188	possible inhumation grave	1,99	0,98	2,0
191	possible inhumation grave		0,71	0,0
206	possible inhumation grave		0,83	0,0
217	possible inhumation grave		0,64	0,0
229	possible inhumation grave			0,0
231	possible inhumation grave		0,82	0,0
234	possible inhumation grave	2,25	0,68	1,5
236	possible inhumation grave		0,88	0,0
243	possible inhumation grave	2,23	0,92	2,1
246	possible inhumation grave		1	0,0
248	possible inhumation grave		1,03	0,0
249	possible inhumation grave	2,25		0,0
252	possible inhumation grave	1,35	0,7	0,9
253	possible inhumation grave	2,16	0,96	2,1
257	possible inhumation grave		0,91	0,0
260	possible inhumation grave			0,0
261	possible inhumation grave		0,71	0,0
262	possible inhumation grave		0,79	0,0
266	possible inhumation grave	2,63	0,7	1,8
267	possible inhumation grave		0,84	0,0
268	possible inhumation grave		0,81	0,0
269	possible inhumation grave		0,85	0,0
276	possible inhumation grave	2,21	1	2,2
281	possible inhumation grave		0,62	0,0
296	possible inhumation grave			0,0
307	possible inhumation grave		0,61	0,0
312	possible inhumation grave		0,9	0,0
316	possible inhumation grave		1,12	0,0
317	possible inhumation grave			0,0
319	possible inhumation grave	1,69	0,68	1,1
322	possible inhumation grave		1,2	0,0
323	possible inhumation grave		0,92	0,0
324	possible inhumation grave		0,95	0,0
326	possible inhumation grave		1,13	0,0
327	possible inhumation grave		0,95	0,0
328	possible inhumation grave		0,97	0,0
334	possible inhumation grave		0,96	0,0
340	possible inhumation grave		0,97	0,0
341	possible inhumation grave		0,8	0,0
343	possible inhumation grave	1,08	0,57	0,6
344	possible inhumation grave	1,66	0,62	1,0
345	possible inhumation grave	2,39	0,93	2,2
357	possible inhumation grave			0,0
369	possible inhumation grave			0,0
382	possible inhumation grave			0,0
389	possible inhumation grave	2,28	0,99	2,3
391	possible inhumation grave	2,03	0,89	1,8
404	possible inhumation grave			0,0
411	possible inhumation grave			0,0
412	possible inhumation grave			0,0
413	possible inhumation grave			0,0
414	possible inhumation grave			0,0

Appendix 10.1
Individual beads

Table 1
Amber beads.

Amber	Vrijthof	Siegmund type/CG	FAG CG
Various shapes	68 (1149-10: 3x)	-	-
	85 (1418-2: 1x)		
	95 (1482-2: 1x)		
	110 (1624-25: 1x)		
	166 (1539-2: 10x)		
	178 (1516-1: 3x)		
	187 (1636-6: 3x)		
	187 (1637-5: 14x; 1: 1x)		
	187 (1640-2: 1x)		
	247 (1752-4: 2x, 7: 1x)		
	258 (1831-2: 17x)		
	274 (1792-3: 10x)		
	277 (1807-3: 15x)		
	314(1172-6: 1x)		
Total	84		

Table 2
Amethyst beads.

Amethyst	Vrijthof	Siegmund type/CG	FAG CG
Various shapes	48 (1587-1: 9x)		
	85 (1418-3: 2x)		
	110 (1624-18: 2x)		
	285 (1819-3: 1x)		
	315 (1151-1: 14x	Per 5.2	IV
Total	28		

Table 3
Millefiori (leaf type) beads.

Rock-crystal	Vrijthof	Siegmund type/CG	FAG CG
Large biconical	308 (1737-2: 1x)		
Total	1		

Table 4
Rock-crystal bead.

Millefiori (leaf type)	Vrijthof	Siegmund type/CG	FAG CG
Biconical/	68 (1149-2: 2x)		
Globular	95 (1482-2: 5x)		
and	187 (1637-2: 1x)		
Cylindrical	314 (1173-2: 3x)		IV
Total	11		

Table 5
Reticella beads.

Reticella	Vrijthof	Siegmund type/CG	FAG CG	Koch type
Short cylindrical	187 (1637-3: 1x)	D	II and III	48,14
	258 (1831-8: 1x)			
Total	2			

Table 6
Metal-in-glass beads.

Metal-in-glass	Vrijthof	Siegmund type/CG	FAG CG
Segmented /	48 (1587-10:1x)	40.1	II
Globular compressed	68 (1149-4:7x)	C-E	
	178 (1516-5:2x)		
	187 (1636-5:6x; 1637-6:34x)		
Total	50		

Table 7
Black beads: monochrome, opaque.

Black: monochrome, opaque	Vrijthof	Siegmund type/CG	FAG CG
Compressed,	12 (1673-3: 1x)	31.1	
globular	95 (1478-1: 62x)	C-D	II-III
	187 (1637-15: 8x)		
	187 (1636-9: 1x)		
Total	72		

Table 8
Black beads: polychrome, opaque.

Black: polychrome, opaque	Vrijthof	Siegmund type/CG	FAG CG	Koch type
Combed bands monochrome Biconical	313 (1019-4: 1x)	Group 31 (3-5) B	II-III	Group 49 -
Combed bands polychrome Compressed globular	0 (1361-1: 1x)	Group 31 (3-5) B	II-III	Group 50 -
Total	2			

Table 9
Blue beads: monochrome, opaque.

Blue: monochrome, opaque	Vrijthof	Siegmund	FAG
Roman melon bead	0 (1024-1: 1x)	-	-
	178 (1516-11: 1x)		
	95 (1482-6: 1x)		
Compressed, globular	166 (1539-8: 6x)	Group 37 (1-2)	IV-V
	187 (1637-9: 2x)	F-I	
	187 (1636-8: 1x)		
Cylinder, short	85 (1418-8: 1x)	Group 37 (1-2)	IV-V
	100 (1434-8: 4x)	F-I	
	247 (1752-3: 1x)		
Globular	48 (1587-4: 1x)	Group 37 (1-2)	IV-V
		F-I	
Cylinder, 5 facets	258 (1831-6: 3x)	1.3	-
		D-I	
Total	22		

Table 10
Blue beads: monochrome, transparent.

Blue: monochrome, transparent	Vrijthof	Siegmund	FAG
Unknown, fragments	179 (1504-2) fragments	Group 47 A/F-I	I/IV-V
Heart	64 (965-1: 32x) 68 (1149-8: 2x)	1.1 A	I
Cylinder long	85 (1418-9: 1x) 152 (1617-6: 1x) 187 (1637-10: 2x)	1.2 B-C	II
Almond	152 (1617-1: 4x)	1.8 H-I	IV-V
Cylinder short	187 (1637-16: 9x)	47.1 A	I
Compressed globular	124 (1609-3: 29x) 166 (1539-6: 4x) 285 (1819-2: 4x)	47.1 A	I
Barrel	95 (1484-5: 1x)	47.1? A?	I?
Biconical, long	166 (1539-4: 5x)	47.5 F-G	IV
Double/Multiple	277 (1807-9: 1x)	47.7 G-H	-
Polygonal	187 (1637-13: 1x)	47.9 A	I
Total	96	A-I	I-V

Table 11
Blue beads: polychrome opaque.

Blue: polychrome opaque	Vrijthof	Siegmund	FAG	Koch
Dots	124 (1609-2: 1x)	Group 37 (3)	-	Group 1
Compressed globular	B			2-3
Total	1			

Table 12
Blue beads: polychrome transparent.

Blue: polychrome transparent	Vrijthof	Siegmund	FAG	Koch
Raised dots, monochrome (yellow)	110 (1624-26: 1x)	-	-	4,6
Cylinder, 4 sides				Stufe 4
Bands, polychrome (red, white)	95 (1482-4: 1x)	-	-	M 67/72
Biconical	166 (1539-7: 2x)			Stufe 2-4 / 6-8
Total	4			

Table 13
Green beads: monochrome opaque.

Green: monochrome opaque	Vrijthof	Siegmund	FAG
Biconical, broad	17 (1681-2: 3x)	-	
Biconical, long	68 (1149-6: 3x) 166 (1539-5: 7x) 187 (1636-3: 2x) 314 (1172-5: 2x)	1.8 H-I	IV-V
Cube	68 (1149-7: 2x)	1.6 H-I	-
Cylinder, short (small)	110 (1624-9: 1x)	36.1 C-G	II-III
Compressed globular	12 (1673-2:12x) 85 (1418-12: 1x) 100 (1434-4: 2x) 100 (1495-3: 9x) 178 (1516-6: 1x) 258 (1831-1: 35x) 277 (1807-8: 3x) 313 (1019-2: 9x / -3: 9x)	-	-
Unclear/fragments	179 (1504-1: 1x)	-	-
Total	102		

Table 14
Green beads: monochrome, transparent.

Green monochrome, transparent	Vrijthof	Siegmund	FAG
Compressed globular	85 (1418-6: 3x) 95 (1484-7: 38x) 110 (1624-10: 5x) 178 (1516-8: 1x) 235 (1748-1: 4x) 285 (1819-5: 2x	Group 46 (1-5) A H-I	-
Cylinder, long	110 (1624-7:1x)	46.2 A	I
Cylinder, short	48 (1587-3: 23x) 85 (1418-10: 1x) 187 (1637-14: 1x) 315 (1151-3: 35x)	-	-
Cylinder, 6-sides	235 (1748-6: 2x)	46.4 A	I
Heart shaped	64 (965-2: 20x) 110 (1624-11: 2x)	1.1 A	I
Total	138	A	I

Table 15
Green beads: polychrome, opaque.

Green polychrome, opaque	Vrijthof	Siegmund	FAG	Koch
Dots, polychrome (red, yellow)	277 (1807-5: 1x)	-	-	K-group 7?
Biconical?				
Total	1			

Table 16
Green beads: polychrome, transparent.

Green polychrome, transparent	Vrijthof	Siegmund	FAG	Koch
Dots, monochrome (blue) Compressed, globular	314 (1173-3: 1x)	-	-	1.13 Stufe 2-3
Bands, monochrome (yellow) Barrel	247 (1752-8: 1x)	-	-	Group 42
Wave, monochrome (yellow) Compressed, globular	178 (1516-12: 1x)	-	-	Group 27 500-700
Wave and eyes Biconical	235 (1748-3: 1x)	-	-	M80 Pl.: B-C
Total	4			

Table 17
Orange/ochre beads: monochrome opaque.

Orange/ochre monochrome opaque	Vrijthof	Siegmund	FAG
Barrel	48 (1587-5: 1x)	34.1	
	95 (1484-3: 1x)	H-I	-
Annular	178 (1516-2: 1x)	34.1	
		H-I	-
Total	3		

Table 18
Orange/ochre beads: monochrome transparent.

Orange/ochre monochrome transparent	Vrijthof	Siegmund	FAG
Annular	315 (1151-2: 1x)	-	-
Compressed, globular	247 (1752-5: 1x)	-	-
Total	2		

Table 19
Red beads: monochrome, opaque.

Red monochrome, opaque	Vrijthof	Siegmund	FAG
Compressed, globular	12 (1673-1: 17x) 68 (1149-9: 2x) 100 (1495-4: 3x) 110 (1624-24: 2x) 178 (1516-9: 1x) 187 (1637-19: 5x) 187 (1636-4: 11x)	35.4 D-G	-
Globular	247 (1752-1: 1x)	35.4 D-G	-
Biconical	100 (1434-9: 4x) 110 (1624-20: 1x) 124 (1609-1: 3x) 277 (1807-4: 1x)	S-35.6 H-I	IV
Cylindrical, short (large)	95 (1484-4: 1x) 100 (1434-6: 2x) 110 (1624-19: 4x) 277 (1807-6: 1x)	-	-
Cylindrical, 4 sides	85 (1418-4: 1x)	-	-
Barrel	258 (1831-10: 1x)	-	-
Almond	152 (1617-5: 1x)	1.8 H-I	IV-V
Total	62		

Table 20
Red beads: polychrome, opaque.

Red polychrome, opaque	Vrijthof	Siegmund	FAG	Koch
Crossed waves, white Compressed globular	100 (1434-7: 2x) 110 (1624-13: 1x) 247 (1752-10: 1x)	35.8 F-H	III	Group 34 Stufe 1-4 Pl. D-E
Crossed waves, yellow Compressed globular	100 (1434-3: 2x) 187 (1637-18: 1x)	35.11 (D-H) F-G	-	Group 34 Stufe 1-4
	187 (1636-7: 1x)			Pl. D-E
Crossed waves with dots, white Compressed globular	100 (1434-5: 2x) 110 (1624-5: 1x)	35.12 F-G	-	20.1 Stufe 3-4
Crossed white waves with yellow dots Compressed globular	164 (1633-1: 1x)	-	-	21.9 Stufe 3-4
Crossed waves with band, yellow Compressed globular	100 (1434-13: 1x)			35.2
Border bands with dots, yellow Cylinder, long	85 (1418-7: 1x)	2.4 F-H	-	16.3 Stufe 3
Spirally wound bands, white Biconical/globular	124 (1609-5: 1x)	35.13 D-H		42.9 Stufe 3
Spirally wound white bands with blue border bands Cylinder, long	187 (1637-4: 2x)	35.13 D-H	-	Group 42
Total	17			

Table 21
Yellow beads: monochrome, opaque.

Yellow monochrome, opaque	Vrijthof	Siegmund	FAG
Almond	152 (1617-4: 1x)	1.8 H-I	IV-V
Biconical	277 (1807-7: 4x)	33.5 I	IV-V
Cylinder, short (large)	100 (1434-2: 4x) 110 (1624-12: 2x)	33.1 D-G	II-III
Cylinder, five sides	258 (1831-3: 1x)	1.3 D-I	-
Globular	247 (1752-2: 12x)	33.3 (D-H) E-G	-
Gobular, compressed	68 (1149-5: 7x) 95 (1484-6: 57x) 100 (1434-1: 7x) 110 (1624-8: 15x) 124 (1609-6: 24x) 166 (1539-3: 32x) 178 (1516-4: 4x) 187 (1636-10: 2x) 187 (1637-17: 1x) 314 (1172-4: 4x) 214 (1759-2: 10x)	33.3 (D-H) E-G	-
Irregular-shaped	100 (1495-5: 3x) 152 (1617-2: 2x)	33.6 G-H	IV
Total	192		

Table 22
Yellow beads: polychrome, opaque.

Yellow polychrome, opaque	Vrijthof	Siegmund	FAG	Koch
Crossed waves, monochrome red Compressed globular	110 (1624-2: 2x) 187 (1637-11: 3x) 214 (1759-1: 1x) 247 (1752-9: 1x)	33.7 D-H	III	33,7 / 33,9 Stufe 1-3
Waves, corroded (white) Compressed globular	178 (1516-3: 1x) 187 (1637-8: 1x)	- D-H	-	Group 27 500-700
Total	9			

Table 23
White beads: monochrome, opaque.

White monochrome, opaque	Vrijthof	Siegmund	FAG
Cylinder, short	48 (1587-8: 1x) 95 (1482-5: 1x) 110 (1624-6: 7x) 235 (1748-4: 1x) 314 (1172-7: 1x)	-	-
Cylinder, long	48 (1587-6: 1x)	-	
Cylinder: 5sides	258 (1831-4: 3x) 277 (1807-11: 1x)	1.3 D-I	-
Compressed, globular	110 (1624-4: 3x) 258 (1831-5: 1x) 314 (1172-3: 3x)		
Biconical	100 (1434-10: 2x)	32.3 H-I	IV
Disc	152 (1617-3: 3x)	-	-
Double/Multiple	277 (1807-10: 1x)	32.2 H-I	IV
Irregular-shaped	68 (1149-11: 3x) 235 (1748-8: 1x)	-	
Total	33		

Table 24
White beads: monochrome, transparent.

White monochrome, transparent	Vrijthof	Siegmund	FAG
Melon bead	187 (1637-7: 1x)	-	-
Cube	235 (1748-7: 1x)	-	-
Compressed globular/			
Ring	235 (1748-2: 1x) 258 (1831-9: 1x)	-	-
Total	4		

Table 25
White beads: polychrome, opaque.

White polychrome, opaque	Vrijthof	Siegmund	FAG	Koch
Crossed waves, monochrome blue Compressed globular	110 (1624-21: 1x)	32.7 E-H3-4	IV	34,4 / 34,5
Crossed blue waves with red dots Biconical, broad	48 (1587-7: 1x) 110 (1624-15: 1x)	- 3-4	-	21,5
Crossed waves with dots, red Cylindrical, long	110 (1624-23: 1x)	-	-	Group 20 Pl. C
Spiral bands, monochrome (dark: vaag)) Cylindrical, short/arrel	110 (1624-3: 2x) 124 (1609-4: 2x)	-	-	Group 42 Pl. C-D
Polychrome transparent eyes (red with blue) Compressed globular	100 (1434-11: 2x)	-	-	15,34 Stufe 4
Total	10			

Appendix 10.2
Strings of beads

Table 1
Strings with a majority of black beads: grave 95.

Vrijthof 95	Colour	Decoration	Type	Date	#
1478-1	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	62
				Maastricht: B-E (400-580/90)	62

Table 2
Black decorated bead: stray find 1361-1.

Vrijthof o	Colour	Decoration	Type	Date	#
1361-1	Black, opaque	Decorated	S: group 31 K: group 50	S: B (440-485) FAG: II (400-580/90)	1
				Maastricht: B-E (400-580/90)	1

Table 3
Strings with a majority of blue beads: grave 64.

Vrijthof 64	Colour	Decoration	Type	Date	#
965-1	Blue, transparent	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	32
965-2	Green, opaque	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	20
				Maastricht: C (460/80-510/25)	52

Table 4
Strings with a majority of blue beads: grave 124.

Vrijthof 124	Colour	Decoration	Type	Date	#
1609-3	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	29
1609-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	24
1609-1	Red, opaque	Undecorated	S-35.6	S: H-I (610-705) FAG: IV (580/90-670/80)	3
1609-4	White, opaque	Decorated	K: group 42	K: C-D (555-620)	2
1609-2	Blue, opaque	Decorated	S: group 37 (3) K: group1	S: B (440-485) K: 2-3 (545/50-590/600)	1
1609-5	Red, opaque	Decorated	S-35.13 K-42.9.	S: D-H (530-670) K: 3 (565-590/600)	1
				Maastricht: D-H (510/20-670/80)	60

Table 5
Strings with a majority of blue beads: grave 152.

Vrijthof 152	Colour	Decoration	Type	Date	#
1617-1	Blue, transparent	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	4
1617-3	White, opaque	Undecorated	-	-	3
1617-2	Yellow, opaque	Undecorated	S-33.6	S: G-H (585-670) FAG IV: (565-670/80)	2
1617-6	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	1
1617-4	Yellow, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	1
1617-5	Red, opaque	Undecorated	S-1.8	S: H-I: 610-705 FAG: IV-V: 580/90-750	1
				Maastricht: F-J (580/90-750)	12

Table 6
Strings with a majority of blue beads: grave 285.

Vrijthof 285	Colour	Decoration	Type	Date	#	
1819-4	Unknown, opaque	Unknown	-	-	5	
1819-2	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	4	
1819-5	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	2	
1819-1	Unknown, opaque	Unknown	-	-	1	
1819-3	Amethyst	Undecorated	S-5.2	FAG: IV: (565-640/50)	1	
				Maastricht : E (565-580/90)	13	

Table 7
Strings with a majority of green beads: grave 48.

Vrijthof 48	Colour	Decoration	Type	Date	#
1587-3	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	23
1587-1	Amethyst	Polished/Cut	S-5.2	FAG: IV: (565-640/50)	9
1587-7	White, opaque	Decorated	K-21.5	K: 3-4 (565-620/30)	1
1587-9	Unknown, opaque	Undecorated	-	-	1
1587-8	White, opaque	Undecorated	-	-	1
1587-6	White, opaque	Undecorated	-	-	1
1587-4	Blue, opaque	Undecorated	S: group 37 (1-2)	S: (F-I) 570-705 FAG: (IV-V) 565-750	1
1587-5	Orange/Ochre, opaque	Undecorated	S-43.1	S: H-I (610-705)	1
1587-10	Colourless	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	1
				Maastricht: E-G (565-640/50)	39

Table 8
Strings with a majority of green beads: grave 85.

Vrijthof 85	Colour	Decoration	Type	Date	#
1418-5	Unknown, opaque	Undecorated	-	-	3
1418-6	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	3
1418-3	Amethyst	Undecorated	S-5.2	FAG: IV (565-640/50)	2
1418-1	Unknown, opaque	Decorated	-	-	1
1418-10	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
1418-4	Red, opaque	Undecorated	-	-	1
1418-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	1
1418-12	Green, opaque	Undecorated	-	-	1
1418-2	Amber	Undecorated	-	-	1
1418-9	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	1
1418-7	Red, opaque	Decorated	S- 2.4 K: 16.3	S: F-H (570-670) K: 3 (565-690/600)	1
				Maastricht: D-G (510/20-640/50)	16

Table 9
Strings with a majority of green beads: grave 100.

Vrijthof 100	Colour	Decoration	Type	Date	#
1495-3	Green, opaque	Undecorated	-	-	8
1495-4	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	3
1495-5	Yellow, opaque	Undecorated	S-33.6	S: G-H (585-670) FAG IV: (565-670/80)	3
				Maastricht: E-H (565-670/80)	14

Table 10
Strings with a majority of green beads: grave 235.

Vrijthof 235	Colour	Decoration	Type	Date	#
1748-1	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	4
1748-5	Unknown, opaque	Unknown	-	-	3
1748-6	Green, transparent	Undecorated	S-46.4	S: A (485-530) FAG: I (460/80-510/25)	2
1748-10	Unknown, opaque	Undecorated	-	-	1
1748-3	Green, transparent	Decorated	K-M80?	K: B-C (530-600)?	1
1748-4	White, opaque	Undecorated	-	-	1
1748-7	White, transparent	Undecorated	-	-	1
1748-8	White, opaque	Undecorated	-	-	2
1748-2	White, transparent	Undecorated	-	-	1
				Maastricht: C-D (460/80-565)	16

Table 11
Strings with a majority of green beads: grave: 258.

Vrijthof 258	Colour	Decoration	Type	Date	#
1831-1	Green, opaque	Undecorated	-	-	35
1831-2	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	17
1831-6	Blue, opaque	Undecorated	S-1.3	S: D-I (530-705)	3
1831-4	White, opaque	Undecorated	S-1.3	S: D-I (530-705)	3
1831-7	Unknown, opaque	Undecorated	S-1.3?	S: D-I (530-705)?	3
1831-10	Red, opaque	Undecorated	-	-	1
1831-5	White, opaque	Undecorated	-	-	1
1831-9	White, transparent	Undecorated	-	-	1
1831-8	Red, opaque	Decorated	S-2.11 K-48.6	S: D (530-585) FAG: II-III (400-580/90) K: 2-3 (545/50-590/600)	1
1831-3	Yellow, opaque	Undecorated	S-1.3	S: D-I (530-705)	1
				Maastricht: D-E (510/20-580/90)	66

Table 12
Strings with a majority of green beads: grave 313.

Vrijthof 313	Colour	Decoration	Type	Date	#
1019-2	Green, opaque	Undecorated	-	-	9
1019-3	Green, opaque	Undecorated	-	-	9
1019-4	Black, opaque	Decorated	S: group 31 (3-5) K: group 49	-S: B (440-485) -FAG: II (400-565)	1
				Maastricht: B-D (400-565)	19

Table 13
Strings with a majority of green beads: grave 315.

Vrijthof 315	Colour	Decoration	Type	Date	#
1151-3	Green, transparent	Undecorated	S: group 46 (1-5)	S: A (485-555) / H-I (610-705)	35
1151-1	Amethyst	Polished/Cut	S-5.2	FAG: IV (565-640/50)	14
1151-2	Orange/Ochre, transparent	Undecorated	-	-	1
				Maastricht: E-G (565-640/50)	50

Table 14
Strings with a majority of red beads: grave 12.

Vrijthof 12	Colour	Decoration	Type	Date	#
1673-1	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	17
1673-2	Green, opaque	Undecorated	-	-	12
1673-3	Black, opaque	Undecorated	S-31.1	S: C-D 485-585 FAG: II 400-580/90	1
				Maastricht: D-G (510/20-640/50)	30

Table 15
Strings with a majority of red beads: grave 187.

Vrijthof 187	Colour	Decoration	Type	Date	#
1636-4	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	11
1636-5	Colourless	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	6
1636-6	Amber	Polished/Cut	-	-	3
1636-10	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	2
1636-3	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	4
1636-7	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	1
1636-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	1
1636-9	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	1
				Maastricht: D-G (510/20-640/50)	29

Table 16
Strings with a majority of amber beads: grave 274.

Vrijthof 274	Colour	Decoration	Type	Date	#
1792-3	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	10
				Maastricht phase B-E (400-580/90)	10

Table 17
Strings with a majority of amber beads: grave 277.

Vrijthof 277	Colour	Decoration	Type	Date	#
1807-3	Amber	Polished/Cut	Red	FAG: II-III (400-580/90)	15
1807-7	Yellow, opaque	Undecorated	S-33.5	S: I (640-705) FAG: IV-V (580/90-750)	4
1807-8	Green, opaque	Undecorated	-	-	3
1807-6	Red, opaque	Undecorated	-	-	1
1807-5	Green, opaque	Decorated	K: group 7	K: 4 (590/600-620/30)	1
1807-4	Red, opaque	Undecorated	S- 35,6	S: H-I (610-705) FAG: IV (580/90-670/80)	1
1807-11	White, opaque	Undecorated	S-1.3	S: C-D (485-585)	1
1807-9	Blue, transparent	Undecorated	S-47.7	S: G-H (585-670)	1
1807-10	White, opaque	Undecorated	S-32.2	S: H-I (610-705) FAG: IV (580/90-670/80)	1
				Maastricht E-H (565-670/80)	28

Table 18
Strings with a majority of yellow (with white) beads: grave 95.

Vrijthof 95	Colour	Decoration	Type	Date	#
1484-6	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	57
1484-7	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	38
1484-2	Amber	Undecorated	-	-	1
1484-3	Orange/Ochre, opaque	Undecorated	S-34.1	S: H-I (610-705)	1
1484-4	Red, opaque	Undecorated	-	-	1
1484-5	Blue, transparent	Undecorated	-	-	1
				Maastricht: D-H (510/20-670/80)	99

Table 19
Strings with a majority of yellow (with white) beads: grave 95.

Vrijthof 95	Colour	Decoration	Type	Date	#
1482-2	Millefiori	Decorated	S-2.13 K-M25/27/52	K: 2-4 (545/50-620/30)	3
1482-3	Blue, opaque	Decorated	-	-	1
1482-4	Blue, transparent	Decorated	K-M67/72	K: 2-4 (545/50-620/30)	1
1482-5	White, opaque	Undecorated	-	-	1
1482-6	Blue, opaque	Ribbed	Melon bead	Roman	1
				Maastricht: D-G (510/20-640/50)	7

Table 20
Strings with a majority of yellow (with white) beads: grave 100.

Vrijthof 100	Colour	Decoration	Type	Date	#
1434-1	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	7
1434-2	Yellow, opaque	Undecorated	S-33.1	S: D-G (530-640) FAG: II-III (400-580/90)	4
1434-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	4
1434-9	Red, opaque	Undecorated	S- 35.6	S: H-I (610-705) FAG: IV (580/90-670/80)	4
1434-10	White, opaque	Undecorated	S-32.3	S: H-I (610-705) FAG: IV (580/90-670/80)	2
1434-11	White, opaque	Decorated	K: 15,34	K: 4 (590/600-620/30)	2
1434-3	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	2
1434-4	Green, opaque	Undecorated	-	-	2
1434-5	Red, opaque	Decorated	S-35.12 K: 20.1	S: F-G (570-640) K: 3-4 (565-620/30)2	
1434-6	Red, opaque	Undecorated	-	-	2
1434-7	Red, opaque	Decorated	S-35.8 K: group 34 K: D-E (600-650)	S: F-H (570-670) FAG: III-IV (460/80-670/80)	2
1434-12	Unknown, opaque	Undecorated	-	-	1
1434-13	Red, opaque	Decorated	K-35.2.	-	1
				Maastricht phase E-H (565-670/80)	35

Table 21
Strings with a majority of yellow (with white) beads: grave 110.

Vrijthof 110	Colour	Decoration	Type	Date	#
1624-8	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	15
1624-6	White, opaque	Undecorated	-	-	7
1624-10	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	5
1624-19	Red, opaque	Undecorated	-	-	4
1624-3	White, opaque	Decorated	K: group 42	K: C-D (555-620)	3
1624-4	White, opaque	Undecorated	-	-	3
1624-11	Green, opaque	Undecorated	S-1.1	S: A (485-555)	2
				FAG: I (460/80-510/25)	
1624-12	Yellow, opaque	Undecorated	S-33.1	S: D-G (530-640) FAG: II-III (400-580/90)	2
1624-18	Amethyst	Polished/Cut	S-5.2	FAG: IV (565-640/50)	2
1624-2	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	2
1624-24	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	2
1624-13	Red, opaque	Decorated	S-35.8 K: group 34	S: F-H (570-670) FAG: III-IV (460/80-670/80) K: D-E (600-650)	1
1624-15	White, opaque	Decorated	K-21,5	K: 3-4 (565-620/30)	1
1624-17	Unknown,	Undecorated	-	-	1
	transparent				
1624-20	Red, opaque	Undecorated	S-35.6	S: H-I (610-705) FAG: IV (580/90-670/80)	1
1624-21	White, opaque	Decorated	S-32.7 K-34.4/34.5	S: E-H (530-670) FAG: IV (580/90-670/80) K: 3-4 (565-620/30)	1
1624-23	White, opaque	Decorated	K: group 20	K: C (555-620)	1
1624-25	Amber	Polished/Cut	-	-	1
1624-26	Blue, transparent	Raised dots	K-4,6	K: 4 (590/600-620/30)	1
1624-5	Red, opaque	Decorated	S-35.12 K: 20,1	S: F-G (570-640) K: 3-4 (565-620/30)	1 1
1624-7	Green, transparent	Undecorated	S-46.2	S: A (485-555) FAG: I (460/80-510/25)	
1624-9	Green, opaque	Undecorated	S-36.1	S: C-G (485-640) FAG: II-III (400-580/90)	1
1624-28	Red, opaque				1
1624-29	Green, opaque	Undecorated	-	-	1
1624-30	Green, opaque	Undecorated	-	-	1
				Maastricht: D-H (510/20-670/80)	61

Table 22
Strings with a majority of yellow (with white) beads: grave 166.

Vrijthof 166	Colour	Decoration	Type	Date	#
1539-3	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	32
1539-2	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	10
1539-5	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	7
1539-8	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705) FAG: IV-V (565-750)	6
1539-4	Blue, transparent	Undecorated	S-47.5	S: F-G (570-640) FAG: IV (580/90-670/80)	5
1539-6	Blue, transparent	Undecorated	S-47.1	S: F-G (570-640) FAG: IV (580/90-670/80)	4
1539-7	Blue, transparent	Decorated	K-M67/72	K: 4 (590/600-620/30)	2
				Maastricht: D-H (510/20-670/80)	66

Table 23
Strings with a majority of yellow (with white) beads: grave 178.

Vrijthof 178	Colour	Decoration	Type	Date	#
1516-4	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	4
1516-1	Amber	Polished/Cut	-	-	2
1516-5	Colourless	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	2
1516-7	Unknown, opaque	Unknown	-	-	1
1516-6	Green, opaque	Undecorated	-	-	1
1516-3	Yellow, opaque	Decorated	K: group 27	K: (500-700)	1
1516-8	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
1516-11	Blue, opaque	Ribbed	-	-	1
1516-12	Green, transparent	Decorated	K: group 29	K: (500-700)	1
1516-13	Amber	Polished/Cut	-	-	1
1516-2	Orange/Ochre, opaque	Undecorated	S-34.1	S: H-I (610-705)	1
1516-9	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	1
				Maastricht: D-H (510/20-670/80)	17

Table 24
Strings with a majority of yellow (with white) beads: grave 214.

Vrijthof 214	Colour	Decoration	Type	Date	#
1759-2	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	10
1759-1	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9 K: 1-3 (525/30-590/600)	S: D-H (530-670) FAG: III (460/80-580/90)	1
				Maastricht phase D-H (510/20-670/80)	11

Table 25
Strings with a majority of yellow (with white) beads: grave 247.

Vrijthof 247	Colour	Decoration	Type	Date	#
1752-2	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	12
1752-6	Unknown, transparent	Undecorated	-	-	4
1752-4	Amber	Polished/Cut	-	-	2
1752-8	Green, transparent	Decorated	K-42	-	1
1752-5	Orange/Ochre, transparent	Undecorated	-	-	1
1752-3	Blue, opaque	Undecorated	S: group 37 (1-2)	S: F-I (570-705)	1
				FAG: IV-V (565-750)	
1752-7	Amber	Carved	-	-	1
1752-9	Yellow, opaque	Decorated	S-33.7	S: (D-H)E-F (530-670) 530-640	1
				FAG: III: 460/80-580/90	
1752-1	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	1
1752-10	Red, opaque	Decorated	S-35.8	S: F-H (570-670)	
			K: group 34	FAG: III-IV (460/80-670/80)	1
			K: D-E (600-650)		
				Maastricht: D-H (510/20-670/80)	25

Table 26
Strings with a majority of yellow (with white) beads: grave 314.

Vrijthof 314	Colour	Decoration	Type	Date	#
1172-4	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	4
1172-3	White, opaque	Undecorated	-	-	3
1172-2	Unknown, opaque	Undecorated	-	-	2
1172-5	Green, opaque	Undecorated	S-1.8	S: H-I (610-705)	2
				FAG: IV-V (580/90-750)	
1172-7	White, opaque	Undecorated	-	-	1
1172-6	Amber	Polished/Cut	-	-	1
				Maastricht: D-H (510/20-670/80)	13

Table 27
Strings with a majority of yellow (with white) beads: grave 314.

Vrijthof 314	Colour	Decoration	Type	Date	#
1173-4	Millefiori	Decorated	S-2.13 K-M21/22	K: 3 (565-590/600)	2
1173-2	Millefiori	Decorated	S-2.13 K-M9/11	K: 3 (565-590/600)	1
1173-3	Green, transparent	Decorated	K-1.13	K: 2-3 (545/50-590/600)	1
				Maastricht: E (565-580/90)	4

Table 28
Strings with a majority of metal-in-glass: grave 68.

Vrijthof 68	Colour	Decoration	Type	Date	#
1149-4	-	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	7
1149-5	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	7
1149-12	Unknown, opaque	Unknown			3
1149-11	White, opaque	Undecorated	-	-	3
1149-10	Amber	Polished/Cut	-	-	3
1149-6	Green, opaque	Undecorated	S-1.8	S: H-I (610-705) FAG: IV-V (580/90-750)	3
1149-2	Millefiori	Decorated	S-2.13 K-M33	K: 3 (565-590/600)	2
1149-8	Blue, transparent	Undecorated	S-1.1	S: A (485-555) FAG: I (460/80-510/25)	2
1149-9	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	2
1149-7	Green, opaque	Irrelevant	S-1.6	S: H-I (610-705)	2
				Maastricht: E-H (565-670/80)	34

Table 29
Strings with a majority of metal-in-glass: grave 187.

Vrijthof 187	Colour	Decoration	Type	Date	#
1637-6	-	Silver-in-glass	S-40.1	S: C-E (485-585) FAG: II-III (400-580/90)	34
1637-5	Amber	Polished/Cut	-	FAG: II-III (400-580/90)	14
1637-16	Blue, transparent	Undecorated	S-47.1	S: A (485-555) FAG: I (460/80-510/25)	9
1637-15	Black, opaque	Undecorated	S-31.1	S: C-D (485-585) FAG: II (400-580/90)	8
1637-19	Red, opaque	Undecorated	S-35.4	S: D-G (530-640)	5
1637-11	Yellow, opaque	Decorated	S-33.7 K-33,7 / 33,9	S: D-H (530-670) FAG: III (460/80-580/90) K: 1-3 (525/30-590/600)	3
1637-10	Blue, transparent	Undecorated	S-1.2	S: B-C (440-555) FAG: II (400-580/90)	2
1637-12	Unknown, opaque	Unknown	-	-	2
1637-4	Red, opaque	Decorated	S-35.13 K: group 42	S: D-H (530-670)	2
1637-9	Blue, opaque	Undecorated	S: group 37 (1-2)	S: (F-I) 570-705 FAG: (IV-V) 565-750	2
1637-1	Amber	Polished/Cut	-	-	1
1637-13	Blue, transparent	Undecorated	S-47.9	S: A (485-555) FAG: I (460/80-510/25)	1
1637-14	Green, transparent	Undecorated	S: group 46,1-5	S: A (485-555) / H-I (610-705)	1
1637-17	Yellow, opaque	Undecorated	S-33.3	S: D-H (530-670)	1
1637-18	Red, opaque	Decorated	S-35.11 K: group 34	S: D-H (530-670) K: D-E (600-650)	1
1637-2	Millefiori	Decorated	S-2.12	S: C-D (485-585)	1
			K- M56	K: 2 (545/50-565/70)	
1637-3	Red, opaque	Retticella	S-2.11 K-48,14	S: D (530-585) FAG: II-III (400-580/90) K: 2-3 (545/50-590/600)	1
1637-7	White, transparent	Undecorated	-	-	1
1637-8	Yellow, opaque	Decorated	K: group 27	K: (500-700)	1
				Maastricht: B-E (400-580/90)	90

Appendix 12.1
The list of graves assigned to cemetery 5.

context	trench	level	context type	container type	sex	orientation
33	5	1	inhumation grave	wooden container	male	10
42	5	2	disarticulate human remains	disarticulate human remains	x	x
43	5	1	disarticulate human remains	disarticulate human remains	x	x
47	5	2	inhumation grave	trench grave	x	19
51	5	1	inhumation grave	wooden container	female?	10
52	5	2	inhumation grave	trench grave with stones	female	11
53	5	2	disarticulate human remains	disarticulate human remains	x	x
61	5	1	possible inhumation grave	trench grave	x	1
62	5	2	inhumation grave	trench grave with stones	?	17
67	5	2	inhumation grave	trench grave	male	19
103	5	2	inhumation grave	trench grave	x	359
108	5	2	inhumation grave	articulated skeleton	female	352
109	5	2	inhumation grave	trench grave	male	6
113	5	2	inhumation grave	trench grave	female	7
114	5	2	inhumation grave	trench grave	x	3
118	5	1	disarticulate human remains	disarticulate human remains	x	x
122	5	2	inhumation grave	wooden container	female	6
123	5	1	inhumation grave	trench grave	x	6
129	5	1	possible inhumation grave	trench grave	x	7
137	5	2	inhumation grave	trench grave with stones	female	19
139	5	2	inhumation grave	stone container	female	17
141	5	2	inhumation grave	trench grave	?	14
145	5	1	possible inhumation grave	trench grave	x	3
146	5	1	possible inhumation grave	trench grave	x	1
147	5	1	inhumation grave	trench grave	x	1
148	5	1	inhumation grave	trench grave with stones	x	357
149	5	1	inhumation grave	trench grave	x	359
150	5	1	possible inhumation grave	trench grave	x	2
151	5	1	possible inhumation grave	trench grave	x	14
158	5	1	inhumation grave	trench grave	female	3
163	5	1	inhumation grave	stone container	female	13
169	5	2	inhumation grave	trench grave	male	15
170	5	2	inhumation grave	trench grave with stones	?	7
174	5	1	find	stone stray	x	x
175	5	1	possible inhumation grave	trench grave	x	6
176	5	1	possible inhumation grave	trench grave	x	3
182	5	1	pit	pit	x	x
186	5	1	inhumation grave	stone container	?	3
190	5	1	animal grave	trench grave	x	x
323	4	3	possible inhumation grave	trench grave	x	358
324	4	3	possible inhumation grave	trench grave	x	0
325	4	3	inhumation grave	trench grave	x	188
326	4	3	possible inhumation grave	trench grave	x	350
327	4	3	possible inhumation grave	trench grave	x	5
328	4	3	possible inhumation grave	trench grave	x	350
329	4	3	inhumation grave	trench grave	female	182
330	4	3	inhumation grave	trench grave with stones	x	186
331	4	3	inhumation grave	trench grave with stones	?	359
332	4	3	inhumation grave	trench grave	female	354
333	4	3	possible inhumation grave	trench grave with stones	x	7
334	4	3	possible inhumation grave	trench grave	x	3
335	4	3	inhumation grave	trench grave	?	356
336	4	3	inhumation grave	trench grave	male	178
337	4	3	inhumation grave	articulated skeleton	female	1
338	4	3	inhumation grave	articulated skeleton	female	7
339	4	3	inhumation grave	trench grave	?	29
340	4	3	possible inhumation grave	trench grave	x	358
341	4	3	possible inhumation grave	trench grave	x	3
356	4	3	inhumation grave	trench grave	x	358
357	4	3	possible inhumation grave	trench grave	x	x
358	4	3	disarticulate human remains	disarticulate human remains	x	x
359	1	3	inhumation grave	trench grave	?	1
360	1	3	inhumation grave	trench grave	?	3

Continuation appendix 12.1

context	trench	level	context type	container type	sex	orientation
361	1	3	inhumation grave	trench grave	?	2
362	1	4	disarticulate human remains	disarticulate human remains	x	x
363	1	5	inhumation grave	trench grave	x	0
364	1	4	inhumation grave	trench grave	female	4
365	1	4	inhumation grave	wooden container	x	358
366	1	3	inhumation grave	trench grave	?	357
367	1	3	inhumation grave	trench grave with stones	female	x
369	1	4	possible inhumation grave	trench grave	x	x
370	1	4	inhumation grave	trench grave	?	3
371	1	3	disarticulate human remains	disarticulate human remains	x	x
372	1	4	inhumation grave	trench grave	?	x
373	1	4	inhumation grave	articulated skeleton	male	0
374	1	4	inhumation grave	articulated skeleton	female	7
375	1	4	disarticulate human remains	disarticulate human remains	x	x
376	1	4	disarticulate human remains	disarticulate human remains	x	x
377	1	4	inhumation grave	trench grave	?	3
378	1	3	inhumation grave	trench grave	female	3
379	1	4	inhumation grave	articulated skeleton	female	355
380	1	3	inhumation grave	trench grave	?	359
381	1	3	inhumation grave	trench grave	female	2
382	1	4	possible inhumation grave	trench grave	x	x
383	1	3	inhumation grave	articulated skeleton	x	x
384	1	3	disarticulate human remains	disarticulate human remains	x	x
385	1	4	inhumation grave	articulated skeleton	x	2
386	1	5	disarticulate human remains	disarticulate human remains	x	x
387	1	4	inhumation grave	trench grave	male	2
388	1	4	inhumation grave	trench grave with stones	male	2
389	1	6	possible inhumation grave	trench grave	x	357
390	1	4	inhumation grave	trench grave with stones	male	3
391	1	4	possible inhumation grave	trench grave	x	7
392	1	5	inhumation grave	trench grave	x	12
393	1	5	inhumation grave	trench grave	?	1
394	1	5	inhumation grave	trench grave	?	5
401	5	1	disarticulate human remains	disarticulate human remains	?	x

Abbreviations

AOD	Amsterdam Ordnance Datum (= NAP)
CIL	Corpus Inscriptionum Latinarum
FAG	Franken Arbeitsgruppe (Müssemeier, U./E. Nieveler/R. Plum/H. Pöppelmann 2003)
L/P/V/	Legoux/Périn/Vallet (Legoux, R./P. Périn/F. Vallet 2004)
NAP	Normaal Amsterdams Peil (=AOD)
NHMM	Natuurhistorisch Museum Maastrichty
RACM	Rijksdienst voor Archeologie, Cultuurlandschap en Monumenten
RAL	Rijksarchief in Limburg
RHCL	Regionaal Historisch Centrum Limburg
ROB	Rijksdienst voor het Oudheidkundig Bodemonderzoek
S	Siegmund
SD	Süddeutsche Chronologie

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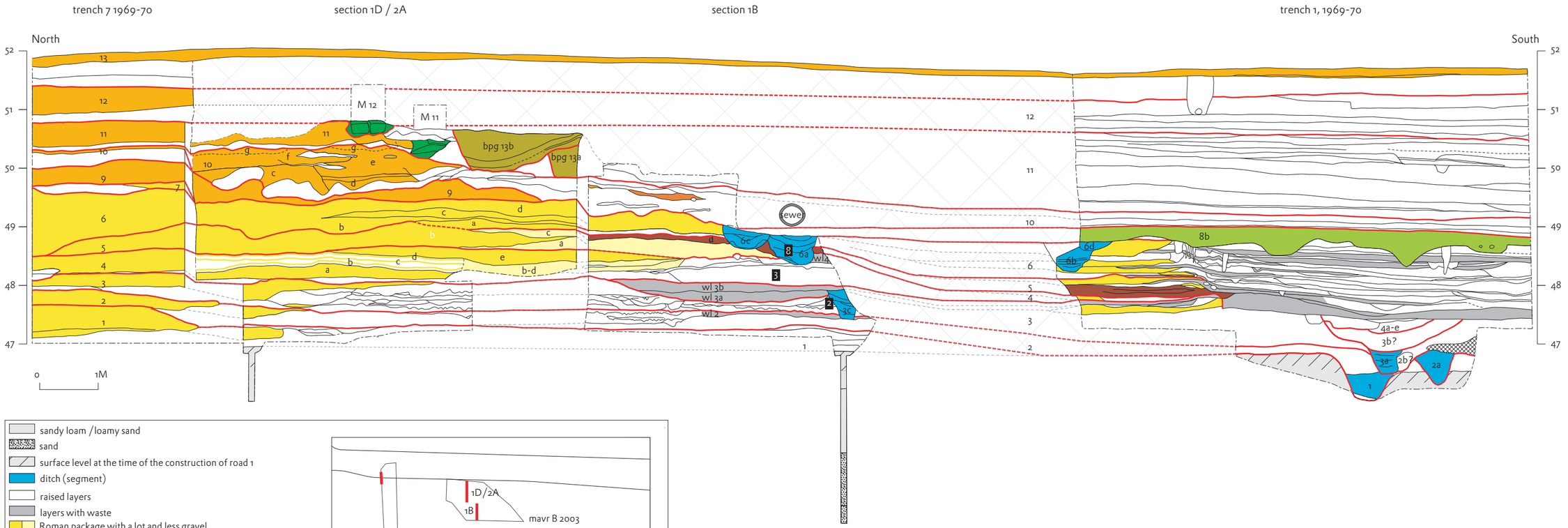
Fig. 5.4
The section through the Roman road and the area immediately to the south of it (Dijkstra/Flamman 2004)



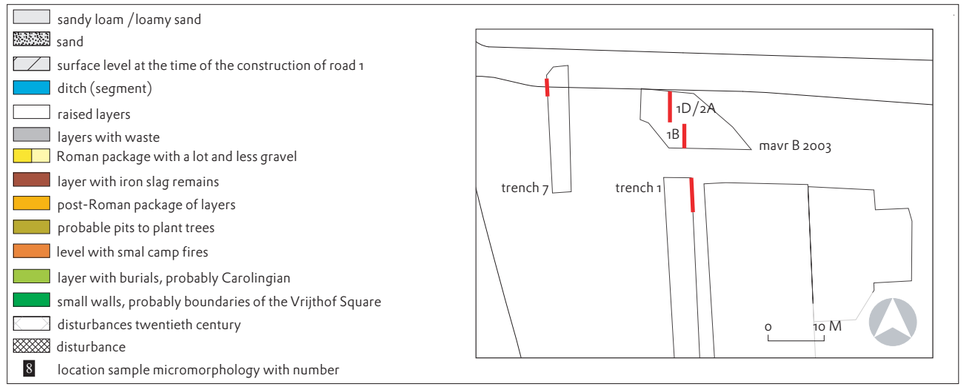


Fig. 5.5
Trench 1. East wall section. A. Roman layers, B. late Roman and early post Roman layers, C. early and central medieval layers, D. late medieval and modern period layers.

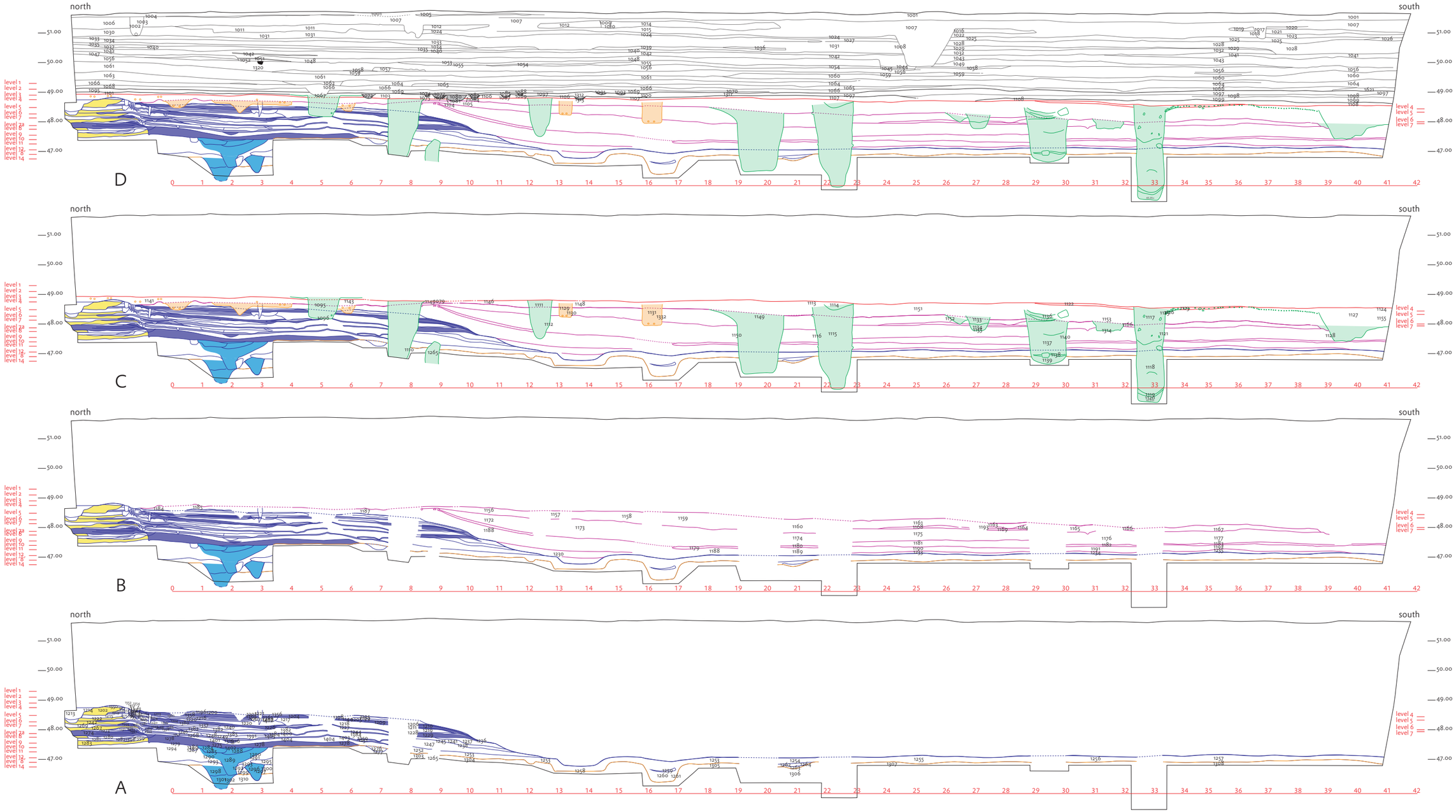


Fig. 5.6
Trench 4. East wall section. A. Roman layers, B. late Roman and early post Roman layers,
C. early and central medieval layers, D. late medieval and modern period layers.

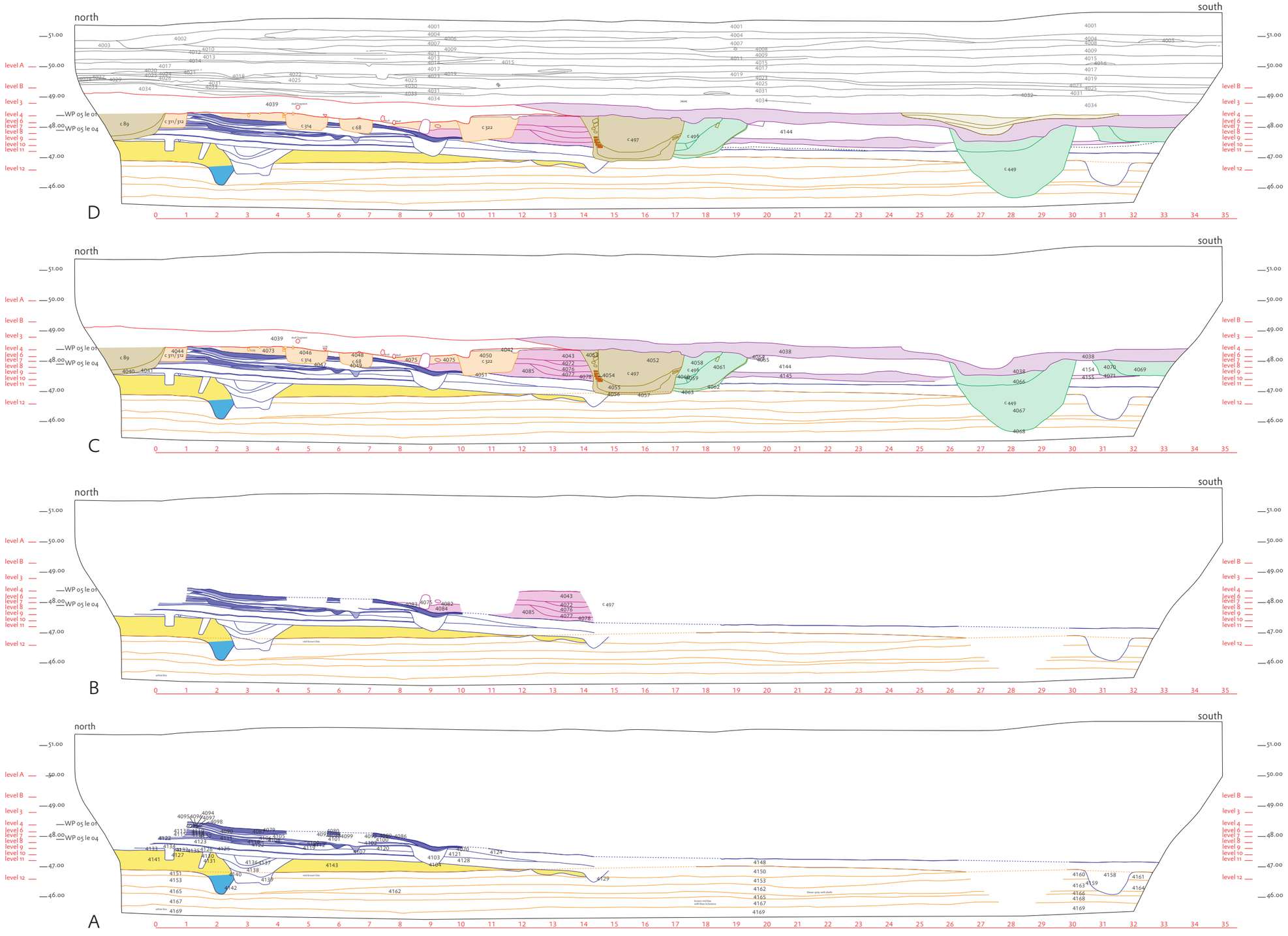


Fig. 5.42
Trench 3. South wall section. A. natural layers, B. 'dirty black layer' (Merovingian), C. 'very black layer' (Carolingian to Central or Late Middle Ages), D. late medieval and modern period layers.

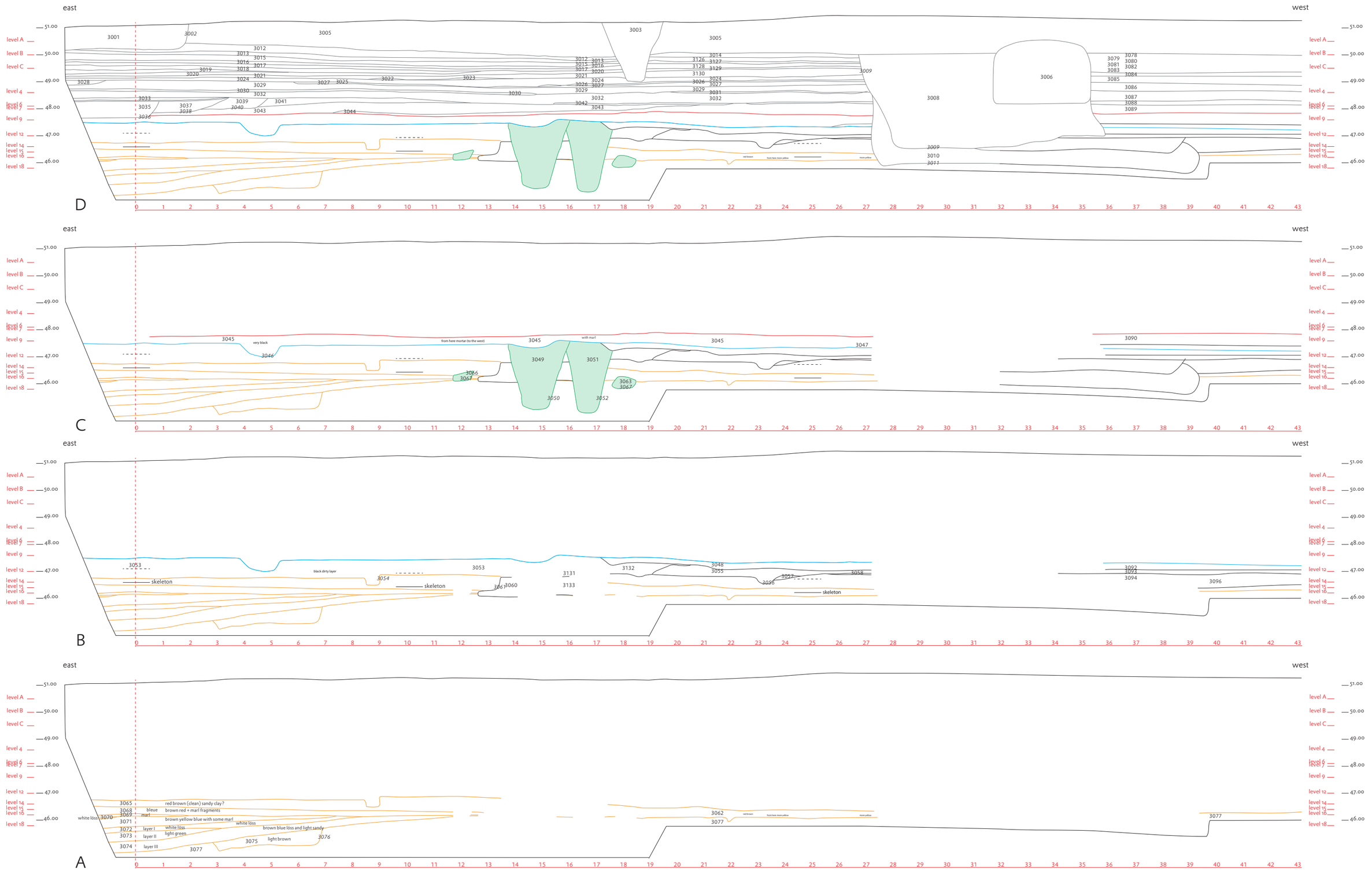
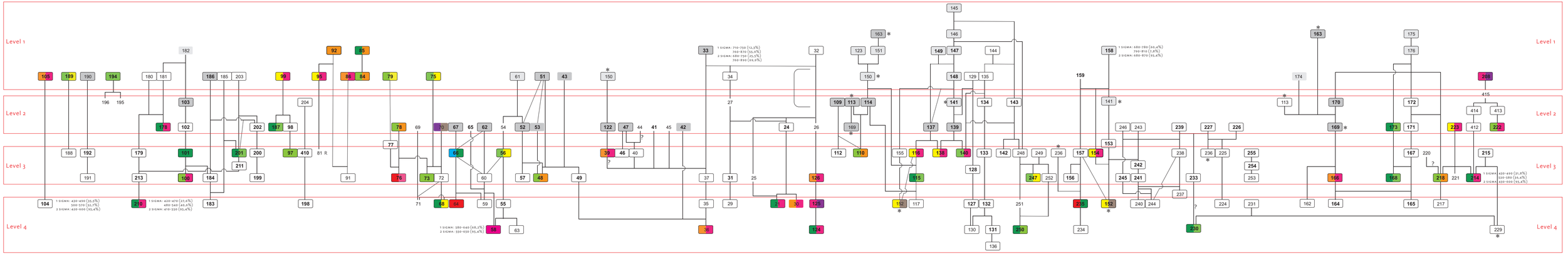


Fig. 11.1
Harris matrix of the Vrijthof graves.



Without stratigraphic relation

80 R 82 R 83 R 108 112 123 409 408 407 89 96 94 93 90 88 87 401 19 28 74 4 5 8 7 17 16 22 20 23 121 119 118 120 18 15 14 13 12 11 10 9 6 3 2 1 228 209 177 216 207 206 205 204

Maastricht phases	
A	Third / Fourth century
B	400 - 460/80
C	460/80 - 510/25
D	510/25 - c. 565
E	c. 565 - 580/90
F	580/90 - 610/20
G	610/20 - 640/50
H	640/50 - 670/80
I	670/80 - 725
J	725 - ...

with outline is grave context, without outline is other context (pit, foundation, disarticulate human remains, find, etc.)

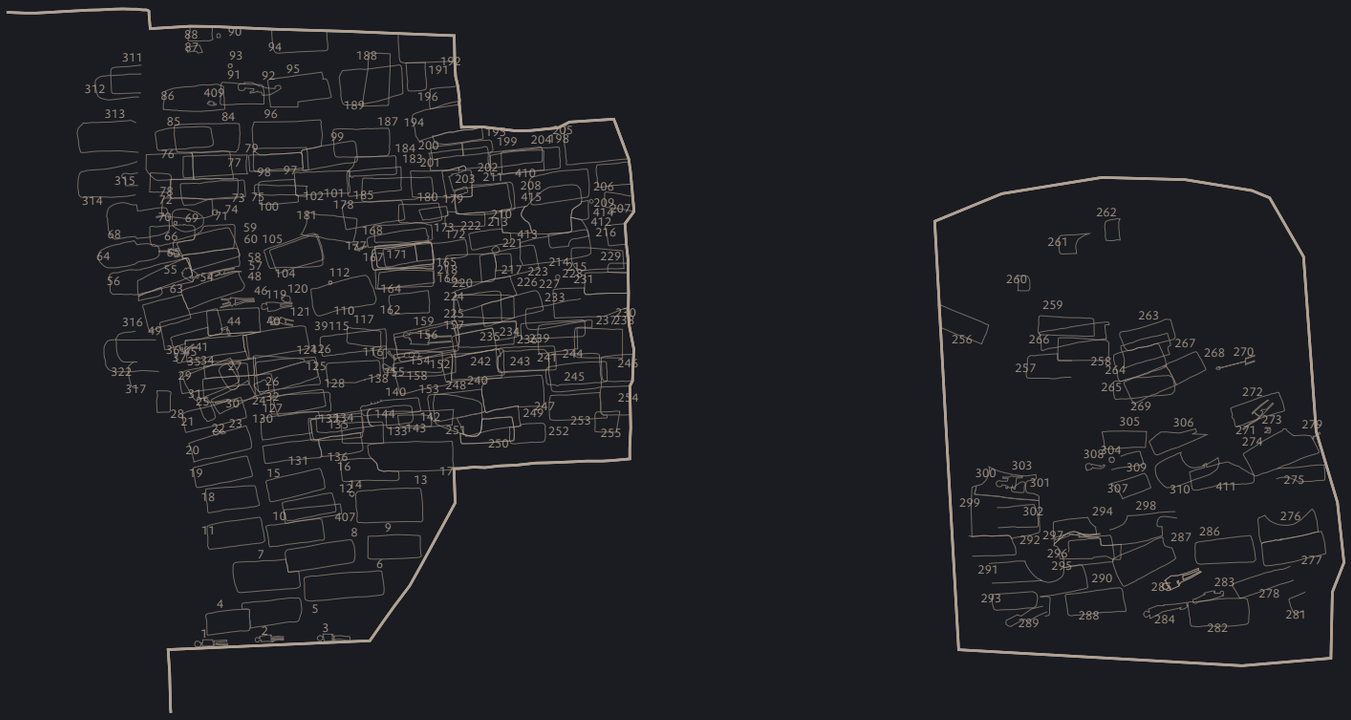
177 bold number is context with skeletal remains (either in a grave or as disarticulate remains outside a grave)

dark gray fill is grave of the top layer of graves (probably Carolingian)

light gray fill is grave younger than the top layer of graves (probably Carolingian)

* small star means that the number has been placed in the matrix twice for reasons of legibility

R Roman period structure



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