

WINSUM-BRUGGEBUREN, SECOND REPORT ON THE EXCAVATION THE ROMAN POTTERY

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ABSTRACT: A small part of a *terp* in Winsum in the province of Friesland was excavated in 1997. Although the study area had been levelled in recent times valuable information concerning the nature of the site in the Roman period was recovered. The excavation revealed that truncated remains were still present and that these features contained sherds of different types of Roman pottery dating for the major part to the first century AD. Although no features could be attributed to Roman military presence, the type and number of the Roman pottery made clear that Romans must have been present early in the first century. The reason for the Roman presence may well have been connected with military expansion in the first century as early as 12 BC and/or with taxation in kind, imposed by the Romans.

KEYWORDS: Winsum, Frisians, Augustan and Tiberian periods, Roman pottery (amphorae, *terra sigillata*, mortaria, smooth wares, Pompeian Red wares, etc.), Roman military campaigns, Roman taxation.

1. INTRODUCTION

1.1. Research objectives

The small village of Winsum in the Dutch province of Friesland is situated on an ancient dwelling mound (*terp*). These *terpen* are situated in the northern part, the clay districts of the provinces Friesland and Groningen. During the nineteenth and early twentieth century the fertile soil of many of these *terpen* was quarried as manure for less fertile regions. This manual digging brought to light thousands of objects, including a large number of Roman sherds (including *terra sigillata*), bronzes, brooches and coins (Galestin, 1992). Although the majority of the Roman finds date to the second and third centuries AD, a small number of first-century Roman objects were discovered. Also some very special Roman items appeared, such as the Roman writing tablet from Tolsum and the Roman votive stone from Beetgum (Boeles, 1951; Galestin, 1997).

The quarrying of the Winsum *terp* took place in the late nineteenth and the early twentieth century. Despite the great size of the *terp*, not many Roman finds were salvaged. This may be due to the fact that at the time the *terp* was quarried little attention was paid to such objects. An exception was the discovery of a silver hoard, probably of the fourth century, which was discovered at Winsum in 1861 (Galestin, 1993). However, Winsum is best known for a small number of early Roman pottery fragments which were brought to the attention of the international archaeological world by Boeles in 1927 and were dated to the Tiberian period. These fragments were recognized as quite exceptional because they date to an early period of Roman expansion in the north,

for which there was some evidence from historical sources but not from archaeological finds. The potsherds were interpreted at the time as possible remains of the elusive *Castellum Flevum*.

Since that time the fragments from Winsum still count as some of the very few examples of early-first-century Roman pottery discovered in the northern part of the Netherlands. A small number of other Roman finds dating to this early period are known, but they are rare exceptions. Some stray coins and a number of coin hoards dating to the Augustan and Tiberian periods are known from the three northern provinces of the Netherlands (Galestin, 2001). The problem is that we have no archaeological context for any of these finds. Therefore it is unknown whether the finds were deposited in a Roman or native context, or both. The only site in the coastal area of northwestern Europe where early Roman pottery and other finds have been found in the context of an excavation is Bentumersiel, in Germany on the bank of the river Ems. These finds date to the Tiberian period and comprise pottery, brooches and coins but also metal objects that may indicate Roman military presence at this site. However, the Roman artefacts discovered at Bentumersiel came from a native context without any features of a military camp (Brandt, 1977; Ulbert, 1977; Bärenfänger, 1999). This makes it difficult to interpret sites like Bentumersiel as military camps.

Despite the lack of evidence of military camps in northern Europe, we can be sure that Roman forces were present in this area. Ancient authors inform us about their various actions directed towards the northern shores. Journeys across the sea, treaties with Frisians and Chauci, Frisians helping the Roman army and Frisians paying tribute and their revolt in

AD 28. Also activities by cavalry and infantry in the marshes are reported to have been conducted across the land of the Frisians. We know very little about questions such as where they stayed and how they were accommodated during their expeditions. We know early military sites at Nijmegen, Vechten en Velsen (the northernmost post and situated near the North Sea) but no archaeological traces of any military activity further north are known. We deal with campaigns here from 12 BC onward by Drusus and his successors. Therefore an excavation at Winsum would be an excellent opportunity to investigate whether any features still survived that could be connected with Roman military presence.

1.2. The excavation

In 1997 an opportunity presented itself to carry out an excavation at Winsum to find out whether at Winsum a Roman castellum or military post had been established to which the Roman finds could be attributed. Under the supervision of Dr J.M. Bos, the Groningen Institute of Archaeology undertook an excavation, in collaboration with the municipality of Littenseradiel and the Argeologysk Wurkferbân of the Fryske Akademy and with the help of many students and volunteers. The excavation was directed by M.J.L.Th. Niekus while T.B. Volkers organized the finds administration. Dr P.B. Kooi directed a short campaign in 1998. A database of all find numbers and their dating was made by T.B. Volkers, while a database recording the excavated features and their location was made by K. van der Ploeg.

In total, twelve trenches were opened (for the location of the site and the trenches see figs 1 and

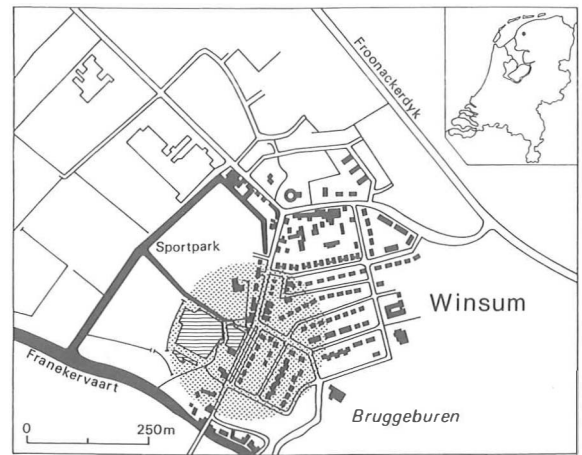


Fig. 1. Winsum. Plan of the village with the excavated area (drawing J.H. Zwier).

2). It turned out that many features still remained in the soil despite the fact that most of the *terp* had been quarried away during the nineteenth century. But many features had been decapitated and there was no connection with a contemporary level. No stratified levels had remained. The site basically consisted of a large number of superimposed and isolated features for which no function could be detected, apart from ditches. A detailed description of the excavated features with their date and possible function is yet to be published.

The pottery sherds are published here with their inventory number, followed by the location of the find in brackets. The location refers to the trench and

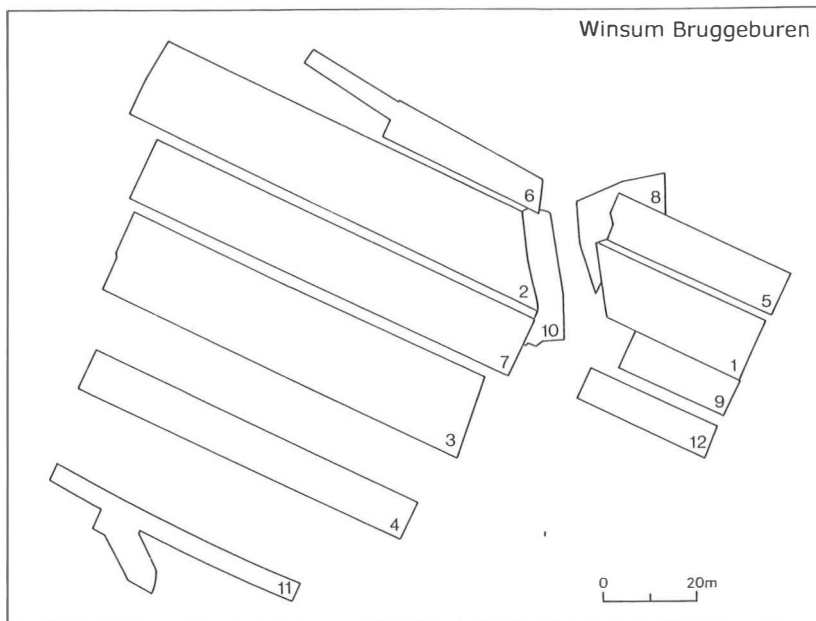


Fig. 2. Winsum. Excavated trenches (drawing J.H. Zwier).

the layer. Location 3/2, for example, refers to trench 3 layer 2. All sherds, including the wall fragments are published here, in order to present the full material remains of the Roman pottery discovered in the excavated area. The Roman pottery is found in many trenches and often together with more recent pottery sherds. Some of the trenches, however, date exclusively to the Roman period. For instance sherds with number 391 (2/2) were discovered in a ditch in trench 2 layer 2, and comprise Roman amphora fragments, Pompeian Red and Gauloise amphora fragments together with fragments of native pottery dating to the Iron Age. According to E. Taayke (personal communication) these native sherds may date to the first half of the first century AD.

The excavation yielded a large amount of Roman material, especially pottery, from the Augustan and Tiberian periods. The finds were discovered in a context which seemed strictly native. Native pottery from the pre-Roman period, the Roman period and also later periods was found. There were no features that could be attributed to a Roman fortification or to its interior structures. No finds of weapons or other military equipment came to light. On the other hand, the amount of Roman material, the range and the date of the pottery and the type and date of the coins all appear to be strong evidence of Roman presence at the site. This makes the excavation very interesting but the difficulty of interpretation still remains. Also the date of the finds is surprising: a small part of the Roman material is Augustan and therefore earlier than the finds which were already known from Winsum, but also earlier than the finds from other northern sites like Velsen and Bentumersiel. On the other hand, objects from the Tiberian period and of later periods were also found.

The quality of the sherds is very good: the fragments do not show much wear or abrasion. This indicates that post-depositional processes have not affected the sherds and that they were deposited in the ground not long after their use, where they remained until their discovery. This is quite different from the much-abraded fragments from Velsen I, where the majority of the sherds are in very poor condition which is due to the washing away of the layers containing the sherds.

Publication of the excavated finds started with the Roman coins (Galestin, 2000); the present publication about the Roman pottery is the second report on the Roman finds from the excavation at Winsum. In a third report, the finds of bronze and other materials will be published.

2. CATALOGUE OF ROMAN POTTERY

2.1. Introduction

The classification of Roman pottery in the Netherlands follows the tradition of the publications on the

excavations of castella like Haltern (Loeschke, 1909) and Hofheim (Ritterling, 1912) and of the castra at Nijmegen (Brunsting, 1937; Stuart, 1962, 1976).

The method of classifying Roman pottery in the Netherlands is still mainly based on the outward appearance of the fabric and subsequently on different types. The basic classification in terms of outward appearance resulted in the distinction of different wares such as colour-coated wares, smooth and coarse wares. The smooth ware which in Germany was called *Tongrundige Gefässe* (Loeschke, 1909: p. 223) initially comprised not only flagons (one- and two-handled) and jars, but also the amphorae, dolia and mortaria (Stuart, 1976: p. 12; Willems, 1981: p. 165). Stuart's method of classifying Roman pottery has been followed, with adjustments, by many archaeologists in the Netherlands (Bloemers, 1978; Willems, 1981; Haalebos, 1990; Bosman, 1997). However, the adjustments which have been made to Stuart's classification may in some instances cause problems and ambiguity. For instance when the amphorae, *dolia* and *mortaria* were identified as a separate group, called '*Schwerkeramik*' by Loeschke in Oberaden (Loeschke, 1942: p. 72), and were no longer incorporated in the smooth-walled pottery, this separation did not apply to the Gauloise flat-based amphorae. These remained to be classified together with the two-handled flagons (Bosman, 1997: p. 228). This meant that the (flat-based) Gauloise amphorae, which were containers for imported wine, were not classified and counted with the regular amphorae which had been used for the same purpose. The problem was tackled by Haalebos (1990: pp. 172–173) who classified all two-handled vessels among the amphorae under three headings: small, large and medium-sized, of which he reckoned only the small amphorae among the smooth-walled pottery, as '*kruikamforen*'. The same problem occurred in Britain where a distinction was made between two-handled flagons and large two-handled flagons (Tyers, 1996: pp. 200–201).

Pompeian Red ware also illustrates a problem of classification. It has been classified among the Belgian wares (Loeschke, 1909: p. 268), among the Painted wares (Stuart, 1962: p. 29, type 13–15; Stuart, 1976: p. 41, type 15), among the Fine wares (Davies, Richardson & Tomber, 1994: p. ii) and among the so-called *Kochgeschirr* (Simon, 1976: p. 98).

There is no standard sequence of presentation of ceramic types in an excavation report. According to Tyers (1996: p. 83) one seeks to balance the need of grouping together physically similar wares with that of grouping together vessels by source, function or date. As a result, in some publications we find the classification of the material according to the definition of specific wares while in other publications the classification is based on a different definition of wares, following for instance the distinction be-

tween oxidized wares, reduced wares and fine wares (Davies, Richardson & Tomber, 1994: pp. i–ii).

The present publication is partly based on the distinction used in Dutch archaeology between ‘smooth-walled’ pottery (almost exclusively oxidized wares), ‘rough-walled’ pottery (reduced coarse wares) and the ‘thick-walled’ pottery (amphorae, dolia and mortaria). The term painted wares, which is often used in Dutch archaeology is not used here. Colour-coated wares, Pompeian Red ware and Eggshell ware are included among the Fine wares. *Terra nigra* and cork-urns are classified among the Gallo-Belgic wares which in the Dutch tradition are also called Belgic wares (*‘Belgische waar’*) following the terminology in a publication by Holwerda (1941).

The sherds are numbered with the inventory number WB (Winsum-Bruggeburen), followed by the year of the excavation (97) and the find number. This number refers (in brackets) to the location (trench/layer) and all sherds have been measured in the same sequence: height×breadth×section.

2.2. Italian and Gaulish *terra sigillata* (fig. 3)

Thirty fragments of *terra sigillata* were discovered in the excavation at Winsum: Italian *terra sigillata* as well as South and East Gaulish *terra sigillata*. Almost one third of the sherds are of Italian *terra sigillata* comprising fragments of cups and plates. The cup fragments include three fragments of Consp. Form 14, dating to the Augustan period, and one of Consp. Form 31, dating to the late Augustan and Tiberian periods. One of the three fragments of the cups of Form 14 is a base fragment with part of a potter’s stamp. Form 14 is common at Haltern (Ha 7) and was also found at Nijmegen (Haalebos, 1991: pp. 102–105 and Figs 4.10 and 4.16) and at Vechten, but this type of cup was not found at Velsen I (Bosman, 1997: p. 168). According to M.D. de Weerd (2003) the presence or absence of this type of cup does not prove an early or later date for the findspot. However, the presence of three fragments of this early cup at Winsum cannot be ignored, even though other objects which might provide a more precise dating such as dendrochronological samples are not available. Also the fact that the *terra sigillata* of the types Haltern 1 and Haltern 7 (Consp. Form 14) never reached Velsen (De Weerd, 2003; Bosman, 1997: p. 168) is very important. The harbour at Velsen is dated to the Tiberian period and presence of sherds in Winsum, dating to an earlier period seems to indicate that the earliest *terra sigillata* that reached Winsum did not arrive with Romans coming from Velsen. The earliest *terra sigillata* may have come direct from Nijmegen or Vechten and may have belonged to an earlier shipment of pottery to the Ro-

man army, connected with a military campaign to the north. It is important to notice that a sherd of Haltern 1 and of Haltern 7 were found at Bentumersiel (Ulbert, 1977: p. 53 and Pl. 6. 57 and 58). Both Winsum and Bentumersiel may have played an essential role in the campaign of Drusus in 12 BC.

The four plates include two sherds of Consp. Form 18 and two of Consp. 20. Both Form 18 and the early examples of Form 20 date to the Augustan period and are common at Haltern (Conspectus, 1990: pp. 82 and 86).

The South Gaulish plate Drag. 17 dates to the first century and is common at Velsen I (Bosman, 1997: pp. 169 and 173). The decorated bowl Drag. 29 is more common at Velsen II while only one example is known from Velsen I, dating to the Tiberian period (Bosman, 1997: pp. 166 and 175). However, the decorated bowl Drag. 29 occurs already in Augustan contexts (Polak, 1995: p. 71).

The remaining Gaulish *terra sigillata* cannot be dated with much precision: the dish Drag. 32 is relatively late and dates to the third quarter of the second century or even later. For the fragments of the bowl Drag. 37 without the relief decoration it is impossible to determine a more precise date than second or third century.

2.2.1. Italian (*‘Arretine’*) *terra sigillata*

Potter’s stamp on campanulate cup, probably Conspectus Form 14 (Ha 7)

1. WB 97.491 (3/0–1) (fig. 3:1). Base fragment with part of rectangular stamp. The sherd is broken and only the letter L followed by a full stop and the lower part of a second letter remain. The second letter may be the letter T and the stamp may be of L. Titius Thyrsus. The stamp seems similar to OCK type 2249.14. The approximate date is 10 BC–AD 10. The location of this particular stamp is Lyon but other (similar) stamps of Thyrsus are attributed to Arezzo, compare OCK type 2246.28. Characteristic of the stamp from Winsum is the lower end of the letter L which points slightly downward. The frame is rectangular with a symmetrical border (OCK Frame 151), the edge of the rectangular frame is rounded at the corner. Stamps of this potter occur in Neuss, Xanten, Haltern and Vechten. These are stamps on plane ware, both on plates and on cups. The fragment from Winsum is 2 mm thick and this may indicate that it did not belong to a plate but to a cup of Consp. Form 14 (Ha 7). 2×2.9×0.2 cm.

Campanulate cup with narrow hanging lip, Conspectus Form 14 (Ha 7)

2. WB 97.726 (2/face B) (fig. 3:2). Rim fragment of cup. The straight profile of the wall and the lip are characteristic of a cup of Conspectus Form 14.1; 4.2×8×0.3 cm. Rim diam. 8 cm.
3. WB 97.1508 (9/1) (fig. 3:3). Wall fragment of cup. The lip is broken off. The form is similar to Conspectus 14.2; 5.6×5.5×0.4 cm.

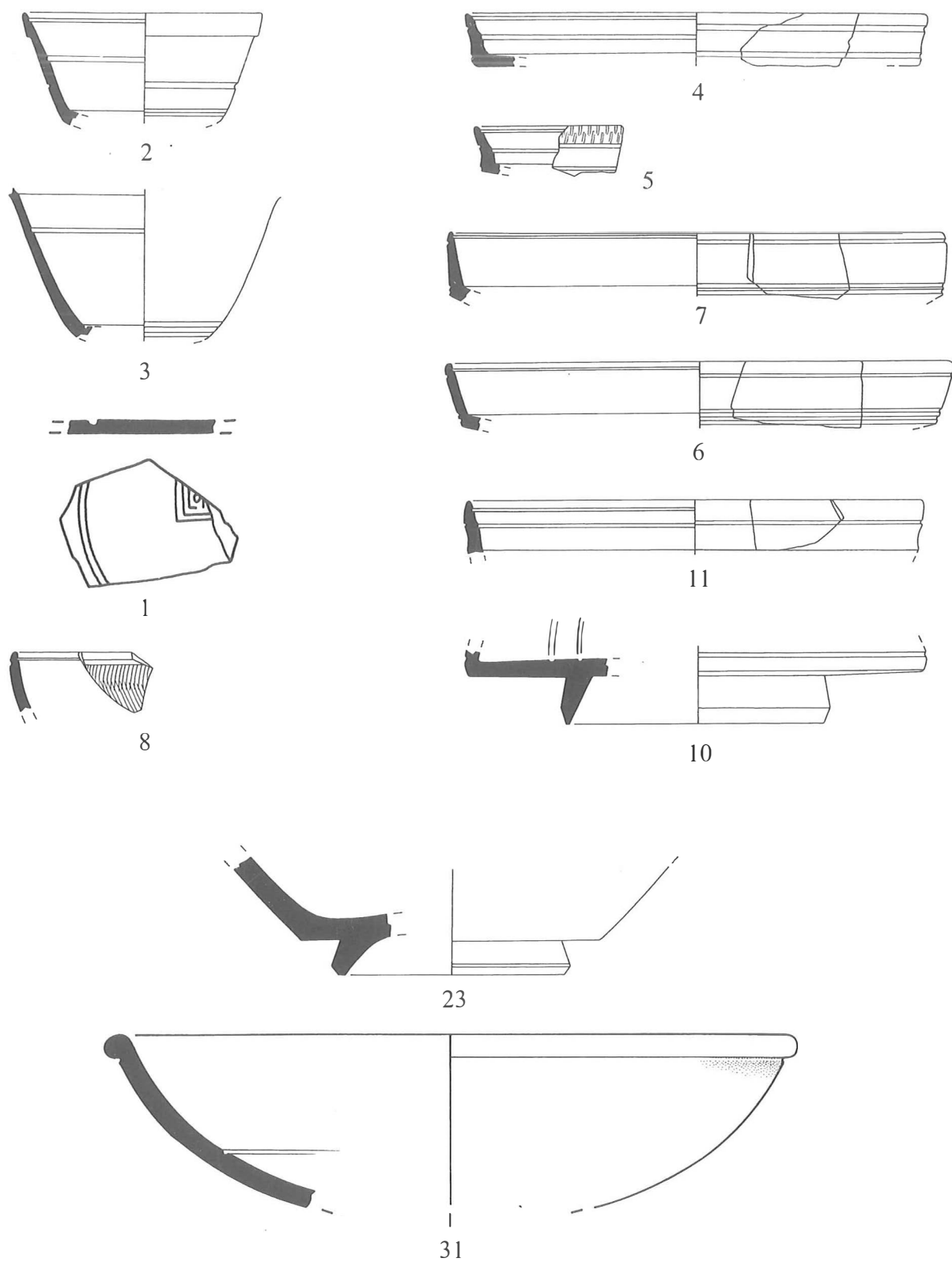


Fig. 3. *Terra sigillata* (illustration numbers refer to catalogue). Scale 1:2.

Plate with concave vertical rim, Conspectus Form 18.2 (Ha 2)

4. WB 97.302 (2/3) (fig. 3:4). Rim fragment of plate, Conspectus 18.2 (Ha 2); 1.7×4×0.3 cm. Rim diam. 16 cm.
5. WB 97.1139 (7/3) (fig. 3:5). Rim fragment of plate, Conspectus 18.2 (Ha 2); 1.6×2.4×0.4 cm. Rim diam. c. 16 cm.

Plate with smooth (or finely moulded), vertical rim, Conspectus Form 20.1 (Ha 5)

6. WB 97.460 (1/4) (fig. 3:6). Rim fragment of plate, Conspectus 20.1; 2.5×4.7×0.5 cm. Rim diam. 16 cm.
7. WB 97.1429 (7/0–1) (fig. 3:7). Rim fragment of plate, Conspectus 20.1; 2.3×3.5×0.5 cm. Rim diam. 16 cm.

Cup with restricted wall, Conspectus Form 31 (Ha 11)

8. WB 97.477 (2/2) (fig. 3:8). Rim fragment of cup, Conspectus 31; 2×2.5×0.3 cm.

Plate of unknown form

9. WB 97.1511 (10/0–1). Rim fragment of plate of unknown form; 0.5×0.6 cm.

2.2.2. South Gaulish terra sigillata

Plates

10. WB 97.63 (1/1) (fig. 3:10). Base fragment of plate, Drag. 17; 5.3×8.5×0.6 (wall) cm. Base diam. 8 cm. Diam. c. 14 cm.
11. WB 97.1139 (7/0–1) (fig. 3:11). Rim fragment of plate, Drag. 17; 1.8×3.2×0.4 (wall). Rim diam. 16 cm.
12. WB 97.1 (dump). Rim fragment of plate, Drag. 17 with rouletted decoration on the rim; 1.6×1.3×0.4 cm.
13. WB 97.1 (dump). Rim fragment of plate; 0.9×1.3×0.4 cm.
14. WB 97.505 (2/3). Base fragment of plate; 2.6×4.5×0.5 cm.
15. WB 97.620 (3/1). Fragment of plate?; 1.3×2.3×? cm.

Cup and bowls

16. WB 97.392 (2/2). Wall fragment of bowl with conical wall, probably of the Type Hofheim 5 (Ritterling, 1912); 2.4×1.5×0.6 cm.
17. WB 97.23 (1/1). Fragment of footring of cup, Drag. 27; 1.6×2.3×0.7 cm.
18. WB 97.1099 (5/2). Wall fragment of cup, Drag. 27; 1×1.4×? cm.
19. WB 97.1368 (7/3). Wall fragment of bowl, Drag. 29; 2.2×2.1×0.8 cm.
20. WB 97.474 (2/2) Wall fragment of bowl; 0.8×1.1×0.2 cm.
21. WB 97.512 (2/3). Wall fragment of bowl; 1.5×1.9×0.2 cm.

2.2.3. East Gaulish terra sigillata

Cup, dishes, bowls and flagon?

22. WB 97.102 (1/2). Rim fragment of cup, Drag. 27; 2.2×2.2×0.2 cm.
23. WB 97.491 (3/0–1) (fig. 3:23). Base fragment of dish, probably Drag. 31; 3.7×9.2×0.7 cm. Footring diam. 8 cm.
24. WB 97.32 (1/1). Base fragment of Drag. 31?; 1.6×6.2×? cm. Diam. footring 10 cm.
25. WB 97.1313 (7/2). Rim fragment of dish, probably Drag. 32; 1.7×2.2×0.6 cm.

26. WB 97.2 (1/1). Base fragment of bowl, Drag. 37; 1×8×? cm. Base diam. 8 cm.
27. WB 97.237 (2/1). Wall fragment of bowl, probably Drag. 37; 3.5×3.6×0.9–1.2 cm.
28. WB 97.1371 (dump). Base fragment of bowl, probably Drag. 37; 2.6×2.3×0.5 cm.
29. WB 97.1125 (10/0–1). Wall fragment, maybe of a bowl; 1.2×2×0.4 cm.
30. WB 97.399 (2/1). Wall fragment, probably of a flagon, Drag. 52 with barbotine decoration; 3×1.9×0.3 cm.
31. WB 97.1099 (5/2), 97.1106 (5/2–3) and 97.1116 (5/3). Three fragments of a shallow bowl with bead rim, in imitation of Drag. 31. The fragments of this shallow bowl probably are to be identified as Oxfordshire red/brown-slipped ware which is also referred to as Oxfordshire colour-coated ware. The fabric is hard, the break has an orange colour (2.5YR 6/6–6/8) with a grey core while the colour of the slip is brown 10R 4/4–4/6 and 5YR 3/3. 22×9×0.5 cm. Diam. rim 24 cm. Three fragments probably belong to the same bowl. Two of them (1099 and 1116) fit together and were found in two successive layers on the same spot while the third was found on a different spot, in a different part of the same trench. The form of the bowl resembles Type C 45 (Young, 1977: p. 159 and fig. 58) of the Oxfordshire red/brown colour-coated ware. The fabric may be compared to Fabric F5, which is typical of this type of bowl (Booth, Boyle & Keevill, 1993: pp. 138–139). The colour of the surface is similar to the colour of the Oxford Red-slipped ware mentioned in the NRFRC (OXF RS). Although it was not yet possible to have the bowl identified as Oxfordshire ware by specialists, the form and the fabric make this identification very probable. The production of this type of bowl started circa AD 240 or 250 rather than 270 as was suggested by Young (Booth, Boyle & Keevill, 1993: pp. 163 and 167) while the end of the production may be around AD 400. The distribution of the Oxfordshire is extensive in central England in the late third century but the distribution expands and intensifies during the fourth century (Tyers, 1996: pp. 175–178). This ware was found in Scotland but also on the continent and even in the province of Groningen (the Netherlands) on different sites (Fulford, 1977: p. 50, fig. 5 and pp. 81–82).

2.3. Fine wares (figs 4 and 5)

2.3.1. Pompeian Red ware

The name of Pompeian Red ware derives from the colour of the thick slip covering the inside of the platters, which is reminiscent of the red colour in the wall paintings at Pompeii. The forms include large dishes with plain rims and lids (Tyers, 1996: p. 156). The dishes were used for cooking, as is evident from the areas of sooting on the exterior of the dishes. Several different fabrics have been distinguished (Peacock, 1977; Tyers, 1996: pp. 156–159; NRFRC, 1988: p. 43). According to Peacock, Fabric 1 originates from a source in the region of Pompeii while other fabrics may originate in France and Flanders. The sherds from Winsum all belong to Fabric 1, from Campania. The platters and lids were exported for military use throughout Europe (Tyers, 1996: pp.

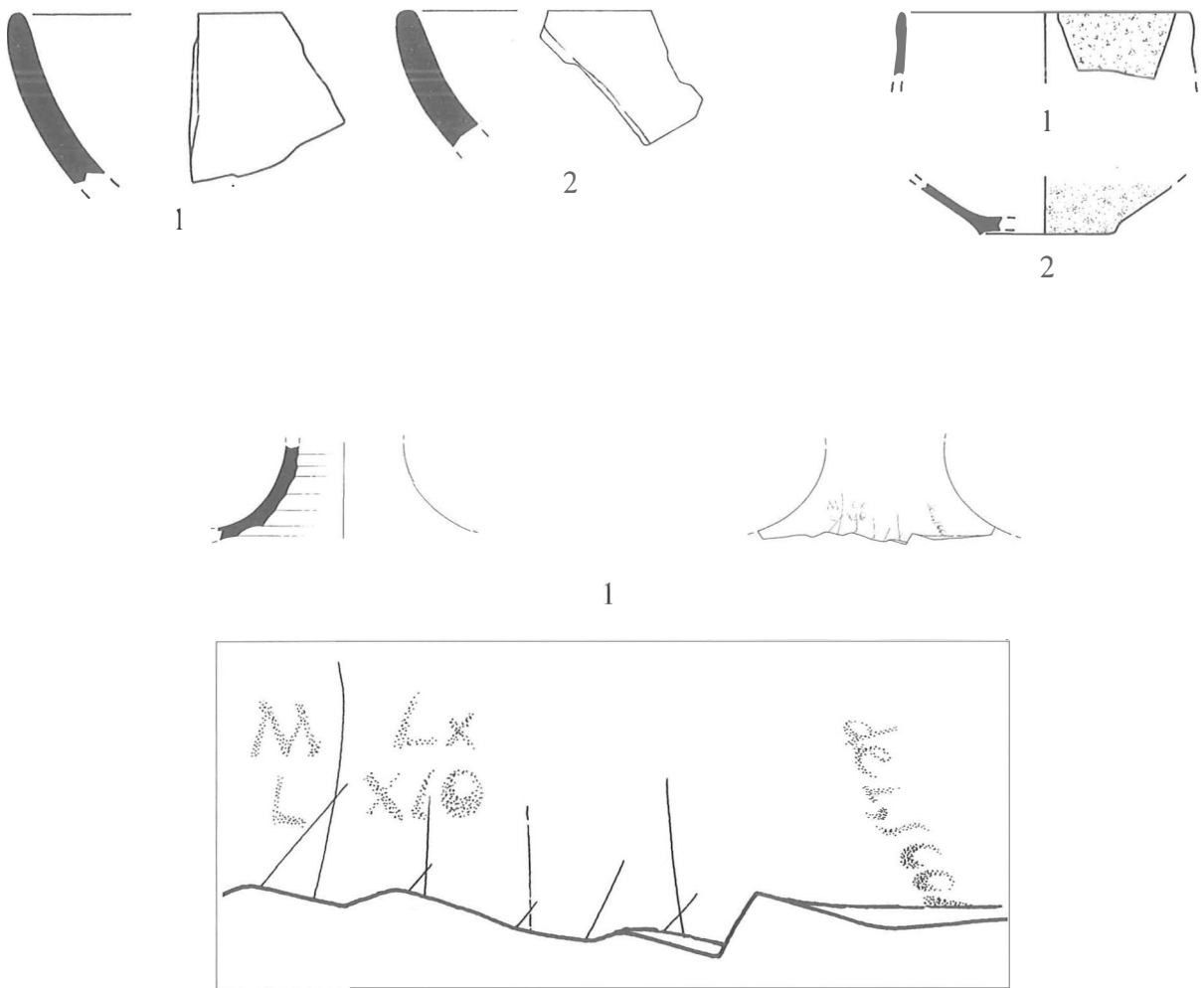


Fig. 4. Pompeian Red ware (illustration numbers refer to catalogue). Scale 1:2.

Fig. 5. Colour-coated wares (illustration numbers refer to catalogue). Scale 1:2.

156–159 and fig. 187). At Oberaden, Haltern and Neuss, Pompeian Red is present in Augustan levels. The form of the dishes found at Winsum is comparable to Oberaden *Typus* 21 and Haltern Types 75a (dishes) and b (lids). The ware also occurs at Velsen I, where it dates from the Tiberian period, but is absent at Velsen II (Bosman, 1997: p. 186).

Rim sherds of plain-rim dishes. Form Oberaden Typus 21 and Haltern Type 75a. Peacock Fabric 1

1. WB 97.391 (2/2) (fig. 4:1). Plain-rim fragment with thick red slip on the interior; 4.6×4.2×0.8 cm.
2. WB 97.563 (2/4) (fig. 4:2). Fragment with plain rim and thick red slip on the interior; 4×4.6×0.7 cm.
3. WB 97.1194 (5/south face). Plain-rim fragment with thick red slip on the interior; 1.5×2.4×0.7 cm.

Base fragments of dishes, probably Oberaden Typus 21 and Haltern Type 75a. Peacock Fabric 1

4. WB 97.2+391+391 (1/1 and 2/2). Three joining base fragments of dish. Thick red slip on the interior. Traces of sooting on the outside; 3.8×4.5×0.6 cm. Base diam. 26 cm.
5. WB 97.514 (2/3). Base fragment of dish. Thick red slip on the interior and traces of sooting on the exterior surface; 2.5×2.6×? cm.
6. WB 97.64 (1/1). Base fragment with thick red slip on the interior and sooting on the exterior surface; 2.2×2×0.5 cm.
7. WB 97.266 (2/1). Base fragment with thick red slip on the interior and sooting on the outside surface; 1.6×2.4×? cm.
8. WB 97.383 (2/2). Base fragment with fine multiple concentric grooves on the interior. Only the interior surface with the red slip remains; 1.6×2.4×? cm.
9. WB 97.491 (3/0–1). Base fragment with red surface, the outside is dark brown; 2.3×1.5×0.4 cm.

Fragment of dish, probably Oberaden Typus 21 and Haltern Type 75a. Fabric 1

10. WB 97.566 (2/4). Wall fragment with thick red slip on the interior; 3.9×4.3×0.7 cm.

Fragments without slip, fragments of lids, Haltern Type 75b. Fabric 1

11. WB 97.1 (dump). Fragment of lid; 5.7×7.8×0.7 cm.
 12. WB 97.31 (1/1). Fragment of lid; 2.4×4.2×0.6 cm.
 13. WB 97.383 (2/2). Fragment of lid; 3×4.5×0.6 cm.
 14. WB 97.383 (2/2). Fragment of lid; 2.7×2.7×? cm.
 15. WB 97.533 (2/3). Rim fragment of a very thin lid; 3.6×1.9×0.4 cm.

2.3.2. *Colour-coated wares*

The colour-coated fragments from Winsum all belong to roughcast cups, semi-spherical bowls with a roughcast of quartz sand which covers the entire (inner and outer) surface of the cup. The form of the cups may be compared to that of Hofheim Type 22. Among the colour-coated wares different fabrics have been distinguished which may point to different provenances, for instance southern Gaul, Lyon and Spain. The different fabrics vary in colour from gray, light red, red and pink. The provenances of these different fabrics could not be identified. Colour-coated cups of different fabrics are also found at Velsen I, as may be gathered from the description (Bosman, 1997: pp. 199–202). The production of roughcast cups at Lyon started in the Tiberian period (Tyers, 1996: p. 150) and the roughcast on the interior of the products from southern Gaul ends soon after AD 40 (Bosman, 1997: p. 199).

Rim fragment

1. WB 97.391 (2/2) (fig. 5:1). Rounded rim. Fabric pink (5YR 7/4), reddish brown slip (5YR 4/3); 3×2×0.2 cm. Rim diam. 10 cm.

Base fragment

2. WB 97.73 (1/2). (fig. 5:2). Fragment of a slightly concave base. Fabric gray (2.5YR 6/1) with a slip flecked light red and red (2.5YR 6/8–5/8); 5.5×2.5×0.2 cm. Foot diam. 3.8 cm.

Wall fragments

3. WB 97.1 (dump). Wall fragment with transition to the base. Fabric light red (2.5YR 6/8). Inside and outside, a light red and red flecked slip (2.5YR 6/8–5/8); 3.3×2.1×0.2 cm.
 4. WB 97.72 (1/1). Wall fragment. Fabric white (10YR 7/2–8/2) with a dark grayish brown slip (10YR 4/2); 2×1×0.2 cm.
 5. WB 97.73 (1/2). Wall fragment, fabric pinkish gray (5YR 7/2) with dark gray slip (5YR 4/1). Faint trace of applied decoration on the wall; 2×1×0.2 cm.
 6. WB 97.391 (2/2). Two joining wall fragments, fabric red (10R 4/8) with red slip (10R 4/4); 2.5×5×0.4 cm.
 7. WB 97.491 (3/0–1). Wall fragment, fabric pink (5YR 7/4), reddish brown slip (5YR 4/3); 1.5×9×0.2 cm.

2.3.3. *Eggshell ware*

1. WB 97.1508 (9/1). Wall fragment with horizontal groove. Probably fragment of a cup. Similar cups are known from Velsen (Bosman, 1997: p. 186) which are comparable to Oberaden *Typus* 38 and Haltern Type 40; 3.5×2.3×0.2 cm.

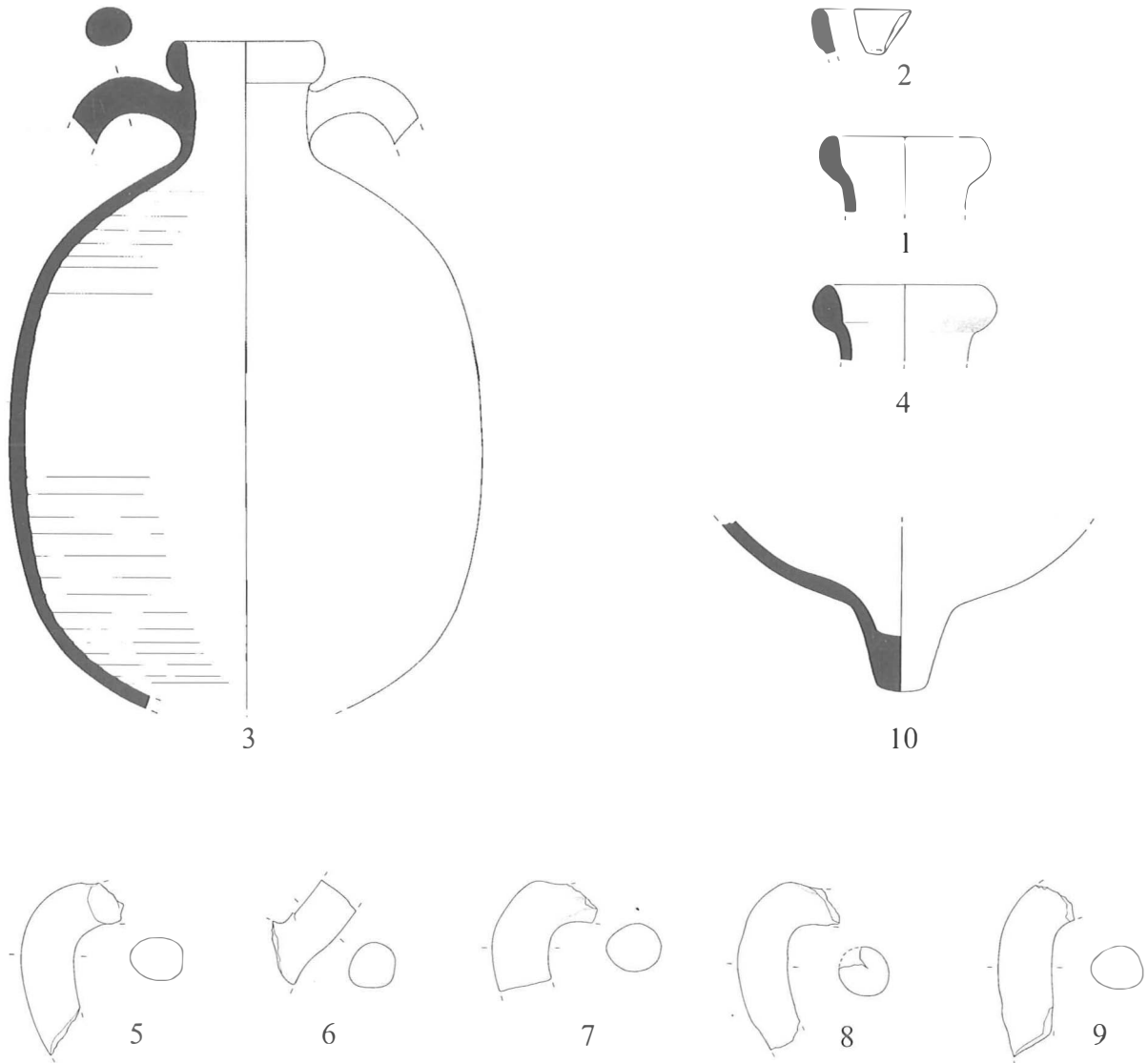
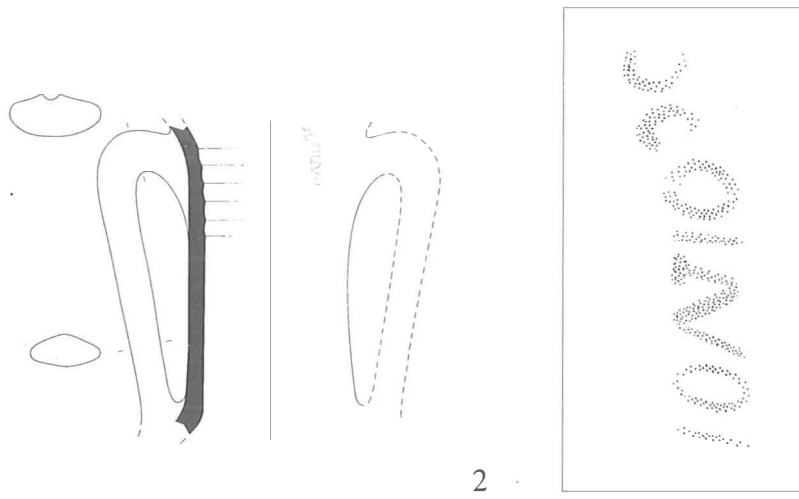
2.4. Amphorae, *dolia* and *mortaria* (figs 6–11)

2.4.1. *Amphorae*

Amphorae are possibly the most complex and most discussed category of Roman pottery. The amphorae are traditionally classified by their shape as outlined by H. Dressel in 1899 (Sealey, 1985; Peacock & Williams, 1991). This classification is still the basis of our modern typology although new forms have been identified and new classifications have been proposed (Peacock & Williams, 1991: p. 7).

The definition of an amphora as a two-handled container used for transporting liquid commodities and with a bottom with a point or knob (see Peacock & Williams, 1991: p. 5) excludes other types of amphora such as the flat-bottomed amphora from southern Gaul. This typological definition should therefore perhaps be replaced by a functional grouping where the term amphora “should be confined to vessels that have been stoppered, sealed and transported with contents. Anything else is a flagon, however large and however much it resembles one of the known amphora forms” (Tyers, 1996: p. 85). This may resolve the problem of definition of amphorae and may end discussions on the question of whether or not to include the flat-bottomed amphorae among the flagons. However, the problem still persists as is clear from the publication of the finds from Velsen, where the flat-bottomed Gauloise amphorae are classified with the two-handled flagons (Bosman, 1997: pp. 228–231).

Petrographical studies by Peacock and by Williams have made it clear that different areas in the Mediterranean world were involved in producing amphorae. It is also clear that different forms, for instance Dressel 20 and Ha 70, may be of the same fabric. On the other hand, amphorae of the forms Dressel 2–4 were produced in many different areas in Italy (e.g. Campania), but also in Spain (Catalonia) and in southern France. It is therefore considered unwise to attempt to classify body sherds without a rim, but with the help of petrological and sometimes chemical analysis it is often possible to identify the provenance of amphorae from small, unclassifiable body sherds (Williams in: Sealey, 1985: p. 153). Petrological methods may indeed help to attribute a sherd to its region of production. For instance volcanic or metamorphic inclusions like the black sand from the Vesuvius region may identify its provenance as Italy.



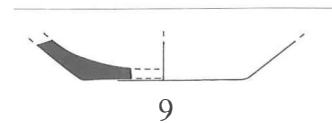
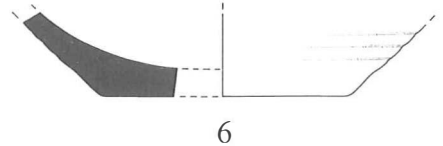
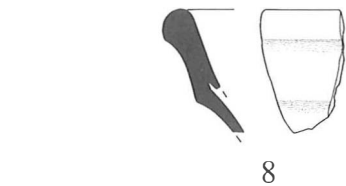
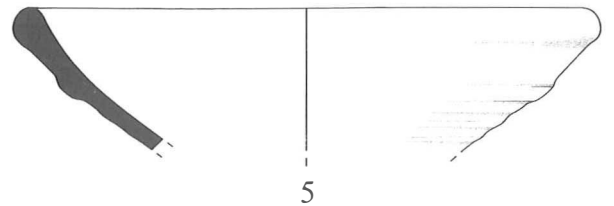
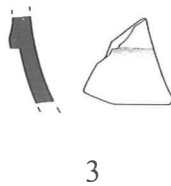
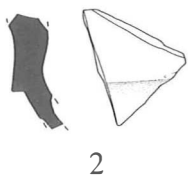
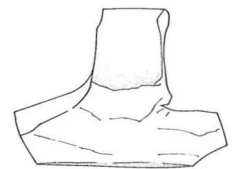
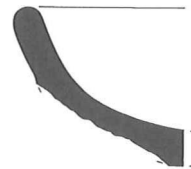
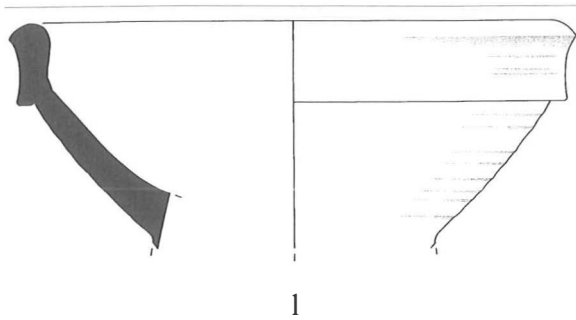
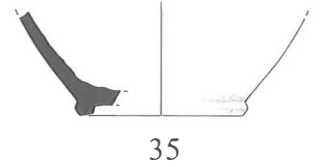
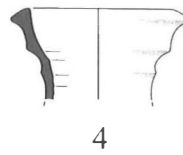
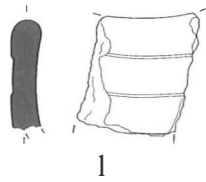
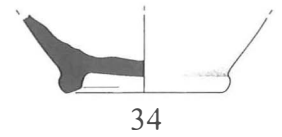
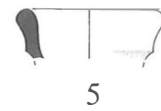
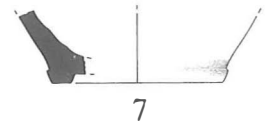
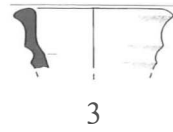
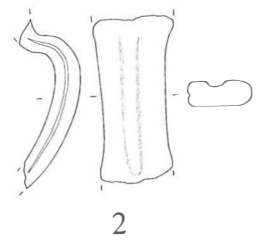
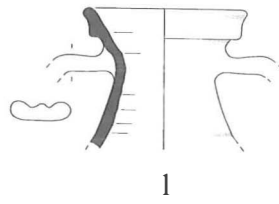
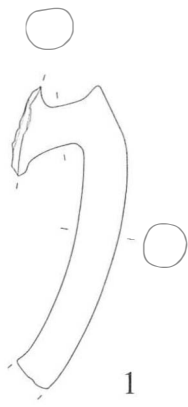


Fig. 8. Amphora, Camulodunum 184 (illustration number refers to catalogue). Scale 1:4.
 Fig. 9. Amphorae, Gauloise flat-based (illustration numbers refer to catalogue). Scale 1:4.
 Fig. 10. Dolia (illustration number refers to catalogue). Scale 1:3.
 Fig. 11. Mortaria (illustration numbers refer to catalogue). Scale 1:3.

The amphora fragments excavated at Winsum form a varied group, among which a number of different forms have been identified. For instance Dressel 20, Haltern 70, Camulodunum 184, Dressel 2–4 and Gauloise amphorae. Although wall fragments are difficult to identify, the wall fragments of Dressel 20 vessels, which were exclusively used for olive oil, are easy to pick out; quite a number of wall fragments may be attributed to Dressel 20 (and maybe include Ha 70, which is thinner and contained a sweet liquid). Still a number of sherds remain that cannot be attributed to a definite type of amphora, but whose fabric may in some instances point to the provenance and even to the form. Both Peacock and Williams and *The National Fabric Reference Collection* published by the Museum of London (NRCRF) may help to identify fabrics from different sources. With the help of the NRCRF we are for example able to identify fabrics from Italy (e.g. CAM AM 1, CAM AM 2), which were used for Dressel 1 and Dressel 2–4 and the fabric ITA AM 2, which was used for Dressel 2–4. Dressel 1 and many Dressel 2–4 vessels are wine amphorae. Other fabrics (e.g. P&W AM 16) identify sherds as belonging to amphorae from southern Spain, for example Dressel 7–11 which was used as a container for salted foods (Sealey, 1985: p. 77).

The different fabrics that could be identified among the sherds from Winsum testify to imports from quite a large area in the Mediterranean world. Provenances range from the eastern Mediterranean (Kos) to Italy, Spain and southern France. The products carried in these containers vary. The products are in the first place olive oil, as may be seen from the many fragments of Dressel 20. A second product was wine, as is evident from the many Gauloise amphorae, but also the amphorae from Italy and the eastern Mediterranean contained wine. Other amphorae from Spain, for instance Ha 70, may have held *defrutum*, a sweet liquid, a non-alcoholic syrup (Sealey, 1985: pp. 62–64; Peacock and Williams, 1991: p. 116). Fragments of Dressel 7–11 point to the presence of salted foods like salted fish (*salazones*) and fish sauces (*garum*, *muria*, *alec*) (compare Sealey, 1985: pp. 77–85).

The importation of the amphorae to Winsum appears to start in the Augustan period with Oberaden 83/Dressel 20 amphorae, but may continue into the Tiberian period and maybe even to later times. The rims of the Oberaden 83/Dressel 20 amphorae suggest an Augustan date, but for the remaining sherds there is no evidence for a more precise dating, owing to the lack of rim fragments that may help to date the amphorae.

The amphora sherds from Winsum show a concentration in the part of the excavation which is nearest to the centre of the original *terp*.

Amphora sherds with painted inscriptions and a graffito

1. WB 97.476. (2/2) (fig. 6:1). Fragment of the neck of an amphora, probably Dressel 2–4. There are two inked inscriptions and one graffito: (a) horizontal on the shoulder in capitals: M Lx L XLO |, where M may perhaps refer to *m(odii)* but Lx Sixty modii seems too much for one amphora and also the second line is difficult to explain; (b) vertically on the shoulder in cursive letters *def.scc[.]*, probably *defrutum scc?* (raisin wine, compare Hassall & Tomlin, 1994: p. 312, note 75); and (c) X X X X X, 'fifty'.
2. WB 97.460 (2/3) (fig. 6:2). Amphora fragment with a long neck and straight handles, probably a Dressel 2–4 amphora. One inked inscription, vertically down the neck in capitals: <SC>VINO [NAS], probably *VI No[nas]*, "on the sixth day before the Nones" (compare Tomlin, 1997: p. 771). About the existence of the letters S and C, I am not sure.

Oberaden 83 and Dressel 20

The Dressel 20 is a large globular amphora from southern Spain, the province of Baetica, and was used for the transport of olive oil. Although this type of amphora is known under several names, e.g. Oberaden 83, Haltern 71 and Hofheim 76, the name Dressel 20 is used for the entire group of amphorae, which shows a gradual change in form (Martin-Kilcher, 1987: pp. 49–51). Its Augustan predecessor (Oberaden 83) is less massive and has an ovoid body with a pointed spike; the wall of this predecessor is thinner than that of the later Dressel 20 and may be as thin as 1.15 cm between the handles (Sealey, 1985: pp. 67–68). The rim fragments of the earliest group (Martin-Kilcher, 1987: p. 54, *Profilgruppe A*) are characterized by a relatively slim profile compared to the later examples. The earliest rims date from 10 BC to AD 30, but other early forms date to the years AD 10–50. Group A rims therefore start in the Augustan period; they gradually become thicker and by the mid first century evolve into group B. The rim fragments from Winsum all have parallels in group A and may date to the Augustan period or maybe later, but not later than the middle of the first century. All five handle fragments belong to the earliest examples (Martin-Kilcher, 1987: *Henkelform 1* and 2). The pronounced spike of the base fragment also belongs to an early form of the amphora.

The Oberaden 83/Dressel 20 amphora weighs circa 30 kg and its content varies from 40 to 80 litres, but in general it contains circa 65 litres. The early amphorae are present in all Augustan military camps in Europe. They are not found in pre-Roman *oppida* where only wine amphorae were found. Therefore the presence of olive-oil amphorae is seen as a sign of Romanisation as for instance at Augst where they are found in the earliest layers of the civilian settlement (Martin Kilcher, 1987: pp. 49–50).

The fabric of the Oberaden/Dressel 20 amphorae is easy to recognize and it is characterized by Peacock and Williams (1991) as Class 25 and identified

in the NRFRC (1998: p. 84) as Baetican (Early) amphorae I (BAT AM I). It is a very rough, sandy fabric and body sherds have a tendency to laminate.

Among the sherds from Winsum, four rim fragments were identified which belong to four different amphorae, as well as five handles and one pointed spike. The remainder are c. 109 body sherds. The body sherds vary in size from large fragments measuring c. 15×15 cm to medium-sized and small fragments measuring from 8×6 to 3×4 cm. The fragments vary in thickness from 1.1 to 1.7 cm. The presence of the four rim fragments indicates that at least some 260 litres of olive oil were consumed at Winsum.

Rim fragments

1. WB 97.74 (1/2) (fig. 7:1). Rim fragment, comparable to *Profilgruppe A* (Martin-Kilcher, 1987); 6.4×9.9×1 cm (wall). Rim diam. 10–12 cm.
2. WB 97.99 (1/2) (fig. 7:2) Rim fragment, *Profilgruppe A* (Martin-Kilcher, 1987); 3.9×4.9×1 cm (wall). Rim diam. 10–12 cm.
3. WB 97.302 (1/4) (fig. 7:3). Complete rim, *Profilgruppe A* (Martin-Kilcher, 1987) with one handle and large parts of the body, 55 cm high. Rim diam. 13 cm.
4. WB 97.976 (3/2–3) (fig. 7:4). Rim fragment, *Profilgruppe A* (Martin-Kilcher 1987); 6×12.9×1 cm. Rim diam. 12 cm.

Handles

5. WB 97.391 (2/2) (fig. 7:5). Handle, *Henkelform 1* (Martin-Kilcher, 1987). Length 15 cm.
6. WB 97.467 (2/3) (fig. 7:6). Handle, *Henkelform 1* (Martin-Kilcher, 1987). Length 8.5 cm.
7. WB 97.1100 (7/0–1) (fig. 6b:7). Handle, *Henkelform 2* (Martin-Kilcher, 1987). Length 9 cm.
8. WB 97.1191 (5/south face). Handle, *Henkelform 1* (Martin-Kilcher, 1987). Length 14 cm.
9. WB 97.1477 (9/1). Handle, *Henkelform 1* (Martin-Kilcher, 1987). Length 14.5 cm.

Base fragments

10. WB 97.1557 (10/1–2) (fig. 7:19). Base fragment with spike and part of wall; 14×22×1.2 cm.

Wall fragments with shoulder or part of handle

11. WB 97.489 (2/2). Wall fragment with part of handle; 15×12.5×1.4 cm.
12. WB 97.31 (1/1). Shoulder fragment; 8.5×7.4×1.4 cm.
13. WB 97.157 (1/3). Shoulder with part of handle? 5.5×6×? cm.
14. WB 97.357 (2/1). Shoulder fragment; 10.5×7×1.6 cm.
15. WB 97.1556 (10/1–2). Shoulder/neck fragment; 9.5×7×1.2 cm.
16. WB 97.1557 (10/1–2). Shoulder fragment; 18×16×1.1 cm.

Wall fragments of Dressel 20

17. WB 97.1 (dump). 10.7×7×1.2 cm.
18. WB 97.1 (dump). 10×11×2.2 cm.
19. WB 97.1 (dump). 6.5×5.2×1.2 cm.
20. WB 97.1 (dump). 4.5×6×1.2 cm.
21. WB 97.14 (1/1). 4.4×4.9×1.5 cm.
22. WB 97.21 (1/1). 2.5×2.3×1 cm.
23. WB 97.34 (1/1). 18.5×20×0.9–1.4 cm (two joining fragments).

24. WB 97.34 (1/1). 8.1×7.2×1.1 cm.
25. WB 97.34 (1/1). 9.5×10.5×1 cm.
26. WB 97.46 (1/2). 16×16×1.9 cm.
27. WB 97.52 (1/1). 5.2×4.4×1.1 cm.
28. WB 97.64 (1/1). 4.8×5.6×1.4 cm.
29. WB 97.68 (1/2). 3×2.8×1.4 cm.
30. WB 97.68 (1/2). 5.4×5.2×1.4 cm.
31. WB 97.73 (1/2). 5.1×5×1.2 cm.
32. WB 79.74 (1/2). 12×14×1.7 cm.
33. WB 97.86 (1/2). 12×15.5×2 cm.
34. WB 97.87 (1/2). 5.3×10.2×0.9 cm.
35. WB 97.104 (1/2). 5.8×6×0.9 cm.
36. WB 97.114 (1/3). 11×13×0.9 cm.
37. WB 97.114 (1/3). 3.6×6.4×1.1 cm.
38. WB 97.116 (1/2). 5.9×5.8×1.3 cm.
39. WB 97.116 (1/2). 4.8×5.8×1.6 cm.
40. WB 97.116 (1/2). 7.8×3.5×1.4 cm.
41. WB 97.132 (1/3). 6.4×4.6×1.2 cm.
42. WB 97.136 (1/3). 2.5×3.5×0.8 cm.
43. WB 97.162 (1/3). 7.5×4.5×1.1 cm.
44. WB 97.185 (1/4). 3.2×5.2×1 cm.
45. WB 97.223 (2/1). 11×5.5×1.3 cm. Three joining fragments.
46. WB 97.229 (2/1). 9.5×15×1.8 cm.
47. WB 97.266 (2/1). 8×7.5×1.1 cm.
48. WB 97.303 (1/4). 8.8×6×1.3 cm.
49. WB 97.360 (2/1). 4.5×3.9×1.3 cm.
50. WB 97.391 (2/2). 6.5×7×1.8 cm.
51. WB 97.391 (2/2). 6.8×7×1.4 cm. Three joining fragments.
52. WB 97.391 (2/2). 3.5×4.8×1 cm.
53. WB 97.391 (2/2). 12×9×2.7 cm.
54. WB 97.391 (2/2). 9×5.5×2.3 cm.
55. WB 97.411 (2/2). 10×10×? cm.
56. WB 97.461 (2/2). 6.6×6.5×1.3 cm.
57. WB 97.467 (2/3). 5.1×5.5×1.2 cm.
58. WB 97.469 (2/2). 11×11.5×1.3 cm.
59. WB 97.474 (2/2). 11.5×15×1.6 cm.
60. WB 97.474 (2/2). 10×10.5×1.4 cm.
61. WB 97.474 (2/2). 7.5×10×1.7 cm.
62. WB 97.474 (2/2). 10×11.5×1.5 cm.
63. WB 97.491 (3/0–1). 7×5×1.1 cm.
64. WB 97.512 (2/3). 6×6.8×1 cm.
65. WB 97.512 (2/3). 8.5×12.5×1.3 cm.
66. WB 97.533 (2/3). 3.8×2.6×1.2 cm.
67. WB 97.560 (2/4). 9×11×? cm.
68. WB 97.721 (2/face B). 9×11×1.1 cm.
69. WB 97.766 (2/south face). 8×9×1 cm.
70. WB 97.789 (dump). 6×9×1 cm.
71. WB 97.810 (5/0–1). 12×6×1.2 cm.
72. WB 97.810 (5/0–1). 13×5×1.1 cm.
73. WB 97.816 (5/1). 6.8×6×1.2 cm.
74. WB 97.843 (3/2). 2.5×4.8×1 cm.
75. WB 97.916 (5/1, dump). 11×7×1.3 cm.
76. WB 97.996 (5/1). 5.1×5.5×1.5 cm.
77. WB 97.998 (5/1). 3.2×3.3×1 cm.
78. WB 97.1139 (7/0–1). 2×4×1.3 cm.
79. WB 97.1149 (5/3). 6.5×6×1.2 cm.
80. WB 97.1159 (5/3). 5.7×9.7×1.9 cm.
81. WB 97.1159 (5/3). 4.6×4.5×1.1 cm.
82. WB 97.1160 (5/3). 6×4.8×1.1 cm.
83. WB 97.1189 (5/south face). 4.5×7.2×1.2 cm.
84. WB 97.1285 (7/2). 15×12×1.9 cm.
85. WB 97.1285 (7/2). 4.5×5×1.2 cm.
86. WB 97.1285 (7/2). 5.3×5×1.1 cm.
87. WB 97.1285 (7/2). 8×5×1.1 cm.

88. WB 97.1337 (90-1). 6×7×1.7 cm.
89. WB 97.1361 (7/3). 5×4×1.3 cm.
90. WB 97.1375 (7/3). 3×5.5×1.6 cm.
91. WB 97.1383 (9/0-1). 9×7.4×1.1 cm.
92. WB 97.1426 (7/3). 3.4×5.2×1 cm.
93. WB 97.1447 (8/2). 8.5×6×1.1 cm.
94. WB 97.1447 (8/2). 5.2×5.9×1.5 cm.
95. WB 97.1447 (8/2). 4.8×5×1 cm.
96. WB 97.1447 (8/2). 8.5×7×0.9 cm.
97. WB 97.1447 (8/2). 7.3×5.6×1.6 cm.
98. WB 97.1477 (9/1). 6×8.5×1.4 cm.
99. WB 97.1477 (9/1). 8×6.5×1.6 cm.
100. WB 97.1480 (9/1). 6×8×1.3 cm.
101. WB 97.1480 (9/1). 5.4×6.7×1.4 cm.
102. WB 97.1511 (10/0-1). 12×10×1.4 cm.
103. WB 97.1511 (10/0-1). 9.7×10.5×1.2 cm.
104. WB 97.1511 (10/0-1). 7×8×1.2 cm.
105. WB 97.1511 (10/0-1). 6×8×1.2 cm.
106. WB 97.1511 (10/0-1). 5.5×9.1×1.3 cm.
107. WB 97.1511 (10/0-1). 3.5×4×1.3 cm.
108. WB 97.1512 (10/1). 7×5.5×0.9 cm.
109. WB 97.1512 (10/1). 3×6.5×1.2 cm.
110. WB 97.1542 (9/2). 10×12.5×1.5 cm.
111. WB 97.1542 (9/2). 5×11.5×2.4 cm.
112. WB 97.1542 (9/2). 4.5×4×0.8 cm.
113. WB 97.1556 (10/1-2). 13.5×14×1-1.3 cm.
114. WB 97.1556 (10/1-2). 9.5×11.1×1.3 cm.
115. WB 97.1556 (10/1-2). 1.9×13×1.3-2.1 cm.
116. WB 97.1557 (10/1-2). 7.5×14×1.2 cm.
117. WB 97.1557 (10/1-2). 8.5×18.5×1.3 cm.
118. WB 97.1638 (11/dump). 11×15×1.9 cm.
119. WB 97.1671 (south of 11). 12×10.5×1.8 cm.

Haltern 70 (Peacock & Williams Class 15)

Haltern 70 amphorae were produced in southern Spain in the province of Baetica. The amphora is classified as a wine amphora but painted inscriptions specify the content as *defrutum* or as black olives preserved in *defrutum*. Sealey argues that *defrutum* was a non-alcoholic syrup, similar to *sapa* which is also mentioned on amphorae but also in texts from Cato and Columella (Sealey, 1985: pp. 59-65).

The amphorae have an everted, collared rim and oval handles with a fairly deep vertical groove. The fabric is the same as for Dressel 20 amphorae (Peacock & Williams, 1991: pp. 115-116, Class 15). In the NRFRC the fabric is identified as BAT AM I. As a consequence it is difficult to distinguish between the two types and although wall fragments of Haltern 70 tend to be thinner (1-1.5 cm) than those of Dressel 20 and display a tighter curving (Peacock & Williams, 1991: p. 116), the walls of the early Dressel 20 amphorae are also quite thin (Sealey, 1985: p. 67), measuring circa 1 cm at the height of the collar. The thickness of the sherd therefore is not a very useful criterion for distinguishing between Haltern 70 and Dressel 20 amphorae. Only one rim fragment from Winsum could positively be attributed to a Haltern 70 amphora.

Rim fragment

1. WB 97.1509 (9/1). Rim fragment of Haltern Type 70. 5.5×7×1.2 cm. Rim diam. 18 cm.

Dressel 2-4 (Peacock & Williams Class 10)

The amphora type known as Dressel 2-4 is a combination of three very similar forms published by Dressel in his table of amphora forms in 1899. Although the name Dressel 2-5 is also used, the distinctive form of the handle of Dressel 5 and the Greek provenance of this amphora have led to the exclusion of the latter, and in most recent literature on amphorae the term Dressel 2-4 is used (Zevi, 1966: p. 214; Sealey, 1985: p. 33). The form is, however, also known as 'Koan' (Peacock & Williams, 1991: p. 105; Davies, Richardson & Tomber, 1994: pp. 20-21). The Dressel 2-4 amphorae were used as containers for wine and were made throughout the western Mediterranean world: the fabrics used for Dressel 2-4 include fabrics from Italy (Campania, Latium, Etruria), from Spain (Catalonia and Baetica) and from southern and central France (Peacock & Williams, 1991: pp. 105-106). In the NRFRC the different fabrics used for Dressel 2-4 have been identified (ITA AM 2, CAM AM, CAM AM2, CAT AM and BAT AM). All fabrics from Italy are red brown, orange or pink in colour, while the Baetican fabrics are pale brown to buff.

The problem is that in Winsum no rim fragments were discovered, nor any other sherd with diagnostic features to identify the Dressel 2-4 amphora more closely. Therefore all sherds have been classified solely on the basis of fabric or colour, which is rather risky. However, all sherds attributed here to Dressel 2-4 have a fabric that is red brown, orange or pink in colour, which is characteristic of Italy and therefore the sherds belong to amphorae from Italy and not from Spain.

Another problem is that the distinction between sherds of Dressel 2-4 and those of Camulodunum 184, the amphora with peaked handles from the Aegean area, is difficult to make and body sherds are easily confused (Davies, Richardson & Tomber, 1994: p. 26). According to Sealey (1985: p. 54) it is possible to distinguish between sherds of these types by petrological analysis, but identification in the hand specimen is not always easy.

Notwithstanding these difficulties the choice has been made here to put all sherds that belong to the fabrics attributable to Italy to Dressel 2-4 and to attribute to the Cam. 184 only those fragments that are definitely of the form Camulodunum 184, an amphora with a characteristic peaked handle and three sherds with the same fabric as the handle. This fabric is quite different from the fabric of the sherds attributed to the Dressel 2-4 amphora. Future research may help to identify between the body sherds from Dressel 2-4 and those from Cam. 184. For the

present the only certainty we have is that we have here body sherds from amphorae from Italy, which contained wine. The presence of Dressel 2–4 amphorae as well as Cam. 184 amphorae is attested elsewhere in the Netherlands, at Velsen I (Bosman, 1997: p. 191) and in Nijmegen from the Augustan period onwards (Van der Werff, 1984: p. 356).

Wall fragments

1. WB 97.1 (dump). Wall fragment, orange fabric with limestone inclusions and white slipped surface; 9.8×7.5×0.9 cm.
2. WB 97.64 (1/1). Wall fragment, orange fabric, limestone inclusions and white slipped surface; 5.3×9×1.1 cm.
3. WB 97.476 (2/2). Wall fragment, orange fabric, limestone inclusions and white slipped surface; 7×8×0.8 cm.
4. WB97.814 (5/dump). Wall fragment, orange fabric, limestone inclusions and white slipped surface (2.5Y 8/2); 5.5×5×0.8–1.1 cm.
5. WB 97.837 (5/1 dump). Wall fragment, orange fabric, with well-sorted inclusions of black sand. The sherd's outer surface is completely missing; 5×4.5×? cm.
6. WB 97.973 (5/1 dump). Wall fragment, orange fabric, limestone inclusions and white slipped surface. The interior surface is grey (5YR 5/1–6/1); 6×4.5×1 cm.
7. WB 97.1320 (8/0–1). Wall fragment, orange fabric, limestone inclusions and white slipped surface; 7×6×0.7 cm.

Thinner wall fragments with rilling and a paler fabric

8. WB 97.577 (2/dump). Wall fragment with orange fabric and white slipped surface. The sherd is quite thin (0.6 cm) and on the inside rilling is visible circa 1.5 cm apart. The inner surface is paler with traces of white slip. The fragment is fairly flat without much curve; 7.5×8×0.6 cm.
9. WB 97.1188 (5/ south face). Wall fragment with orange fabric and white-slipped, pink (7.5YR 8/4) surface. The sherd is quite thin and the inner surface is lighter than the colour of the fabric. On the inside, rilling is visible; 4.8×3.8×0.3 cm.
10. WB 97.406 (2/2). Wall fragment with brick-red (10YR 6/8) colour and white (5Y 8/3) slipped surface. The interior surface is covered with a brown substance, probably remnants of resin. This fabric may be Campanian (Davies, Richardson & Tomber, 1994: p. 21); 13.5×16×0.8–1 cm.
11. WB 97.89 (1/2). Two joining wall fragments with light pinkish-orange (2.5YR 6/8) colour and white slip. The fabric shows silver and gold mica and probably limestone. On the exterior is an incised line which may be part of a grafitto; 5×3.5×0.7 cm.
12. WB 97.810 (5/0–1). Wall fragment with light pinkish-orange fabric and white slip. Silver and gold mica and probably limestone. A grafitto consisting of two (or three) incised lines; 5.5×4×0.7 cm.

Camulodunum 184

Amphorae of the Type Camulodunum 184 are often called Rhodian amphorae. They were used for the transport of wine from the eastern Mediterranean (Rhodes). The characteristics of the form are a cylindrical neck and long rod handles which rise to a peak. Six fabrics are classified by Peacock and Williams, two of which have been identified as probably originating from the island of Rhodes (Peacock &

Williams, 1991: pp. 102–104, Class 9). These two are classified in the NRCRF (1998: pp. 112–113) as Rhodian (Pink) Amphorae 1 (RHO AM 1) and Rhodian (Yellow) Amphorae 2 (RHO AM 2). A third fabric of these amphorae is known as Peacock and Williams Class 9 (P&W AM 9) (NRCRF, 1998: p. 105). Among the amphora sherds from Winsum there is only one example of the diagnostic peaked handle and three sherds which all four belong to fabric 1, the pink amphorae. Other sherds may also belong to this type of amphora on the base of their fabric, compare NRCRF (1998: p. 105).

Wall fragments

1. WB 97.7 (1/1) (fig. 8:1). Long rod handle with peak. Length 25.5 cm; handle diam. 4×3.3 cm.
2. WB 97.74 (1/2). Wall fragment of fabric 1 (5YR 7/4–7/6); 5.5×5.5×0.9 cm.
3. WB 97.506 (2/3). Wall fragment of fabric 1; 6×3×0.9 cm.
4. WB 97.533 (2/3). Wall fragment of fabric 1; 3.8×4×0.9 cm.

The following fragments may be attributed to the Type Camulodunum 184 but the colour of the fabric is different. The fabric of No. 7 is similar to P&W AM 9 which was used for Camulodunum 184 (NRCRF, 1998: p. 105).

Wall fragments

5. WB 97.35 (1/1). Wall fragment, brown with white inclusions; 7×7.5×1.4 cm.
6. WB 97.98 (1/2). Wall fragment similar to No. 5; 2.8×6.5×1.2 cm.
7. WB 97.1508 (9/1). Wall fragment light red (2.5YR 6/8) with many white inclusions; 7×9×1.3 cm.
8. WB 97.185 (1/4). Wall fragment, fine red fabric (10R 5/6) with white inclusions. Rilling on the interior; 6×3.5×1 cm.

Dressel 7–11

Dressel 7–11 amphorae are ovoid in form and originate from Spain. The Dressel 7–11 amphorae were incorporated as Beltrán I amphorae in the classification of Iberian amphorae made by Lloris M. Beltrán. Although their origin in the Iberian peninsula is certain, a Gaulish origin for some of the forms has been suggested (Peacock & Williams, 1991: p. 118). The amphorae are also called *salazon* amphorae after their contents which consisted of food with a high salt content such as fish sauce (*muria*, *garum*) or salted fish (Sealey, 1985: pp. 77–93). The date of the amphorae is late first century BC for the early forms and first century AD for the later forms. According to Peacock and Williams (1991: pp. 117–119, Class 16) the fabrics tend to be relatively soft, fairly fine-textured, and light buff in colour (10YR 8/4). They distinguish several fabrics and suggested that the amphorae were made in different places in southern Spain. One of these fabrics is classified as P&W AM 16 (NRCRF, 1998: p. 107). This is a pale brown

fabric (10YR 7/4) with a pale orange core (2.5YR 7/6–7/8).

Among the amphora sherds from Winsum, several show the characteristics of this fabric of Dressel 7–11. It is soft, fine-textured and buff in colour. Although there are no diagnostic forms among the sherds found at Winsum, the fabric of the wall fragments points to a Spanish origin and the most probable candidate for an amphora of Spanish origin and with a fabric quite different from Dressel 20 or Ha 70, is the amphora Dressel 7–11. Dressel 7–11 amphorae have also been identified at Velsen I and among them ten different fabrics have been identified, including some from Spain and from France. This makes this type of amphora the most varied in fabric among the amphorae from Velsen (Bosman, 1997: p. 190).

Wall fragments, pale brown

1. WB 97.1139 (7/0–1). Wall fragment. The fabric is similar to the fabric described in the NRCRF as P&W AM 16, which is a pale brown (10YR 7/4) with a pale orange core (2.5 YR 7/6–7/8) and a powdery, soft and buff (10YR 8/3) surface. The fabric is very similar to that of the mortaria discovered at Winsum; according to Bosman (1997: p. 196) also some mortaria from Velsen I have a fabric that resembles that of Spanish Dressel 7–11 amphorae; 10×10.5×1.4 cm.
2. WB 97.1477 (9/1). Wall fragment, same fabric as No. 1 but no differently coloured core and a very pale brown (10YR 8/2) inner surface; 6.7×4.5×1.1 cm.

Wall fragments, pink (7.5YR 8/2–8/3) with in some cases a powdery, very pale brown (10YR 8/2) surface

3. WB 97.1 (dump). Wall fragment. The interior surface of the sherd is dark brown, maybe with the remains of some sort of resin to fasten the stopper; 6.5×6×1.3 cm.
4. WB 97.1 (dump). Wall fragment; 3×6.4×1 cm.
5. WB 97.73 (1/2). Wall fragment; 5×6.5×1.4 cm.
6. WB 97.74 (1/2). Wall fragment; 7.3×6.5×1.3 cm.
7. WB 97.119 (1/2). Three wall fragments (two of which join): 8×9×1 cm; 2×2.5×1 cm.
8. WB 97.120 (1/2). Wall fragment; 5.5×3×? cm.
9. WB 97.129 (1/2). Wall fragment; 4.5×5.5×0.9 cm.
10. WB 97.266 (2/1). Three joining wall fragments; only the inner surface remains; 10×12×? cm.
11. WB 97.513 (2/3). Wall fragment; 6×8×1.2 cm.
12. WB 97.593 (3/1). Wall fragment; 8×11×1.2 cm.
13. WB 97.797 (5/1). Wall fragment; 7×6×1.2 cm.
14. WB 97.819 (5/1). Wall fragment; 1.5×4.5×1 cm.
15. WB 97.1016 (5/1 dump). Wall fragment, shoulder?; 4×3.5×? cm.
16. WB 97.1161 (5/3). Wall fragment; 4.5×5×1.2 cm.
17. WB 97.1477 (9/1). Wall fragment; 7×8.5×1.2 cm.

The following fragment has a very pale brown (10YR 8/4) fabric

18. WB 97.31 (1/1). Wall fragment with beginning of the handle and part of the rim. Fabric with some inclusions of mica; 6×7×0.6–0.9 cm. Rim diam. c. 12 cm.

Wall fragments with a white (10YR 8/1) fabric

19. WB97.1 (dump). Wall fragment; 4.5×7.5×1.1 cm.
20. WB97.72 (1/1). Wall fragment; 6×5×0.8 cm.
21. WB97.88 (1/2). Wall fragment; 6.5×5×1.3 cm.
22. WB97.868 (4/1). Wall fragment; 5×4.2×1 cm.
23. WB 97.1161 (5/3). Wall fragment; 4.5×5×1.2 cm.

Fragments of a pale yellow fabric (2.5Y 8/3)

24. WB 97.1 (dump). Wall fragment with mica inclusions; 5.5×4×1 cm.
25. WB 97.810 (5/0–1). Wall fragment, fabric similar to No. 24, with mica; 6.5×5.5×1.2 cm.

Wall fragment, probably Dressel 7–11, similar to the pink fragments mentioned above but of rougher, coarser fabric with much larger inclusions. The wall also is thicker:

26. WB 97.674 (3/1). Wall fragment; 9×8×1.8 cm.

Gauloise flat-based amphorae

The Gauloise flat-based amphorae were made in southern France (Gallia Narbonensis) at a large number of potteries (Laubenheimer, 1985: pp. 71–80). Nine different types were distinguished by Laubenheimer (1985: pp. 243–310). The first-century type, Gauloise 1, is characterized by a collared rim and a wider base compared to the other forms (Laubenheimer, 1985: figs 97 and 117). All base fragments from Winsum show characteristics of this early type and the diameter of the base corresponds to the Gauloise 1 amphorae. The fabric of the Gauloise 1 amphorae in general is fine-textured and micaceous. Two main variants are distinguished: one soft and fine, the other coarser (Laubenheimer, 1985: p. 245). In the NRCRF (1998: p. 93) two fabrics are identified (GAL AM 1 and GAL AM 2) which are difficult to distinguish, and a third was named 'Other Gaulish Amphorae' but its characteristics were not published.

Among the Gauloise fragments from Winsum, fabrics of different colours and textures can be distinguished. These differences do not necessarily indicate different centres of production but the distinction serves rather as a means to identify the minimum number of amphorae of this type that reached Winsum in the first century AD. The different fabrics that could be identified on the basis of colour result in 17 groups and within some groups there are different textures, which brings the total number to at least 20 different Gaulish amphorae in Winsum.

Although there are inscriptions showing that Gauloise amphorae were used for fish sauce (Davies, Richardson & Tomber, 1994: p. 18) these amphorae were generally used as wine containers. Of the amphorae from Winsum it is thought that they were used for wine, because they show remnants of resin on the interior of the sherds, a characteristic which was also

found on Gauloise wine amphorae from Velsen (Bosman, 1997: p. 228). However, an internal lining also may occur with amphorae containing products other than wine (Heron & Pollard, 1988: p. 430). The capacity of this type of amphora is circa 30 litres (Laubenheimer, 1985: p. 245); hence the total amount of Gaulish wine that arrived at Winsum was more than 500 litres.

(a) *Yellow to reddish yellow with mica on the surface*
Rim, base and handle fragments

1. WB 97.1556 (10/1–2) (fig. 9:1). Rim, handles and part of wall of Gauloise 1 amphora. The entire fragment consists of five fitting sherds. The rim is pulley-shaped and the handles have three ribs on the outside. The fabric is white (10YR 8/2) with a reddish yellow core (5YR 7/6). The surface is yellow (10YR 8/6) to reddish yellow (7.5YR 7/8). Height 11 cm. Rim diam. 14 cm.

(b) *Light red and yellow, coarse fabric*

2. WB 97.585 (3/1) (fig. 9:2). Handle of a Gauloise amphora. The fabric is light red (2.5YR 7/6) with a very pale brown core (10YR 8/4). The exterior varies from reddish yellow (5YR 7/8) to very pale brown (10YR 8/4). The exterior of the handle is moulded with a flat groove down the centre, the inner side is almost flat. The fabric contains many coarse grains of quartz occasionally as large as 3 mm; 14×5.4 cm.

(c) *White exterior (10YR 8/2) of c. 2 mm thick, with a pink (5YR 7/4) interior. Much silver mica with some gold mica inclusions*

3. WB 97.1 (dump) (fig. 9:3). Rim fragment with shoulder and handle attachment; 4.8×6.8 cm and rim diam. 13 cm.
4. WB 97.1161 (3/3) (fig. 9:4). Rim fragment very similar to No. 3 but not from the same amphora; 7.4×7.5 cm. Rim diam. 13 cm.
5. WB 97.112 (1/2) (fig. 9:5). Rim fragment; 4.5×4.9 cm. Rim diam. 12 cm.
6. WB 97.266 (2/1). Rim fragment; 4.5×7.7×0.8 cm (wall).
7. WB 97.377 (2/1) (fig. 9:7). Base fragment with footring of Gauloise 1 amphora. 6×12.1×1.3 cm. Footring diam. 14 cm. The diameter of the footring is typical for Gauloise Type 1 amphorae, distinct from the smaller footring of Gauloise 4 amphorae, see Laubenheimer (1985), fig. 97 (G1) and fig. 117 (G4).
8. WB 97.34 (1/1). Wall fragment; 3.5×6×? cm.
9. WB 97.57 (1/1). Wall fragment; 4.7×2.9×0.6 cm.
10. WB 97.64 (1/1). Wall fragment; 4.3×6.5×0.6 cm.
11. WB 97.120 (1/2). Wall fragment with resin on the interior; 2.4×2.8×0.9 cm.
12. WB 97.221 (2/1). Wall fragment; 6×7.3×0.7 cm.
13. WB 97.819 (5/1). Wall fragment; 4.3×3.8×0.7 cm.
14. WB 97.1016 (5/1). Wall fragment; 3.3×3.5×0.5 cm.
15. WB 97.1149 (5/2). Wall fragment; 3×4.2×0.6 cm.
16. WB 97.1160 (5/2). Two wall fragments; 3.4×5.4×0.8 and 3.5×5.8×0.8 cm.
17. WB 97.1161 (5/2). Six wall fragments two of which fit; 4×6.8×0.8; 6.1×5.9×0.8; 5.5×3.1×0.8 cm; 5×6.5×0.6 cm; 2.8×2×0.8 cm.
18. WB 97.1191 (5/south face). Wall fragment; 3.8×2.7×0.6 cm.
19. WB 97.1197 (7/1). Wall fragment; 3.8×4.3×0.7 cm.
20. WB 97.1 (dump). Wall fragment; 6×4.2×0.9 cm.

21. WB 97.31 (1/1). Wall fragment; 4.6×4.8×0.6 cm.

22. WB 97.587 (3/1). Wall fragment; 3.5×3.7×0.7 cm.

(d) *The following fragments are similar in colour to Nos 3–22 but the surface is rougher and the fabric contains more red particles and less mica*

23. WB 97.31 (1/1). Base fragment with footring of Gauloise (G1) amphora; 6.9×9.3×0.8 cm. Footring diam. 16 cm.
24. WB 97.7 (1/1). Wall fragment; 6.8×7×1 cm.
25. WB 97.34 (1/1). Wall fragment; 7×6.3×1 cm.
26. WB 97.58 (1/1). Wall fragment; 5.5×3.2×0.8 cm.
27. WB 97.73 (1/2). Wall fragment; 5.8×6.5×0.9 cm.
28. WB 97.74 (1/2). Two wall fragments; 8.6 8.6×0.8 and 5×4.8 0.8 cm.
29. WB 97.97 (1/2). Wall fragment; 4×5×0.9 cm.
30. WB 97.561 (2/4). Wall fragment; 3.1 3.2×0.6 cm.
31. WB 97.1149 (5/2). Wall fragment; 3×3×0.6 cm.
32. WB 97.1161 (5/2). Wall fragment; 3.8×3.4×0.9 cm.

(e) *Rim fragment of an extremely fine fabric. The core is gray (2.5Y 6/1) with a small spot of pink (5YR 8/3) while the surface is white (2.5Y 8/1)*

33. WB 97.1477 (9/1). Rim fragment; 4×6 cm. Rim diam. 10 cm.

(f) *Fragments with a light gray to white surface (5YR 7/1–8/1) which is often patchy. They appear to have been fired in a reducing atmosphere. In some areas a pink spot (5YR 8/3–8/4) is visible*

34. WB 97.565 (fig. 9:34) (2/4). Base fragment; 6.8×10.6×1.1 cm; base diam. 13 cm.
35. WB 97.1545 (fig. 9:35) (9/2). Base fragment with remnants of resin on the inside; 8.5×12×1 cm. Footring diam. 14 cm.
36. WB 97.94 (2/2). Wall fragment; 4×6×0.9 cm.
37. WB 97.373 (2/1). Wall fragment with remains of resin on the interior; 6×4.5×1.2 cm.
38. WB 97.391 (2/2). Two wall fragments with remains of resin on the interior; 9.5×13×1 cm; 9×9×1 cm.
39. WB 97.837 (5/dump). Wall fragment with a black substance on the inside and on the fracture, possibly pitch; 7.5×6×1.4 cm.
40. WB 97.1126 (7/0–1). Wall fragment; 4.5×8×0.9–1.3 cm.

(g) *The following sherds all belong to the same amphora (probably G1) with a fairly thick wall (thickness varying from 1.0–1.5–2.2 cm) and a reddish yellow (5YR 7/6) fabric with a light to pinkish gray surface (5YR 7/1–7/2). The fabric contains much silver and gold mica and many red fragments*

41. WB 97.502 (2/2–3). Base fragments and several joining wall fragments. The interior of the base is covered with a dark substance that may be resin; 28×18×1.2–1.5 cm. Base diam. 14 cm.

(h) *Wall fragments with a light gray to white surface with light red spots and a light red core (2.5YR 6/8)*

42. WB97.391 (2/2). Six wall fragments: two joining wall fragments, 26×16.5×1.1 cm, and another three joining wall fragments, 23×18×0.6–1 cm; the sixth fragment is also from the same vessel; 8×6.5×0.8 cm.

43. WB 97.450 (2/2). Wall fragment; 8.5×15.5×0.8 cm.
 44. WB 97.460 (2/3). Wall fragment; 10.4×9×0.6 cm.
 45. WB 97.460 (2/3). Wall fragment; 8.5×8×1 cm.
 46. WB 97.512 (2/3). Three wall fragments; 15×14×0.7, 9×5.5×1.2 and 4×5.5×0.7 cm.
 47. WB 97.519 (2/3). Wall fragment; 5.3×6.2×0.8 cm.
 48. WB 97.533 (2/3). Wall fragment; 5×3.6×0.8 cm.
 49. WB 97.720 (2/ section B east). Wall fragment; 5.3×4.4×0.7 cm.
 50. WB 79.1444 (8/2). Wall fragment; 6.5×8.5×1 cm.

(i) *Wall fragments, pale yellow (2.5Y 8/3) and light red (2.5YR 7/6) with a brown or grey interior surface*

51. WB 97.1 (dump). Wall fragment; 13.5×7.5×1.5 cm.
 52. WB 97.476 (2/2). Wall fragment; 16×13×1.3 cm.
 53. WB 97.1497 (10/0–1). Wall fragment; 4.5×4×1 cm.
 54. WB 97.1544 (9/2). Wall fragment; 9×7.5×1.1 cm.
 55. WB 97.1556 (10/1–2). Wall fragment; 13×7×1.3 cm.

(j) *Wall fragments with light red (2.5YR 7/6) surface and core, containing mica and small white rock particles*

56. WB 97.1 (dump). Wall fragment; 10.1×10.5×1.1 cm.
 57. WB 97.1 (dump). Wall fragment; 8.5×7.8×1.1 cm.
 58. WB 97.221 (2/1). Wall fragment; 5×6.5×1 cm.
 59. WB 97.1012 (6/1). Wall fragment; 9×13.2×1.1 cm.
 60. WB 97.1078 (7/0–1). Wall fragment; 11×7×1.2 cm.
 61. WB 97.1139 (7/0–1). Wall fragment; 10.5×11×0.8–1.6 cm.
 62. WB 97.1474 (9/0–1). Four wall fragments, all split parallel to the surface; c. 2.5×5 cm.
 63. WB 97.1477 (9/1). Two wall fragments; 5.5×5×0.8 and 4.5×5.5×0.9 cm.

(k) *Wall fragments, light red (2.5YR 7/6) with white surface and containing mica. The interior bears a brownish deposit*

64. WB 97.72 (1/1). Wall fragment; 7×7×1.2 cm.
 65. WB 97.104 (1/2). Wall fragment; 5×5×0.9 cm.
 66. WB 97.120 (1/2). Wall fragment; 6×9.5×1 cm.
 67. WB 97.126 (1/2). Wall fragment; 4×3×0.6 cm.
 68. WB 97.810 (5/0–1). Wall fragment; 8.2×8×0.9 cm.
 69. WB 97.819 (5/1). Wall fragment; 5×4×0.8–1.1 cm.

(l) *Very pale brown (10YR 8/4), fine fabric and no mica*

70. WB 97.89 (1/2). Wall fragment; 3.9×4×0.6 cm.
 71. WB 97.266 (2/1). Wall fragment; 2.4×4.1×0.6 cm.
 72. WB 97.560 (2/4). Wall fragment; 2.8×2×0.8 cm.
 73. WB 97.765 (3/1). Wall fragment; 4.9×3.8×0.6 cm.
 74. WB 97.819 (5/1). Two wall fragments; 6×4.8×0.6 cm and 2.1×2.7×0.8 cm.
 75. WB 97.1188 (5/dump). Wall fragment; 4.6×5.4×0.6 cm.
 76. WB 97.1527 (10/0–1). Wall fragment; 2.1×2.9×0.7 cm.

(m) *Pale yellow (2.5Y 8/3), coarse, sandy fabric and no visible mica*

77. WB 97.14 (1/1). Wall fragment; 4.8×2×0.7 cm.
 78. WB 97.64 (1/1). Two wall fragments; 5.2×5×0.9 cm and 3×2.8×0.8 cm.
 79. WB 97.72 (1/1). Wall fragment; 6×5.6×0.6 cm.

80. WB 97.89 (1/2). Two wall fragments; 2.5×3.4×0.8 cm and 2×3.2×0.8 cm.
 81. WB 97.489 (2/2). Wall fragment; 5.2×5.3×0.8 cm.
 82. WB 97.810 (5/0–1). Wall fragment; 8.5×7.7×0.9 cm.

(n) *Pale yellow (5Y 8/2), fine-textured fabric containing mica*

83. WB 97.1 (dump). Wall fragment; 3.2×4.2×0.6 cm.
 84. WB 97.7 (1/1). Wall fragment; 8.6 7.4 1×1 cm.
 85. WB 97.72 (1/1). Wall fragment; 5×5×0.9 cm.
 86. WB 97.112 (1/2). Wall fragment; 3.3×5.7×0.7 cm.
 87. WB 97.821 (5/1). Wall fragment; 9.2×8.7×1 cm.
 88. WB 97.1270 (7/2). Wall fragment; 2.9×5.6×0.7–1.2 cm.

(o) *Pale yellow (2.5Y 8/3), fine-textured, very hard fabric without mica*

89. WB 97.461 (2/2). Two wall fragments; 6.8×6.8×0.5 cm and 7×4.6×0.7 cm.
 90. WB 97.474 (2/2). Two wall fragments; 4.8×4.2×0.6 cm and 3.5×3.9×0.6 cm.
 91. WB 97.505 (2/3). Two wall fragments; 13.2×9.7×0.8 cm and 6.3×6.5×0.8 cm.
 92. WB 97.801 (5/1). Wall fragment; 5.8×5×0.7 cm.
 93. WB 97.998 (5/1). Wall fragment; 7.7×9.5×0.8 cm.
 94. WB 97.1078 (7/0–1). Wall fragment; 3.6×3.8×0.8 cm.

(p) *Black and grey fragments, fired in a reducing atmosphere*

95. WB 97.1 (dump). Wall fragment; 8×9×1.2 cm.
 96. WB 97.192 (1/4). Wall fragment; 11.7×8×1.4 cm.
 97. WB 97.1264 (7/2). Wall fragment; 7.5×6×1 cm.
 98. WB 97.1338 (9/0–1). Wall fragment; 18×13×1.2 cm.
 99. WB 97.1343 (8/1). Wall fragment; 9×5.5×1.1 cm.
 100. WB 97.1429 (7/3). Wall fragment; 6.5×8×1 cm.
 101. WB 97.1429 (7/3). Wall fragment; 4.5×6.4×0.7 cm.

(q) *Miscellaneous wall fragments*

102. WB 97.14 (1/1). Wall fragment; 3×4×0.9 cm.
 103. WB 97.30 (1/1). Wall fragment; 2.5×4.5×0.9 cm.
 104. WB 97.64 (1/1). Wall fragment; 2.5×3.5×? (one surface missing) cm.
 105. WB 79.89 (1/2). Wall fragment; 5.6×5.1×0.9 cm.
 106. WB 97.95 (1/2). Wall fragment; 1.8×3.7×0.7 cm.
 107. WB 97.217 (1/south face). Wall fragment; 3.8×7.3×0.8 cm.
 108. WB 97.720 (1/east face). Wall fragment; 2×4.5×0.7 cm.
 109. WB 97.878 (5/1). Wall fragment; 3.8×3.4×0.8 cm.
 110. WB 97.1099 (5/2). Wall fragment; 3.9×5.5×0.6 cm.
 111. WB 97.1139 (7/0–1). Wall fragment; 2.7×4.3×0.8 cm.
 112. WB 97.1153 (3/3). Wall fragment; 5.3×5.9×0.7 cm.
 113. WB 97.1285 (7/2). Wall fragment; 10.5×7.5×1 cm.

2.4.2. *Dolia*

Dolia, the large storage jars with an turned rim, have a very characteristic rim form. Only one rim sherd of a *dolium* was found at Winsum. It is of the Type Oberaden 112. The rim fragment is grey with a dark grey core. On the exterior of the rim there is a black layer, probably pitch. This has also been observed on other *dolia*, for instance at Neuss where

the sherds often have a thick layer of pitch on rim and shoulder (Vegas, 1975: pp. 43–44). Most fragments from Winsum are wall sherds. The fabric is rough and very hard, and sharp at the fracture. The fabric shows different types of temper: with small grains of white limestone, quartz and light brown particles, probably grog. The colour of the sherds varies from grey with a dark grey core to a grey core with a pink surface (5YR 7/4) or very pale brown (10YR 8/4). For the different colours of dolia from Neuss, compare Vegas (1975: pp. 43–44).

1. WB 97.1408 (8/2) (fig. 10). Rim fragment of *dolium*. The broad, horizontal rim is composed of three equally wide sections: a rounded rim, a shallow furrow and a flat section with a right angle. Compare Oberaden *Typus* 112, *Abb.* 36, 1 and 2. Compare also Vegas (1975: Pl. 28,1). The exterior has a black glossy surface, the interior is gray and the core is dark gray; 9×7.5×2 cm. Rim diam. c. 44 cm.
2. WB 97.1 (dump). Wall fragment. Interior and exterior pink (5YR 8/3); core light grey (7.5YR N7/); 10×8×0.8 cm.
3. WB 97.66 (1/1). Wall fragment. Exterior grey, interior darker grey and with a grey core. Rilling on the interior. The sherd is different from the other *dolium* fragments, it has a flatter and smoother surface. It may not be a *dolium* at all; 7×7.5×1.1 cm.
4. WB 97.933 (4/2). Wall fragment, very pale brown (10YR 8/3), interior white to pinkish white (7.5YR N8/–8/2). The core is half the colour of the interior and half that of the exterior; 20×14×1 cm.
5. WB 97.1193 (5/2). Wall fragment, pink (7.5 YR 8/4); 5×2.6×1 cm.
6. WB 97.1294 (7/2). Wall fragment. Grey; 6×6×1 cm.
7. WB 97.1327 (8/0–1). Wall fragment. Dark grey; 5×4×1 cm.
8. WB 97.1343 (8/1). Wall fragment. Grey; 8×14.5×0.9–1.2 cm.
9. WB 97.1410 (8/2). Wall fragment. Grey; 6.5×7×0.9 cm.
10. WB 97.1428 (7/3). Wall fragment, pink (7.5YR 7/4), interior white (10YR 8/1), core grey (7.5YR N6/–N7/); 12×13×0.9–1 cm.
11. WB 97.1429 (7/3). Wall fragment; 12.5×8.5×1 cm.
12. WB 97.1477 (9/1). Wall fragment. Reddish yellow (5YR 7/6) with a grey interior (10R 5/1) and a dark grey core. Large fragments of limestone in the fabric; 4.2×4.3×1 cm.
13. WB 97.1527 (10/0–1). Wall fragment. Very pale brown (10YR 7/3) with a grey core (7.5YR N6/–N7/); 5×6×1.1–1.5 cm.

2.4.3. *Mortaria*

Mortaria from Winsum all belong to the so-called 'wall-sided' category, *mortaria* with a vertical rim (Tyers, 1966: p. 116; Davies, Richardson & Tomber, 1994: p. 7). The vertical rim is concave on the outside and the rim is undercut. These wall-sided *mortaria* are of the Type Haltern 59/Oberaden 72. The date of this type of *mortarium* is Augustan/Tiberian, according to Vegas, who distinguishes between the Augustan more vertical rim and the Tiberian rim which is less steep and has a more fluent transition from wall to rim. However, this distinction is not very

precise and many exceptions are possible (Vegas, 1975: p. 41).

The fabric is yellow-white. According to Vegas (1975: p. 41), the fabric of these *mortaria* is similar to that of some amphorae, and the *mortaria* all appear to have been imported. Bosman (1997: p. 196) compared the fabric of the *mortaria* with the fabric of some of the Dressel 7–11 amphorae. The walls and base fragments of the *mortaria* from Winsum do not show any grit on the interior surface as the later *mortaria* do. The number of different rims suggests at least three different specimens of the same type of *mortarium*. According to Vegas (1975: p. 41) the use of *mortaria* outside Italy is typical of military contexts and Tyers (1996: p. 116) sees *mortaria* as a key part of the ceramic assemblage of the earliest military sites along the Rhine; only a few examples were imported into Britain during the pre-conquest period.

1. WB 97.1511 (10/0–1) (fig. 11:1). Mortarium fragment with vertical rim which is slightly concave on the exterior, wall with rilling on the exterior and smooth on the interior. The transition to the base curves slightly outward. Comparable to the forms Haltern, Type 59 (Loeschke, 1909: *Abb.* 33: 7) and Oberaden 72 (Loeschke, 1942: *Tafel* 15.5). Compare also Stuart (1962) Type 148 and Pl. 16, nr. 222. Fine, sandy fabric of a very pale, pink colour (7.5YR 8/4); 14×21×1.5 cm (wall). Rim diam. 30 cm.
2. WB 97.1562 (6/dump) (fig. 11:2). Rim fragment of similar form as No. 1. Fabric also similar; 6.5×4.5×1.8 (rim) cm.
3. WB 97.890 (3/2) (fig. 11:3). Rim fragment with part of vertical rim and wall, comparable to No. 1 above. Fine and sandy fabric; 5×4.3×1.1 (rim) cm.
4. WB 97.1477 (9/1) (fig. 11:4). Rim wall and base fragment. The mortarium is small with a vertical and poorly pronounced rim with. The fabric is sandy with an pink colour (7.5YR 7/4); 12×11.2×1.7 cm. Rim diam. 28 cm.
5. WB 97.1377 (7/3) (fig. 11:5). Two fitting rim fragments of a mortarium with a vertical rim. Compare Hofheim, *Typus* 79 (Ritterling, 1912: *Abb.* 78.1). The fabric is fine and sandy, the wall is pink (5YR 7/4–8/4) in colour with a light red core (2.5YR 6/6–7/6); 21×10×0.9 cm (wall). Rim diam. 32 cm.
6. WB 97.1357 + 438 (438=2/2; 1357=7/3) (fig. 11:6). Two fitting base fragments of the same fabric and colour as the rim fragments of No. 5 and probably of the same mortarium; 12×21×0.8 cm. Base diam. 14 cm.
7. WB 97.801 (5/1). Base fragment of a very hard and fine fabric; 3.4×5.3×1.3 cm.
8. WB 97.96 (1/2) (fig. 11:8). Rim fragment made of a dark gray fabric (Munsell, 1994, color chart 1 for gley N4/) with pink on both inner and outer surface (7.5YR 7/4). This combination of a reduced core with oxidized surfaces is also seen in some of the flagons from Winsum (see the Smooth Wares) and this may be a product of Xanten in the Augustan period. 7×4.3×1.1 cm. Rim diam. c. 36 cm.
9. WB 97.674 (3/1) (fig. 11:9). Base fragment of light pink fabric (7.5YR 8/3). The fabric is characterized by many small inclusions, which provide the sherd with a rough surface. The interior shows a series of concentric grooves. 5.5×13.5×0.9 cm. Base diam. 10 cm.

10. WB 97.1447 (8/2). Wall fragment of reddish yellow fabric (5YR 7/8) with light gray core and darker (5YR 6/8) reddish yellow surface. The fabric is characterized by many small inclusions, which provide a rough surface. The interior shows concentric grooves. 5.6×7.2×1.2 cm.

2.5. Gallo-Belgic wares (figs 12, 13)

'Gallo-Belgic' is the collective name for a number of different products: *terra nigra*, *terra rubra* and cork-urns. In the Netherlands it is called '*Belgische waar*' in accordance with the name used by Holwerda (1941). Compare for this type of pottery also Willems (1981, pp: 159–164) and Haalebos (1990: p. 145).

2.5.1. 'Cork-urns'

The name 'cork-urn' derives from the cork-like surface of the wall of the pot which is the result of the firing process in which organic material was burnt away, leaving small cavities in the surface of the pot. The term 'cork-urn' is used in the Netherlands for a vessel that in Germany is called a cooking pot. The publication of Oberaden mentions a cooking pot with a cork-like surface (Loeschke, 1942: *Typus* 111A/B) while a similar vessel was named cooking pot with inverted rim in the publication of Rödgen (Simon, 1976: pp. 103–104, *Form* 58C). In the British literature, the term 'bead-rim jar with flattened rim' is used for similar vessels. Cooking pots with inverted rim from Haltern were classified by Loeschke as *Typus* 91. He made a distinction between *Typus* 91A (not wheel-thrown) and *Typus* 91B (wheel-thrown and with a smoother surface). Both types were classified under the heading of Belgic wares (Loeschke, 1909: pp. 297–299). The same types of pot were also made in a different technique (*Typus* 58) and according to Loeschke (1909: pp 240–241) these pots were wheel-thrown, thinner, smaller and of a different colour. A distinction between cork urns in Gallo-Belgic ware and in Roman coarse ware was also observed at Velsen I (Bosman, 1997: p. 213 and fig. 6.45.4–5 and p. 235 and fig. 6.51.9–10).

All cork-urns from Winsum belong to the Belgic wares and none are wheel-thrown. Among these cork-urns two groups may be distinguished which are marked by a different firing process. The first group were made in an oxidizing atmosphere while the second group were produced in a reducing atmosphere. The sherds of the first group are of a light colour, some are yellow (Munsell 7.5YR 8/9 en 7/4 of 10YR 8/4) with a very light interior of the pot (10YR 8/2), while others have bright colours in the same fabric but with pink or transparent quartz inclusions. The second group are darker in colour and have a dark grey or black core with a brown or grey colour on one or both surfaces. The sherd may also

be black on both sides. This second group have a fabric with white rock particles with a crystalline structure. The white particles clearly stand out against the dark matrix. These differences are the result of two different methods of production and maybe of two different production centres. Petrological investigation may help to solve this problem.

Not only the fabric differs but also the form of the rim. The cork-urns of the oxidized group show an angle on the transition from shoulder to rim and have a groove around the rim (compare Loeschke, 1909: fig. 48.1 and Bosman, 1997: fig. 6.45.4). The reduced group have a less acute angle from shoulder to rim and no groove; compare Oberaden *Typus* 111A (Loeschke, 1942: Pl. 43 and Bosman, 1997: fig. 6.45.5). Both categories show patterns of burnished hatching in groups of parallel lines. The identification of cork-urns as cooking pots does not seem to apply to all pots. Although some show traces of fire or soot, indicating their use as cooking pots, this may be a form of secondary use, as was their use as an urn or a container of a coin hoard. The original use of most of the pots was quite different. In the Augustan military camp at Nijmegen a cork-urn was discovered which had been thrown away in a latrine together with its (tainted) contents. The contents appeared to be breasts of song thrushes, presumably a delicacy for Roman officers (Lauwerier, 1993; Lauwerier, 1995). The very perishable contents of the pot also explain the pitch which is often found around the rim of the pots of the first group from Winsum and which was used to seal the vessels. Probably the lid was not made of the same material as the pot, but a (moistened) piece of organic tissue, like a gall-bladder, will have been used to cover the contents. It was glued to the rim with the pitch and fastened around the rim with a cord fitting into the groove. The pots in Winsum that have the pitch are all of a light colour and some are yellow with an almost white interior. This light interior coating may have had some function in the conservation of the contents. Traces of pitch were also found on other types of Belgic ware, as was observed at Oberaden (Loeschke, 1942: pp. 139–140) where yellow-coloured Belgic pots are also mentioned. These yellow pots may be similar to the oxidized cork-urns from Winsum.

For the provenance of the Nijmegen cork-urns, the area of the Eiffel/Ardennes has been suggested, based on the petrological examination of the pot (Lauwerier, 1993: p. 17; Lauwerier, 1995: p. 8). It is interesting to note that pots with a very similar form were made in England, the North Kent Shelly wares. These pots also have remains of pitch adhering to the rim and the shoulder, which were also interpreted as some kind of waterproof sealing. The pitch was analysed and appeared to be tar made from silver-birch bark and although the contents of these

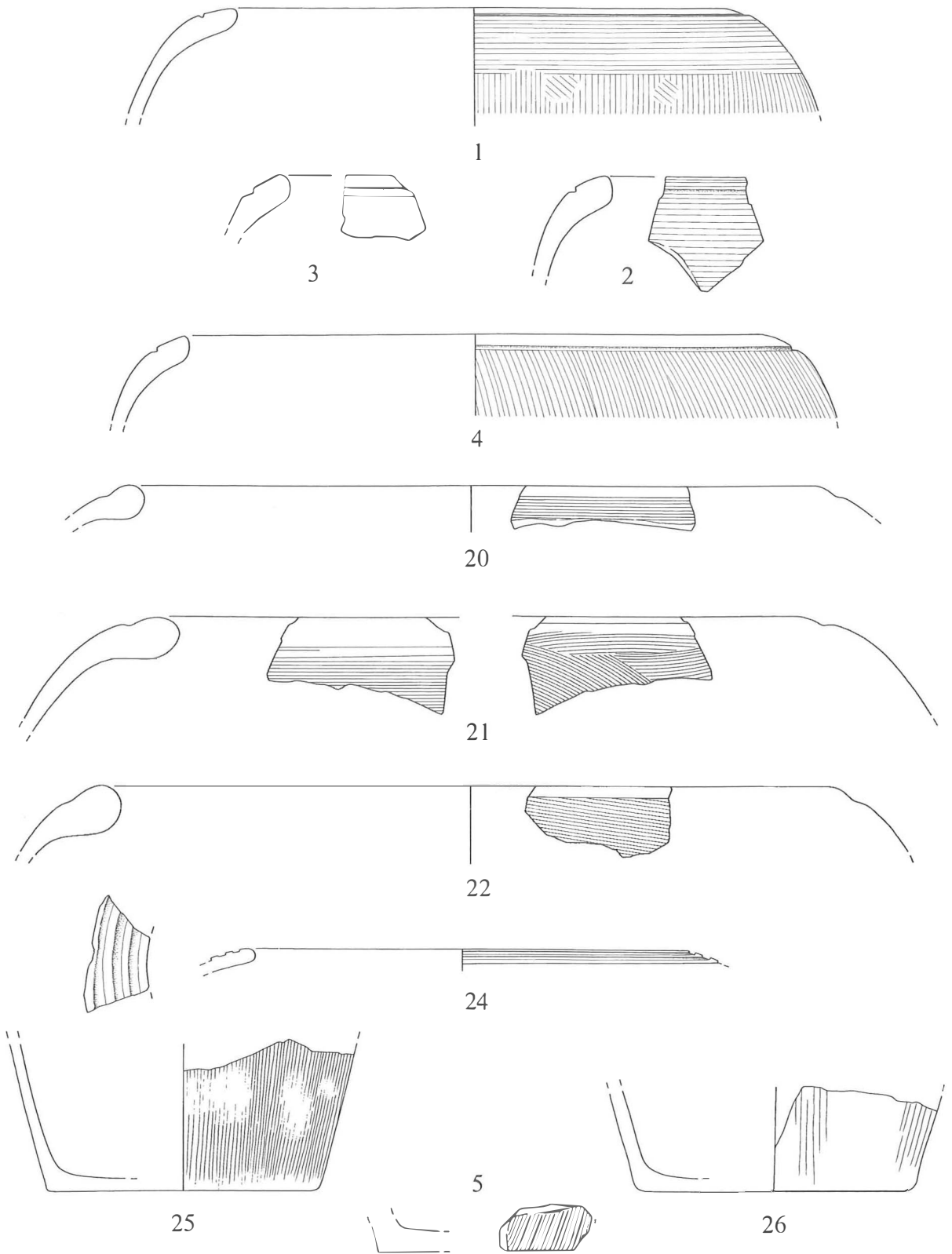


Fig. 12. *Terra nigra* (illustration numbers refer to catalogue). Scale 1:2.

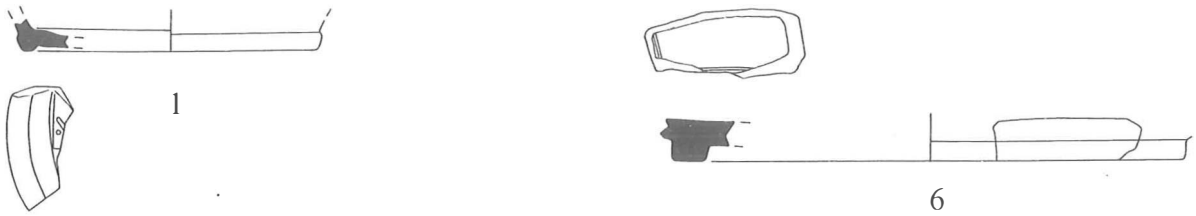


Fig. 13. Cork-urns (illustration numbers refer to catalogue). Scale 1:3.

pots are not known, salt is mentioned as a possibility (Rottländer, 1974; Davies, Richardson & Tomber, 1994: pp. 101–102; Tyers, 1996: pp. 193–194). The diameter of these pots is 28–36 cm. Chemical analysis of the pitch on the cork-urns from Winsum may provide some information about the kind of wood used for the pitch and maybe give an indication of the pots' provenance.

Group 1, oxidized. The colour is light. Yellow, orange, mauve or brown. The interior is also light, often the same shade or even lighter in colour. A groove around the rim, an angle on the transition from shoulder to rim and traces of pitch on the rim. All fragments are covered with burnished hatching. Compare Haltern 91A, Oberaden 111B and Neuss (Vegas, 1975: *Taf.* 22,5 and 6).

1. WB 97.1 (dump) (fig. 12:1). Rim fragment with a groove around the rim. Compare Haltern Type 91A (fig. 48:1) and Neuss Pl. 22,5. Remains of pitch on the interior and exterior of the rim and on the groove. A pattern of hatched burnished lines on the entire fragment; 8×15×0.8 cm. Rim diam. 42 cm.
2. WB 97.31 (1/1) (fig. 12:2). Rim fragment with groove around the rim. Compare preceding sherd. Remains of pitch on the inside of the rim and on the groove. The rim and shoulder are covered with a pattern of horizontal burnished lines while the wall bears a vertical zone of burnished hatching. Although the rim is similar to No. 1, the colour is less bright and the sherds are probably not from the same pot. 6.2×6.2×0.8 cm. Rim diam. c. 42 cm.
3. WB 97.542 (2/4) (fig. 12:3). Rim fragment. The form of the rim is different from Nos 1 and 2 because there is a wider furrow instead of a groove. Also the fabric is different, with more small stones protruding through the surface on the interior and exterior. Faint traces of burnished hatching on the shoulder. 4.2×4.2×0.8 cm.
4. WB 97.1233 (7/1) (fig. 12:4). Rim fragment with pitch remains on the groove. The form of the rim with groove is similar to Nos 1 and 2 but the rim is slightly smaller and must be of a different pot. A pattern of burnished hatching extends almost onto the rim. 6.2×11.6×0.7 cm. Rim diam. 40 cm.
5. WB 97.120 (1/2) (fig. 12:5). Base fragment, flat base with white grit on the bottom. On the wall are hatched burnished lines; 2.3×5×1.1(base)–1.4(wall) cm. Base diam. c. 16 cm.

Wall fragments. All with a pattern of burnished hatching

6. WB 97.31 (1/1). Two joining wall fragments with vertical

burnished lines on the exterior. The sherds probably belong to the rim fragment with the same find number; 6.5×6.5×0.8 cm.

7. WB 97.64 (1/1). Wall fragment; 3.3×2.2×1 cm.
8. WB 97.64 (1/1). Wall fragment; 4×3.5×0.8 cm.
9. WB 97.74 (1/2). Wall fragment; 3.8×3.2×0.8 cm.
10. WB 97.120 (1/2). Wall fragment; 5×6.3×0.8 cm.
11. WB 97.373 (2/1). Wall fragment; 1.5×3.3×1 cm.
12. WB 97.411 (2/2). Wall fragment; 3×3×0.8 cm.
13. WB 97.817 (5/1). Wall fragment; 4×3.2×0.8 cm.
14. WB 97.819 (5/1). Wall fragment; 2.5×3×0.9 cm.
15. WB 97.972 (5/1). Wall fragment; 2.7×4×0.8 cm.
16. WB 97.1139 (7/1). Wall fragment; 2.8×4.5×0.9 cm.
17. WB 97.1139 (7/1). Wall fragment; 3.3×4×0.8 cm.
18. WB 97.1149 (5/3, S. section). Wall fragment; 2.2×2.7×0.7 cm.
19. WB 97.1161 (5/3, S. section). Wall fragment; 4.7×3.5×0.7 cm.

Group 2, reduced. The rim and base fragments have a dark core and lighter surfaces while the wall sherds also have a light surface and a dark core but the inner surface is dark. The colour of the surfaces may be (dark) grey, brown or reddish brown. All fragments have burnished hatching all over. The transition from shoulder to rim is in most fragments marked by a ridge, compare Oberaden *Typus* 111B.

20. WB 97.72 (1/1) (fig. 12:20). Rim fragment with rounded lip, compare Oberaden *Typus* 111B; 4×10×0.8 cm. Rim diam. 38 cm.
21. WB 97.437 (2/2) (fig. 12:21). Rim fragment with rounded lip, compare Oberaden *Typus* 111B. The surface has many small pits; 9.3×10×0.7 cm. Rim diam. 44 cm.
22. WB 97.820 (5/1) (fig. 12:22). Rim fragment with rounded lip, compare Oberaden *Typus* 111B; 5.5×7.7×0.6 cm. Rim diam. 36 cm.
23. WB 97.1384 (7/3). Rim fragment with rounded lip, compare Oberaden *Typus* 111B; 5.5×7.1×1 cm.
24. WB 97.1508 (9/1) (fig. 12:24). Rim fragment, compare Oberaden *Typus* 111A. The rim is very smooth and the pot may have been wheel-thrown.
25. WB 97.1511 (10/1) (fig. 12:25). Base fragment with many small stones on the underside of the base; 8×11.3×0.6. Base diam. 14 cm.
26. WB 97.1508 (9/1) (fig. 12:26). Base fragment with small stones on the underside of the base; 5×9×0.6. Base diam. 14 cm.
27. WB 97.37 (1/1). Wall fragment; 2.6×2.8×0.9 cm.

28. WB 97.89 (1/2). Wall fragment; 4.3×2.5×0.7 cm.
29. WB 97.95 (1/2). Wall fragment; 4.7×4.8×0.7–1.0 cm.
30. WB 97.98 (1/2). Wall fragment; 1.9×3×0.8 cm.
31. WB 97.98 (1/2). Wall fragment; 4×4.6×1.1 cm.
32. WB 97.126 (1/2). Wall fragment; 3.8×5.5×1.3 cm.
33. WB 97.127 (1/2). Wall fragment; 1.9×2.5×? cm.
34. WB 97.129 (1/2). Wall fragment; 2.7×2.7×0.7 cm.
35. WB 97.279 (2/1). Wall fragment; 4.5×4.6×1.1 cm.
36. WB 97.369 (2/1). Wall fragment; 3×3×0.9 cm.
37. WB 97.411 (2/2). Wall fragment, burnished hatching on both sides; 9×9×0.7 cm.
38. WB 97.437 (2/2). Wall fragment; 4×3.5×1.4 cm.
39. WB 97.462 (2/2). Wall fragment; 4.5×4.3×0.8 cm.
40. WB 97.674 (3/1). Wall fragment; 2.7×2.7×0.9 cm.
41. WB 97.688 (4/1). Wall fragment; 4×2.6×1 cm.
42. WB 97.819 (5/1). Wall fragment; 3×5×1 cm.
43. WB 97.1039 (6/1). Wall fragment; 2.5×3.0×0.7 cm.
44. WB 97.1153 (5/3). Wall fragment; 1.5×3.2×0.8 cm.
45. WB 97.1194 (5, S. section). Wall fragment; 6.5×6×0.8 cm.
46. WB 97.1201 (7/1). Wall fragment; 2.2×2.6×0.9 cm.
47. WB 97.1357 (7/3). Wall fragment; 4×4×0.8 cm.
48. WB 97.1508 (9/1). Wall fragment, probably belonging to rim No. 22 above; 4×7.4×0.5 cm.
49. WB 97.1508 (9/1). Wall fragment, similar to No. 46; 3×2.8×0.5 cm.

2.5.2. *Terra nigra*

Terra nigra ware is not frequent in Winsum; only six fragments were discovered.

1. WB 97.126 (1/2) (fig. 13:1). Base fragment of a *terra nigra* vessel. The form of the footing suggests that it belonged to a beaker of the Type Holwerda 27 (Holwerda, 1941: Pl. VII). On the underside of the base a rectangular stamp is visible, possibly showing parts of two letters. The Type Holwerda 27 is classified in Britain as 'Black eggshell wares' (Davies, Richardson & Tomber, 1994: p. 147) or 'Eggshell *terra nigra*' (Tyers, 1996: p. 166). These beakers often show name-stamps on the underside of the base. This type of vessel is among the most frequent of the *terra nigra* wares in Velsen (compare Bosman, 1997: pp. 211–212, Type HBW27 and fig. 6.44.7–8). 0.8×3.5×0.3 (wall) cm. Footring 8 cm.

Wall fragments, probably of beakers

2. WB 97.280 (2/1). Wall fragment; 1.5×3.5×0.2 cm.
3. WB 97.371 (2/1). Wall fragment; 2.5×1.7×0.2 cm.
4. WB 97.984 (5/1). Wall fragment; 2×1.5×0.2 cm.
5. WB 97.1259 (5/west face). Wall fragment; 3.1×2.8×0.3 cm.

Dishes/platters

6. WB 97.1484 (9/1) (fig. 13:6). Fragment of a low footing of a large platter. On the interior two incised lines are visible. One of the lines is the remnant of a concentric circle on the inside of the platter while the other is a short line, positioned at right angles to and above the footing, which seems to be the remnant of a radial stamp. Large platters were often radially stamped with three to five impressions, as for instance on those of Haltern Type 72b (Loeschke, 1909: Pl. XIV, 72b). The dishes and platters are classified by the profile of the wall and therefore it is difficult to attribute this footing to a particular type of dish and to date it. The diameter of the footing indicates that it was a relatively large platter, which is also suggested by the sturdiness of the

footring. Compare also the examples from Haltern, Ha 72 (Loeschke, 1909), from Velsen (Bosman, 1997: fig. 6.45,7) and from the cemetery at Nijmegen-Hatert (Haalebos, 1990: p. 153, No. 3780). 1×4×0.6 cm. Footring diam. c. 14 cm.

2.6. 'Smooth wares' (fig. 14)

The term *gladwandig* is used in the Netherlands to indicate smooth-walled pottery. Traditionally the term was not only used for (one-handed and two-handed) flagons, which often display a smooth, white or yellow surface but also referred to mortaria and dolia and amphorae, the so-called *Schwerkeramik*: the large amphorae and also part of the two-handed flagons (Stuart, 1962: p. 36; Willems, 1981: p. 165). This division is no longer used and in more recent publications the smooth ware does not include the amphorae, mortaria and dolia. On the other hand, the flat-bottomed amphorae still are classified as *gladwandig*, for instance at Velsen (Bosman, 1997: pp. 228–231). In the present publication, smooth wares include flagons and jars while the flat-bottomed amphorae are classified among the amphorae. However, it is sometimes very difficult to make a distinction between two-handed flagons and flat-bottomed amphorae. Haalebos (1990: pp. 172–174) proposed to call all two-handed vessels amphorae and suggested that a distinction may be drawn between small, medium-sized and large amphorae while others made a distinction between two-handed flagons and large two-handed flagons (Tyers, 1996: pp. 201–202). Since it is difficult to distinguish between flagons and amphorae by their form or size it has been proposed to use a functional grouping and to use the term amphorae only for "vessels that have been stoppered, sealed and transported with contents" (Tyers, 1996: p. 85). The question is whether this definition ends the confusion, since the large flagons or medium-sized amphorae mentioned above may have been used as movable containers in the house and may also have served to transport smaller quantities of food (Haalebos, 1990: pp. 172–173). Indeed the use of these medium-sized containers was very similar to that of the amphorae. They may indeed have been stoppered and sealed with resin just like amphorae, as is clear from examples from Velsen (Bosman, 1997: p. 227).

The problem of distinguishing between amphorae and flagons may be resolved by analysis of the fabrics. Large amphorae, used for transport, were made in regions far away (southern France, Italy or Spain) while medium-sized amphorae/large flagons were used for domestic purposes such as storage or transportation of small quantities (of wine or food from large amphorae or barrels). These medium-sized containers are likely to have been produced in the region, from local clay. The fabric is hard and often white or off-white. A small number of fragments are

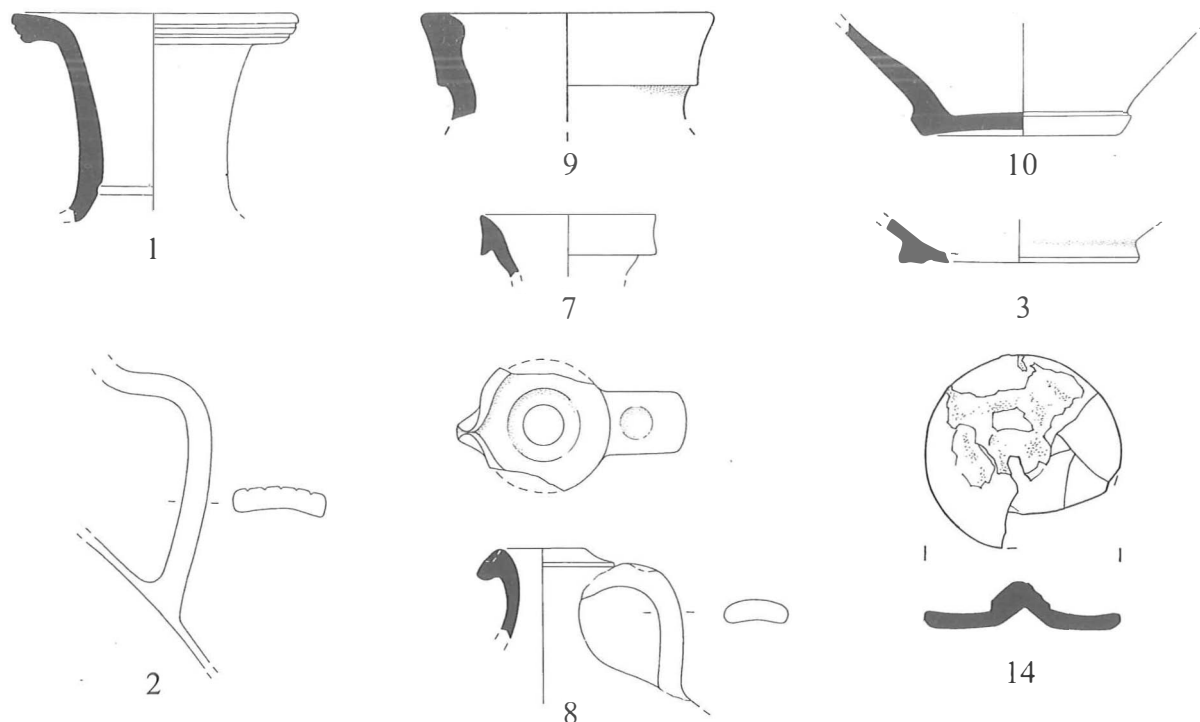


Fig. 14. 'Smooth wares' (illustration numbers refer to catalogue). Scale 1:3.

reddish-yellow with a grey core and some have a white slip.

The reddish yellow fragments with a grey core are Augustan in date, they appear at Haltern. The reddish yellow sherds with white slip are Augustan too, they are also found at Velsen I and are among the earliest fragments of this type of vessel (Bosman, 1997: p. 219). The disc-mouth flagon with a pinched mouth is one of the most recent vessels among the smooth wares. The form was considered to begin c. AD 40 but the date was later changed to the period c. 25–140 (Stuart, 1976: pp. 47 and VII, form 113). The form has parallels at Hofheim and Velsen I where the vessel occurs only in the most recent features of the site (Bosman, 1997: p. 222), which may be dated to c. AD 35 (Bosman, 1997: p. 312). In Nijmegen-Hatert, similar flagons were found in graves, which were dated to the period c. 40–120 (Haalebos, 1990: p. 161). The precise date of the first appearance of the flagon is still in discussion and this makes it difficult to date its begin more precisely than to c. AD 25 and 40.

Flagons

Collared flagon with one handle, Type Ha 45

This is a one-handled flagon from Haltern, with a red, often sandy fabric with a greyish core ('mit sandigem Ton und graublauem Kern',

Loeschke, 1909: p. 224). The date of this vessel is Augustan (Vegas, 1975: p. 28–29; Simon, 1976: pp. 91–92 and 179–181). This type of rim is not seen among the flagons discovered in Velsen I.

1. WB 97.719 (2/face B)+1504 (10/0-1)+1512 (10/1) (fig. 14:1). Fragment of collar and neck of a flagon with one handle. The colour of the surface is reddish yellow (5YR 7/6) while the core is black (very dark gray on the Munsell color chart for Gley N2.5/). Height 8.5 cm. Rim diam. 11.5 cm.
2. WB 97.719 (2/face B) (fig. 14:2). Handle, probably of No. 1. Fabric similar to No. 1. 12.5×4 cm.
3. WB 97.1511 (10/0-1) (fig. 14:3). Base fragment; it is not certain whether the base belongs to sherds 1 and 2 because of the diameter of the base which is rather large. Fabric similar to Nos 1 and 2. 1.8×6 cm. Base diam. 10 cm.
4. WB 97.719 (2/face B)+1511(10/0-1)+1512(10/1). Twelve wall fragments, the same fabric as fragments 1–3. The surface is reddish yellow and the core and interior are dark gray. Four sherds WB 97.719: 4.4×7.8×0.3 (two joining fragments), 2.8×3.1×0.4 and 3.4×3.5×0.5 cm. Six sherds WB 97.1511: 5.1×2.6×0.4, 3.4×3.3×0.6, 2.4×2.7×0.4, 2.8×3.3×0.5-0.7, 2.8×3.2×0.5 and 1.1×2×0.3 cm. Two sherds WB 97.1512: 4×4.3×0.4 and 4.4×6.7×0.4 cm.
5. WB 97.34 (1/1). Wall fragment of the same fabric as Nos 1–4, but a different colour on the surface (10YR 7/3–8/3); 4.2×1.7×0.6 cm.
6. WB 97.383 (2/2). Wall fragment of the same reddish yellow fabric which is covered with a very pale brown slip on the outer surface (10YR 8/2) and with a pink interior (10R 7/2); 6.3×5×0.7 cm.

Collared flagon with one handle, Type Ha 47 (compare Bosman, 1997: fig. 6.46.4)

7. WB 97.365 (2/1) (fig. 14:7). Rim fragment; 2.5×6.5 cm. Rim diam. 7.2 cm.

Disc-mouth flagon with pinched mouth, Type Hofheim 55 (compare Bosman, 1997: 6.47.2 from the most recent features in Velsen I)

8. WB 97.184 (1/4) and 97.322 (1/4) (fig. 14:8). Two joining rim fragments. Height 6.5 cm. Diam. rim 5.5 cm.

Two-handled flagon, Type Hofheim 57 (compare also Bosman, 1997: p. 222)

9. WB 97.1477 (9/1) (fig. 14:9). Rim fragment. Rim diam. 8 cm.
10. WB 97.658 (4/1 north face) (fig. 14:10). Base fragment. Height 4×0.4 cm (wall). Base diam. 9 cm.

Large two-handled flagon, Type Ha 53 (Hofheim 58)

This type of flagon is relatively large (compare Bosman 1997: p. 222). Among the fragments from Winsum there are no diagnostic sherds that can be attributed to this type of flagon except for the base with the large diameter and the fabric of the wall fragments. The colour of the fabric is different (5YR 6/6–7/6) from the other, often pale yellow or pale brown sherds. The sherds are also very hard compared to the other sherds.

11. WB 97.472 (2/3). Base fragment; 2×9.5 cm. Base diam. 12 cm.
12. WB 97.467 (2/3). Four wall fragments; 13×13×0.5, 7×11×0.5, 5×6×0.5 and 5×4×0.5 cm.
13. WB 97.549 (2/4). Wall fragment; 10×11×0.5–0.9 cm

Lid

14. WB 97.154 (1/3) (fig. 14:14). Lid or stopper. The lid has a small pointed knob and a slightly rounded rim. Lids of this type are known from Velsen I and from Rödgen and they have been interpreted as stopper for flagons or 'honey-pots' (Bosman, 1997: p. 223, No. 14). Diam. 7.8 cm. In Nijmegen-Hatert coarse ware lids were found (Haalebos, 1990: p. 171 and fig. 91, 14–15).

Handles

15. WB 97.88 (1/2) Two-ribbed handle, the fabric is not as smooth as the wall sherds but the colour is similar to that of the very pale brown sherds (10YR 8/4) two of which have the same inventory number (No. 48 below). Length 8.8 cm, width 2.3 cm.
16. WB 97.150 (1/3). Two-ribbed handle of the same fabric and colour. Length 8.1 cm, width 2.3 cm.
17. WB 97.1312 (7/2). Three-ribbed handle, smooth, very pale brown fabric; 4.9×2.5 cm.

Base fragments

18. WB 97.57 (1/1). Base fragment with footing, fabric very pale brown; 1.7×3.7×0.4 cm. Footring diam. 10 cm.
19. WB 97.89 (1/2). Base with footing, fabric pale yellow (2.5Y 8/2); 2.3×2.3×0.4 cm. Footring diam. 8 cm.
20. WB 97.185 (1/4). Base fragment, fabric very pale brown (10YR 8/4) with light gray (10YR 7/2) substance on the interior surface; 2.8×5.5×0.4 cm.

Two-handled storage-jars ('honey pots'), Type Haltern 62 (Hofheim 66) (compare for this type also Stuart, 1963: Type 146 and Bosman, 1997: p. 223, fig. 6.48,7, 'honey pot')

21. WB 97.460(2/3) + 760 (3/1). Two fitting rim fragments. Height 2×??×0.3 (wall) cm. Rim diam. 9.2 cm.

The following wall fragments all appear to belong to one of the above-mentioned types of flagons or 'honey pots' but they cannot be attributed to a specific form. Therefore the sherds may be classified on the basis of fabric and colour; this provides an idea of the minimum number of different pots. An interesting phenomenon is the light brown deposit on the inner surface of some of the sherds. The deposit is very even and thin. The deposit may be the result of the use of the pot but may also have been applied on purpose, for instance as a coating to protect the contents of the pot. Among the flagons from Velsen, a coating of resin is to be seen on the interior of many of the pots. It is regarded as a protection for the wine which also gives it a special flavour (Bosman, 1997: pp. 220 and 227). The deposit on the pots from Winsum is not very thick and quite different from the granular remains of resin observed on the pots from Velsen. Analysis of the substance from Winsum may provide some useful information about its origin.

Wall fragments, pale yellow (2.5Y 8/2-8/3)

22. WB 97.64 (1/1). Wall fragment; 3.6×3.3×0.5 cm.
23. WB 97.89 (1/2). Two wall fragments; 2.3×2.5×0.4 cm and 1.5×2.9×0.4 cm.
24. WB 97.96 (1/2). Wall fragment; 4×4.7×0.4 cm.
25. WB 97.119 (1/2). Two wall fragments; 6.3×6.2×0.4 cm and 2.5×3.3×0.3 cm.
26. WB 97.184 (1/4). Wall fragment; 3.2×5×0.3 cm.
27. WB 97.236 (2/1). Wall fragment; 2.2×5.3×0.5 cm.
28. WB 97.502 (2/2-3). Wall fragment with light gray (10YR 7/2) deposit on the interior; 3.8×5.2×0.3 cm.
29. WB 97.720 (2/section B). Wall fragment with brownish gray (10YR 6/2-7/2) on the interior; 3.8×3.4×0.6 cm.
30. WB 97.810 (5-0/1). Wall fragment; 2.6×3.9×0.4 cm.
31. WB 97.1003 (6/1). Wall fragment; 3.5×3×0.4 cm.
32. WB 97.1139 (7/0-1). Wall fragment; 4.8×8.2×0.5 cm.
33. WB 97.1171 (5/section south). Wall fragment; 2.2×3.3×0.5 cm.
34. WB 97.1193 (5/section south). Wall fragment; 2×2.3×0.3 cm.
35. WB 97.77 (1/2). Wall fragment; 3.3×3.6×0.5 cm. This and the following wall fragments are thicker than the fragments 22–34 and all have a light gray (10YR 7/2) interior surface which may be the result of the use of the pot. The layer is very thin but very even.
36. WB 97.113 (1/2). Wall fragment; 3.3×5.5×0.6 cm.
37. WB 97.133 (1/3). Wall fragment; 5.2×10.5×0.7 cm.
38. WB 97.810 (5/0-1). Wall fragment of a large pot with light gray deposit on the interior; 7×7×0.9 cm.
39. WB 97.1319 (7/2). Wall fragment of a large pot; 11×9×0.9 cm.

Wall fragments, very pale brown (10YR 8/4)

40. WB 97.1 (dump). Wall fragment with light gray interior; 4×4.4×0.6 cm.
41. WB 97.1 (dump). Wall fragment; 2.2×2.7×0.5 cm.
42. WB 97.31 (1/1). Wall fragment; 1.3×2.5×0.5 cm.
43. WB 97.31 (1/1). Wall fragment; 6.2×6.2×0.5 cm.
44. WB 97.59 (1/1). Wall fragment; 1.4×2.2×? cm.
45. WB 97.72 (1/1). Wall fragment; 2.7×3.8×0.5 cm.
46. WB 97.77 (1/2). Wall fragment with light gray interior; 3.5×2.5×0.4 cm.
47. WB 97.77 (1/2). Wall fragment; 2.5×3.3×0.3 cm.
48. WB 97.88 (1/2). Two joining wall fragments; 5.7×9.8×0.4 cm.
49. WB 97.89 (1/2). Wall fragment with pink (7.5YR 8/3) surface; 3.6×3.2×0.5 cm.
50. WB 97.117 (1/2). Wall fragment with pink (5YR 7/4–8/4) surface; 3.8×5×0.6 cm.
51. WB 97.236 (2/1). Wall fragment; 2.8×2.2×0.4 cm.
52. WB 97.810 (5/0-1). Wall fragment; 3.4×4.4×0.5 cm.
53. WB 97.1016 (5/1). Wall fragment with pale brown interior; 2.8×3×0.4 cm.
54. WB 97.1149 (5/3). Wall fragment; 2.6×3.3×0.6 cm.
55. WB 97.1149 (5/3). Wall fragment; 2×2.5×0.5 cm.
56. WB 97.1185 (5/section south). Wall fragment; 1.5×1×? cm.
57. WB 97.1188 (5/section south). Wall fragment; 1.9×2.2×0.4 cm.
58. WB 97.1194 (5/section south). Wall fragment; 3.3×2.2×0.5 cm.
59. WB 97.1338 (8/0-1). Wall fragment; 2×2.3×0.5 cm.
60. WB 97.1484 (9/1). Wall fragment; 3.3×4×0.5 cm.

Wall fragments, pale yellow (2.5Y 8/1)

61. WB 97.1 (dump). Wall fragment; 2×3.3×0.4 cm.
62. WB 97.391 (2/2). Wall fragment; 3.5×5×0.5 cm.
63. WB 97.502 (2/2-3). Wall fragment; 3.5×3.5×0.6 cm.
64. WB 97.522 and 533 (2/3). Two joining wall fragments; 5.3×4.3×0.4 cm.
65. WB 97.533 (2/3). Two joining wall fragments; 4.5×4.2×0.3 cm.
66. WB 97.560 (2/4). Wall fragment; 1.3×2.7×0.7 cm.
67. WB 97.563 (2/4). Wall fragment; 3.5×4.8×0.5 cm.
68. WB 97.810 (5/0-1). Wall fragment; 4×6.1×0.5 cm.
69. WB 97.892 (5/1). Wall fragment; 2.8×4×0.4 cm.
70. WB 97.1191 (5/section south). Wall fragment; 3.2×1.8×0.6 cm.
71. WB 97.1477 (9/1). Wall fragment; 4.8×4×0.6 cm.
72. WB 97.560 (2/4). Wall fragment of a large pot; 3.2×8×1 cm.
73. WB 97.1149 (5/3). Wall fragment; 2×1.5×0.6 cm.
74. WB 97.1430 (7/3). Wall fragment of a fairly large pot, probably the same as No. 73; 6.5×6.8×0.5–0.8 cm.

Wall fragments of a different fabric

Very hard and fine with small shiny particles, mica? and a light red colour (2.5YR 6/6) with a very thin, light red slip (2.5YR 7/4). All sherds may belong to the same vessel. At Velsen this fabric was distinguished as fabric 2, occurring in one-handled flagons of the Type Ha 47 (Bosman, 1997: pp. 219–220).

75. WB 97.440 (2/2). Wall fragment; 2×4×0.4 cm.
76. WB 97.467 (2/3). Six wall fragments, two of which fit together: 12×12.5×0.5, 8×11.6×0.5, 5.3×6.3×0.5, 2.2×4.2×0.4 and 2×4.3×0.4 cm.
77. WB 97.549 (2/4). Wall fragment of lower wall, thickening towards the base. The fabric is light red and the core is gray; 8.3×11.5×0.5–0.9 cm.

2.7. Coarse wares (fig. 15)

The Dutch term *ruwwandig* (rough-walled) is used in the Netherlands for wheel-thrown pots with a granular tempering which results in a rough surface (in contrast to the smooth, *gladwandig*, wares). The forms include cooking pots, flagons, beakers and plates or dishes. A large number of fabrics have been distinguished which have not yet been analysed (Haalebos, 1990: p. 164). In the first century AD, most products had a gray colour and Haalebos (*op cit.*), who did not have chemical or petrological analyses at his disposal, distinguished thirteen different fabrics, based on differences in colour.

All fragments from the excavation in Winsum, except for one pot with a yellow colour, have a black or gray surface with a lighter gray colour for the core. The most common form in Winsum and in many other contemporary military sites is the necked jar with everted rim, the so-called 'cooking pot' (Haltern Type 57 and Stuart, 1962: Type 201). Several rim profiles are known from the Augustan site at Haltern (Loeschke, 1909: fig. 32.1–8). Most of the rims from Haltern are rounded and only one has an angular profile. Among the cooking pots from Rödgen (Simon, 1976: p. 100, *Form* 53) also several angular forms could be distinguished, most of them in a red fabric. This difference may be due to the earlier date of Rödgen compared to Haltern (see for these dates Roth-Rubi in Ettliger, 1990: p. 40). In Friedberg, on the other hand, cooking pots (*Form* 40) are similar to those from Winsum, their fabric is grey and the variant 40A has an angular rim profile (Simon, 1976: p. 186). The date of Friedberg is c. AD 15/16 (Simon, 1976: p. 193). Among the forms discovered at Winsum are rounded as well as angular rims and their date may be Augustan and early Tiberian.

The identification of the necked jar as a cooking pot is commonly accepted. Many vessels show traces of fire and clearly were used as cooking pots (Simon, 1976: p. 102).

Other forms include the plate, Stuart Type 218, and a hemispherical cup. The hemispherical cup in coarse ware (Haltern Type 40B, Stuart Type 209) is similar in form to the hemispherical cups in fine ware (Haltern Type 40A, Stuart Type 16, Hofheim Type 22). The cups are taller in the Augustan period compared to the later cups, which also developed a rim (Loeschke, 1909: p. 218). The rim fragment from Winsum shows a tiny rim and may therefore date to the first half of the first century AD. Similar cups were found in Velsen I and according to Bosman (1997: pp. 234–235) these cups date to the period AD 9–40.

Necked jars with everted rims

Cooking pot, Type Haltern 57. Similar cooking pots

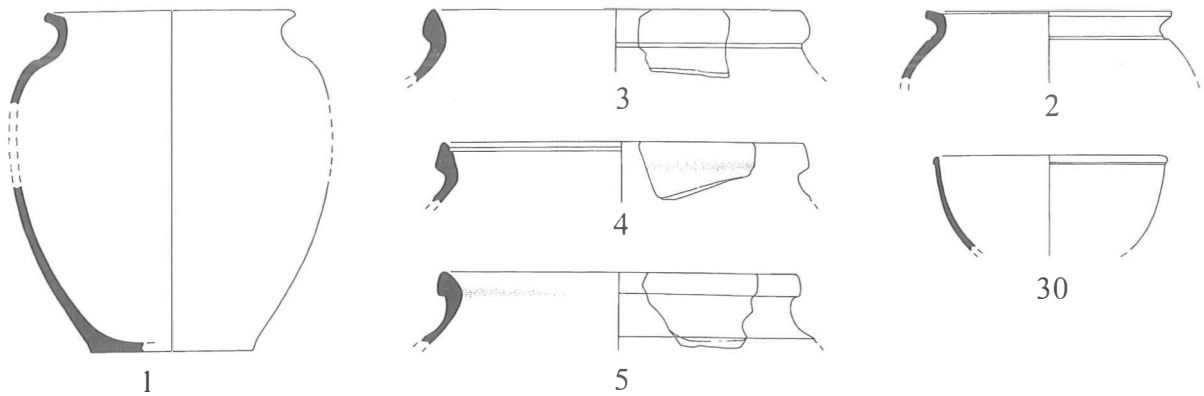


Fig. 15. Coarse wares (illustration numbers refer to catalogue). Scale 1:3.

are known from Rödgen (*Form* 53) and Friedberg. The rims vary from rounded to angular, compare the example from Friedberg (Simon, 1976, *Taf.* 45, No. 172). The cooking pots from Nijmegen are classified by Stuart (1977: p. 71) as Type 201A with a variety of rim profiles, all dated to the period AD 10–c. 65.

Rim fragments

1. WB 97.136(1/3)+373(2/1)+533(2/3)+536(2/3) (fig. 15:1). Almost complete profile of small cooking pot. Soft and brittle fabric with a yellow (2.5Y 7/8) core and dark gray surfaces. The rim has an angular profile; compare Haltern Type 57 (Loeschke, 1909: Fig. 32,6) and Bad Nauheim (Simon, 1976: Nr. 239, Taf. 66). Height 13.5 cm. Rim diam. 10 cm.
2. WB 97.133 (1/3) (fig. 15:2). Rim fragment, horizontal with an angular profile (compare Friedberg No. 239). A groove makes the transition between neck and body. The exterior is dark gray, as are the interior and the core. 3.5×7×0.3 (wall) cm. Lip diam. 10 cm.
3. WB 97.117 (1/2) (fig. 15:3). Rim fragment with everted rim and rounded edge with a slight groove just below the lip on the outside. Dark gray exterior, light gray core and very light gray interior except for the inside of the lip. 3.2×3.9×0.5 (wall) cm. Lip diam. 20 cm.
4. WB 97.391 (2/2) (fig. 15:4). Rim fragment with everted, almost horizontal and internally grooved rim with rounded edge. On the neck a slight ridge. Dark gray mottled colour on the exterior with gray interior and a light gray core. 3.6×4.7×0.2 (wall) cm. Lip diam. 16 cm.
5. WB 97.565 (2/4) (fig. 15:5). Rim fragment with everted, almost horizontal rim with rounded edge. On the neck a small ridge (compare wall fragment WB 97.126 ? which is different in colour). Black glossy exterior with gray core and gray interior except for the inside of the lip, which is black. 3.5×4.8×0.4 (wall) cm. Diam. lip 14 cm.

Base fragments

All base fragments are concave, except possibly WB 97.747 which is very small. Probably all belong to Type Ha 57.

6. WB 97.64 (1/1). Base fragment with dark gray exterior and

light gray interior and core; 4.5×6 cm. Base diam. c. 8 cm.

7. WB 97.474 (2/2). Base fragment with different shades of gray on the interior and exterior; 3.5×4×0.6 (wall) cm. Base diam. 12 cm.
8. WB 97.868 (2/2). Base fragment with light gray core and gray surfaces; 1.4×3.2×?? Base diam. 12 cm.
9. WB 97.889 (3/2). Base fragment with very dark gray interior and exterior surfaces and light gray core; 5×5.6×0.5 (wall) cm. Base diam. 8 cm.
10. WB 97.1149 (5/3 section south). Base fragment with gray core and lighter gray interior and exterior surfaces; 1.6×5.5×0.4 (wall) cm. Base diam. 8 cm.

Wall fragments, probably all fragments of Ha 57 (Stuart Type 201). They are characterized by different shades of gray. All fragments are very hard; the fabric is rough with sand.

Wall fragments with dark gray surfaces and light gray core

11. WB 97.34 (1/1). Wall fragment; 3×3×0.6 cm.
12. WB 97.104 (1/2). Wall fragment; 3×3×0.5 cm.
13. WB 97.126 (1/2). Wall fragment, relatively fine fabric. Compare for the fabric the rim WB 97.391; 7×6×0.4 cm.
14. WB 97.892 (5/1). Wall fragment, similar fabric as base fragment WB 97.889; 1.8×2.5×0.5 cm.

Wall fragments with gray or dark gray outer surface and lighter interior and core

15. WB 97.120 (1/2). Wall fragment; 2.8×2×0.5 cm.
16. WB 97.126 (1/2). Wall fragment; 2.2×4.2×0.5 cm.
17. WB 97.505 (2/3). Wall fragment; 7.5×5.5×0.7 cm.
18. WB 97.1161 (5/3). Wall fragment; 3.5×4×0.6 cm.
19. WB 97.1197 (7/1). Wall fragment; 2.8×1.5×0.3 cm.

Wall fragments with gray interior and exterior and lighter gray core

20. WB 97.120 (1/2). Wall fragment; 2.5×3.3×0.5 cm.
21. WB 97.126 (1/2). Wall fragment with small moulded cordon on the neck; 4×5.2×0.3 cm.

22. WB 97.474 (2/2). Wall fragment, the fabric is similar to that of the cooking pot No. 1 above; 3.5×2.5×0.3–0.4 cm.
 23. WB 97.674 (3/1). Wall fragment; 2.5×2.2×0.4 cm.
 24. WB 97.984 (5/1). Wall fragment; 2.7×3×0.4 cm.
 25. WB 97.984 (5/1). Wall fragment; 3×2×0.5–0.6 cm.
 26. WB 97.1188 (5/section south). Wall fragment; 1.5×2×0.5 cm.
 27. WB 97.1439 (8/2). Wall fragment; 5×4.8×0.7 cm.

Plate with rounded rim, probably Stuart Type 218

28. WB 97.671 (3/1) (fig. 12:28). Rim fragment with inturned rim, possibly Stuart Type 218. The red colour of the fabric is different from the other examples of the coarse wares discussed here. The core is weak red (2.5 YR 6/4) and the surface is reddish brown (2.5YR 3/1); 4.5×6.5×0.6 cm. Rim diam. 24 cm.

Lid

29. WB 97.810 (5/0-1). Fragment of lid? possibly of Stuart Type 219; 6×7×0.9 cm.

Hemispherical cup, Type Haltern 40B and Stuart Type 209

The cup may be compared to Haltern 40B but the dimensions are different. Stuart Type 209 is lower and according to Stuart (1977: p. 63) this type must therefore be dated later (c. AD 15–c. 40) than the examples from Haltern. Bosman (1997: p. 234) dated the cup to the period AD 9–40.

30. WB 97.472 (2/3) (fig. 15:30). Rim fragment; 4.1×5.5×0.2 cm. Rim diam. 10 cm.
 31. WB 97.1149 (5/3 south face). Base fragment with low footring; 4×3×0.4 (wall) cm. Footring diam. 5 cm.

3. SUMMARY

The catalogue of the Roman pottery excavated at Winsum has yielded many details concerning the date, function and origin of the pottery. It appears that the Roman pottery dates for the major part to the first half of the first century. Some of the *terra sigillata* sherds, however, date even earlier to the last decade BC and a relatively small number of *terra sigillata* sherds date to a much later period, the second or third century. The earliest datable sherds are *terra sigillata* fragments for which parallels can be found in middle and late Augustan contexts like Oberaden and Haltern. Similar early *terra sigillata* sherds were discovered in Bentumersiel. These early *terra sigillata* sherds also occur in Nijmegen and were dated to circa 12 BC. It is possible that these earliest sherds arrived in Winsum around 12 BC. This is difficult to ascertain because there are no contexts which date the sherds precisely. Anyway, the sherds date to the Augustan period and they do not occur in Tiberian contexts like for instance the military harbour of Velsen. The majority of the sherds from Winsum cannot be dated more precisely than to the Augustan or Tiberian period and some sherds may

even date to the Claudian period. The relatively long period of time covered by these sherds implies that they did not arrive in Winsum in one occasion but must have arrived over a period of time. The combination of different types of sherds is seen in this period only in military contexts and it is clear that the presence of the sherds in Winsum is connected in some way with the military expansion and the annexation of the coastal areas in the north by the Roman Empire. A comparison may be made with the sherds found at Velsen and Bentumersiel.

The second and third century sherds comprise only *terra sigillata* sherds. They form part of the large number of *terra sigillata* sherds known from the *terpen* area. In this period the northern part of the Netherlands does no longer form part of the Roman Empire and the Roman pottery reflects a different phase in the contacts between the Romans and the Frisians. The Roman pottery is no longer connected with military presence but represents other types of contact between Frisians and Romans like for instance trade or Frisians coming home from military service in the Roman army or diplomatic gifts. The large number of *sigillata* sherds discovered in Friesland seems to rule out Frisian veterans as the only explanation for the *sigillata* and the relatively low value of this kind of pottery seems to exclude diplomatic gifts as plausible explanation for the majority of the sherds. Therefore trade or exchange seem to have been the most important cause for the presence of the second and third century *sigillata* sherds in the province of Friesland but different explanations may be offered for a part of the total amount of these *sigillata* sherds.

The Roman pottery discovered at Winsum represents a range of different types which were used for different purposes: amphorae for the transportation of oil, wine and fish sauce, *mortaria* for the preparation (grinding) of Mediterranean food, pots used for preserving delicacies, and different types of bowls, flagons, cups and platters, used for eating and drinking. The provenance of the ceramics varies. Amphorae from the Mediterranean world (the eastern Mediterranean, Italy, Spain and southern France), cork-urns from central France and the Gallo-Belgic ware like the *terra nigra* from *Gallia Belgica*. *Terra sigillata* came from Italy and Gaul, Pompeian Red platters from Italy, while some of the flagons like the orange-red and the white wares were made in the Rhineland, for instance at Vetera (Xanten) and maybe Cologne.

The total number of sherds in relation with the type of pot and type of sherd is represented in table 1. The second and third century *terra sigillata* fragments are kept apart. The numbers in table 1 illustrate the relatively large number of amphorae. The 306 sherds comprise 57% of the total amount of sherds dating to the first century. Among the amphi-

Table 1. The total number of sherds in relation with the type of pot and type of sherd. The second and third century *terra sigillata* fragments are kept apart.

	Rim	Base	Wall	Handle	Lid	Total
TS 1st cent.	10	4	7	-	-	21
TS 2nd/3rd	3	4	3	-	-	10
Pomp. Red	4	6	-	-	5	15
Colour-coat.	1	1	5	-	-	7
Eggshell	-	-	1	-	-	1
Dressel 20	4	1	109	5	-	119
Other amph.	1	-	47	1	-	49
Gauloise	6	5	126	1	-	138
<i>Dolia</i>	1	-	12	-	-	13
<i>Mortaria</i>	6	3	1	-	-	10
<i>Terra nigra</i>	-	2	4	-	-	6
Cork-urn	9	3	36	-	-	48
Smooth wares	5	6	61	4	1	77
Coarse wares	7	6	17	-	1	31
Total	57	41	429	11	7	545

Percentages (the nine TS sherds dating to the 2nd and 3rd centuries excluded)

Ts 1st cent.	21	3.9%
Pomp Red	15	2.8%
Colour-coat.	7	1.3%
Egg shell	1	0.2%
Dressel 20	119	22.2%
Other amph.	49	9.2%
Gauloise	138	25.8%
<i>Dolia</i>	13	2.4%
<i>Mortaria</i>	10	1.9%
<i>Terra nigra</i>	6	1.1%
Cork-urn	48	9.0%
Smooth wares	77	14.4%
Coarse wares	31	5.8%
Total	535	100%

rae the sherds of the Oberaden/Dressel 20 amphorae which were made for the transport of olive oil amount to 119 among which are four rim fragments. The number of Gauloise amphorae for the transport of wine amounts to 138 sherds among which are six rim sherds. The number of other amphorae amounts to 49 sherds among which there are two rim sherds. The proportion of 3:2:1 based on this very small number of sherds may be compared with finds from Nijmegen which are also based on very small numbers of rims sherds. The percentages of the finds from Nijmegen were based on totals of 10 to 12 rim sherds and this may be the reason why graphs of the same period but from different areas differ so much. However, the

majority of rims in Nijmegen belong to olive oil amphorae or fish sauce amphorae while wine amphorae are less numerous (Van der Werff, 1984: pp. 363 and 374).

The second largest categories are the smooth wares and cork-urns. The smooth wares amount to almost 15%. This category of pottery comprises the flagons which were probably used for wine. The cork urns amount to a little less than 10%. This type of pottery was used for the transport and preservation of delicacies.

Compared to the percentages of the Roman pottery found in Bentumersiel the percentages of Winsum are very similar (Ulbert, 1977: pp. 43–44). Apart

from the amphorae, the *Krüge* and *Töpfe* are the most common categories in Bentumersiel and this is the same in Winsum where the flagons are similar to the *Krüge* and the coarse wares and maybe the cork urns may be counted as *Töpfe*. The percentage of amphorae is much higher in Winsum compared to Bentumersiel. This may be caused by the fact that wall fragments from Gauloise amphorae were counted among the *Krüge* but this cannot be ascertained.

The number of *terra sigillata* sherds is low in Winsum compared to Bentumersiel but the total amount of 21 first century *terra sigillata* sherds may be too small to make statistical conclusions. The number of sherds discovered at Winsum forms only a small portion of the original number of sherds deposited at Winsum. The original number is affected very much by post-depositional processes. The area of the excavation had in the past been completely dug over when the *terp* was quarried for its fertile soil, and the entire Roman habitation levels appear to have been removed. The remaining features were the lower parts of ditches and other remains of habitation. These traces often had a mixed fill, but Roman traces survived in the lowest strata in the eastern part of the excavation, towards the centre of the former *terp*. Moreover the excavated area only comprised a small part of the original *terp* and we may therefore assume that a large number of sherds is still in the soil below the now inhabited part of the former *terp*.

Despite the destruction of the archaeological site in the past centuries, the conservation of the sherds is very good. There is no abraded material and the sherds are in a very good condition and are not much affected by wear. This indicates that the Roman pottery, at least for a large part, was found in its original place (*in situ*), where it was deposited in the Roman period after it had been used. The good state of conservation also indicates that the sherds were not moved after being discarded and will certainly not have been brought to Winsum after their deposition elsewhere. Further examination and evaluation of the excavated features in an attempt to interpret the context of the sherds' deposition has to be carried out in the near future.

4. DISCUSSION

The large number of Roman sherds of different types which were discovered in this excavation near the northern coast and which date to the (early) first century is unique for the Netherlands. This observation brings us back to the question whether Winsum was the location of a Roman military camp on the Frisian coast. This idea was suggested many years ago but it was rejected, partly because traces of a military structure lacked and militaria or coins also lacked. Still the idea of a military site of some sort

did remain (Galestin, 1997) and this idea was one of the leading motives for undertaking the excavation in 1997 (Bos et al., 1998). It appears that the results of the excavation presented here provide new data and this offers the opportunity to reconsider the old idea of a military camp. In combination with new discoveries made elsewhere and recent research on the subject of Roman military expansion in the first century we are able to re-evaluate the possibility of the presence of a military camp at Winsum.

The date, number and variety of the Roman pottery seems in itself a very strong indication for military presence at the site, as was already noted by Boeles in 1927. The different pottery types excavated at Winsum show a great similarity to the range of types discovered in military camps. It appears that this range of pottery is typical of, and even exclusive to all military camps in Germany, in the Netherlands and in Great Britain. For this set of pottery types the term 'fortress assemblage' has been used (Tyers, 1996: pp. 50–51). It refers to a combination of different pottery types including amphorae and *terra sigillata* but also *mortaria*, flagons and jars, in short the entire set for eating, drinking, preparing and storing food for consumption by the Roman legions. It is typical of all Roman forts from the Augustan period onwards. This fortress assemblage is found in England at Camulodunum (Colchester), a Roman fort dating to the Augustan-Claudian period, but the same assemblage was also present at neighbouring Sheepen which is not a fort but an early Roman industrial site and trading post, less than one km away from the Roman fort and situated near the tidal river Colne (Niblett, 1985: pp. 22–23; Sealey, 1985: pp. 7–8).

The presence of this pottery assemblage alone can therefore be seen as an indication of military presence and the suggestion becomes even stronger because there is no evidence that this assemblage of pottery types was found in native centres. Among the native elite, in *oppida* in central Europe, Roman influence remained restricted to the consumption of wine. There was no demand for other Roman products and neither olive oil nor fish sauce were consumed, as is clear from the absence of the types of amphora carrying these products in native contexts. In pre-Roman *oppida*, as for example at Basel, Dresel 1 amphorae used for wine were found but no amphorae for olive oil were discovered. Olive oil was used in Europe north of the Alps only after the Augustan era, and in growing quantities, at Roman civilian settlements such as Augst; according to Martin-Kilcher (1987: p. 50) this illustrates the rapid process of Romanisation of the native people. As a consequence there is little chance to find this number and variety of Roman sherds in a pure native settlement on the shores of northwestern Europe.

Other indications for Roman military presence are the coins. Roman silver and copper coins were dis-

covered dating to the Augustan period (Galestin, 2002) and several copper coins were halved and countermarked. Halved coins are often seen in military contexts and the countermarks point to the distribution of the coins by a Roman military commander.

Although the combination of many different Roman finds seems to point to Roman military presence, the most important feature of this presence, V-shaped ditches and a rampart which are the visual remains of an army camp, are still lacking. This absence of characteristic features may be due to the fact that they have not been found (yet). Other explanations are that the Roman layers may have been destroyed in the process of quarrying the *terp* soil. It appears that only in those trenches which are nearest to the central part of the former *terp* some original Roman features remain while on the fringes of the excavated area all features seem to date to more recent periods. The Roman ditches and bank would have been situated around the camp and this is exactly the place where no Roman features have been conserved. It is also possible that the features have been washed away. The landscape has been subject to radical changes during floods in the post-Roman period and this may account for the disappearance of these features which were situated on the margins of the settlement. Another possible explanation may be that the expected Roman camp was not situated at Winsum but in a nearby site, north of Winsum where the ridge is even more spacious. All these possible explanations, however, cannot at this moment bring a solution to this problem any closer.

Although the new information obtained by the excavation has not brought a solution to the problem and the hope to excavate a military camp at Winsum has not become a reality the number of Roman artefacts has increased tremendously. As a consequence the contrast between the numerous Roman artefacts and the lack of ditches has been aggravated. This same discrepancy between the presence of Roman artefacts and the lack of features in the soil is known only from one site which is otherwise very similar. It is Bentumersiel, situated on the bank of the river Ems near the northern coast of Germany. In this native site many Roman pottery sherds, dating both to the Augustan and to the Tiberian period, Roman coins and other objects were found. At Bentumersiel, contrary to Winsum, military objects like for instance pieces of Roman armour and even remains of metalworking, called a *fabrica*, have been discovered (Haarnagel & Schmid, 1984: p. 204). Like in Winsum in Bentumersiel, too, the V-shaped ditches referring to a Roman camp were not found and as a consequence Bentumersiel was not interpreted as an army camp. It is true that a long and straight ditch was found but this was not interpreted as part of a military defence ditch (Brandt, 1977: *Abb.* 4 and p. 24). Schönberger (1985: pp. 333–334) explains the

absence of V-shaped ditches by the argument that it may have been very difficult to construct ditches in the salt-marsh. However, the fact that a ditch was found at Bentumersiel indicates that ditches existed. Schönberger also questioned whether ditches and a bank wall were ever present or indeed necessary around a mere outpost which may well have been less defended.

The excavation, however, made clear that Bentumersiel was not a normal native settlement like the other sites in the neighbourhood. A farmhouse with a barn but without a stable was found and this has led to the idea that the site was a kind of seasonal camp, a point of (food) storage (Haarnagel & Schmid, 1984: p. 202) which could also have served as a place where the Roman troops could be taken care of in the Late Augustan and Tiberian period according to Haarnagel and Schmid (1984: pp. 203–204). There are also indications that wood (oak) has been stored at Bentumersiel. The oak came from the higher grounds in the hinterland (Brandt, 1977: pp. 23–24). The conclusion may be that the function of Bentumersiel was a military station as suggested by Schönberger (1985: pp. 333–334) with a military harbour or marching camp in the neighbourhood (Haarnagel & Schmid, 1984: pp. 203–204).

The conclusion is that both Winsum and Bentumersiel yielded many Roman objects which are very similar to the assemblages found at Roman forts but they are not a real fort like the well-known legionary bases as they are known from the Rhine and the Lippe, which all had ditches and a bank. This may seem strange because Roman presence in this period often is mainly military presence but on the other hand it is clear that remains of military presence in the Augustan period are very exceptional in north-western Europe. For instance, in the entire area between the rivers Rhine and Elbe there are only very few traces of Roman military presence according to Von Schnurbein (1982: p. 90; 2002). The marine harbour at Velsen is the most northern military site. It is situated on the western coast of the Netherlands and Tiberian in date. Also the long quest for the identification of the battlefield where Varus lost his Roman legions in the Teutoburger Wald has yielded a great deal of new information but here too traces of military presence are lacking. The fact remains that we have very little archaeological evidence of Roman military activities in the coastal regions of north-western Europe, enterprises of which we are only informed in detailed reports in different historical sources. Maybe we have to look for a different type of site and not for a legionary camp with all its characteristic elements. Winsum may therefore give rise to a better understanding of different types of Roman presence in the northern part of Europe.

Historical sources may perhaps offer a solution for our archaeological problem. They not only men-

tion large military expeditions but also speak of small military units, the establishment of cities and the collection of taxes. Small groups of soldiers are reported to have been active in Germany at the time of Varus, in AD 9 and Dio Cassius blamed Varus for not concentrating his legions but instead summoning soldiers to different places to control key sites, to catch robbers and to safeguard the food transports (Dio Cassius LVI, 19,1). This appears to have been normal practice in subjected areas as we know from contemporary documents like the Vindonlanda writing-tablets. It appears that small groups of soldiers, consisting of ten to forty five men, were absent from the camp and active elsewhere (Bowman, 1994: pp. 104–105, *Tab Vindol. I 154*). With the use of the written word the army was able to function in a large geographical area even by small numbers of groups and according to Bowman (1994: pp. 48–49) the system of written communication can be traced back to the Augustan period. According to Von Schnurbein the text of Dio Cassius also implies that Roman troops were stationed in native settlements. Von Schnurbein (1982: pp. 90–91) considered Bentumersiel as a possible site because German native finds as well as Roman finds with a military character were found there together. He rejected this idea because Bentumersiel turned out to be an exception and was not a normal native settlement. He also mentioned Winsum in this respect but rejected this idea too because of the lack of evidence on the structure of the native settlement (Von Schnurbein, 1982: p. 91).

Apart from military presence ancient authors also mention the founding of cities in conquered territory and we are informed that the Romans built towns and wintered among the Germans. Although this information about troops stationed in the centres of the conquered tribes in Germany (Von Schnurbein, 1982: pp. 90–91) was difficult to believe it could not be rejected out of hand. The question was, where were these local centres and what did the Roman troops do in those areas where no native towns are known to have existed? Recent archaeological discoveries have given completely new information on the Roman presence among the Germans. Recently an example of such Romanized towns may have been discovered in Germany, Waldgirmes (Becker & Raschbach, 1998), in the vicinity of the Roman camp of Dorlar. Here a complete Roman military construction with ditch and wall was found. The type of buildings and the lack of militaria has led to the interpretation of the site as having a civil character (Von Schnurbein, 2002: pp. 25–26).

Other activities in which Roman soldiers and civilians were engaged with the Germans was the collection of taxes. Tacitus (*Annals* IV, 72) informs us about the collection of taxes in the form of cow hides for military purposes among the Frisians. The Fri-

sians initially supplied these hides but later they revolted against Olennius who overcharged them in AD 28. They attacked the Roman soldiers, who had to seek refuge in the villa of the veteran named Crup-torix. The number of four hundred soldiers may be exaggerated, but the information about soldiers collecting tax who could not easily reach their camp because it was at some distance may accurately reflect the situation at the time of the reported revolt. Of course we do not know whether such a revolt took place at all, and if the story is true we do not know where it occurred. The story suggests, however, that the Roman soldiers at that time felt relatively safe among the Frisians when they collected the tax. And the Roman soldiers (or contractors who were supervised by the army) may have resided not in defended camps but among the Frisians.

The Roman method for collecting taxes among subjected people is also known from other areas in the Roman Empire. In southern Europe, in Spain, but also in central Europe, according to Wightman (1977: pp. 122–123) military officers or native agents may have lived in existing settlements which served also as centres for the collection of taxes. These arrangements also favoured the prosperity of these centres. This practice is known from inscriptions which mention custom stations in harbours, along roads and in cities. Tax collection was a highly regulated part of Roman society as we learn from the inscriptions on the collection of taxes like for instance the Ephesian Customs Law which informs us about these custom posts and about specific regulations for the construction of new customs buildings (Van Nijf, in press).

The excavation at Winsum provided a wealth of new Roman artefacts but did not produce the military features which were hoped for. Although the excavations did not yield much new information about the context of the Roman objects the number and type of the objects seem to indicate that a small group of Roman soldiers or civilians who may first have arrived within the framework of a military expedition and maybe later as tax collectors have resided at Winsum over a number of years. They may have lived among the Frisians in a native settlement, possibly in a semi-permanent occupation, an annual visit to collect taxes in kind from the Frisians. The Romans must have felt relatively safe and they inform us that the Frisians were co-operative. They were in the impression that the entire region was under control, was pacified and formed part of the Roman empire.

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6. ABBREVIATIONS AND REFERENCES

Conspectus	<i>terra sigillata</i> types according to Ettlinger, 1990.
Drag.	<i>terra sigillata</i> types according to Dragendorff, 1895.
Haltern	pottery types from Haltern according to Loeschke, 1909.
Hofheim	pottery types from Hofheim according to Ritterling, 1912.
Holwerda	pottery types according to Holwerda, 1941.
Munsell	Munsell Soil Color Charts. 1994 revised ed.. New Windsor, NY
NRFRC	The National Roman Fabric Reference Collection (Tomber & Dore, 1998).
Oberaden	pottery types from Oberaden according to Albrecht, 1938–1942.
OCK	<i>terra sigillata</i> stamps according to Oxé et al., 2000.
Rödgen	pottery types from Rödgen according to Simon, 1976.
Stuart	pottery types according to Stuart, 1962.

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