

# medieval ceramics **Papers**



# Pots from troublesome times

## Ceramics used in Middelburg-in-Flanders, Belgium, during the Eighty Years' War

Maxime Poulain, Koen de Grootte and Wim de Clercq \*

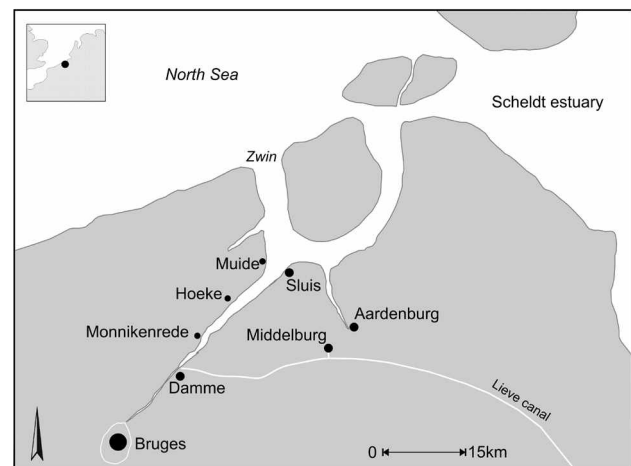
### Summary

*In 1448, the already highly urbanised region around Aardenburg, Damme and Sluis witnessed the founding of a new city, Middelburg-in-Flanders. The thriving start, that characterised this city, soon came to an end. With the outbreak of religious troubles in the second half of the 16th century, the city was located in the frontline of the Spanish-Dutch war. This article*

*examines the ceramics of two garderobe chutes from the lower court of the castle, unearthed during the archaeological excavations of 2004. The analysis of these assemblages raises some questions on the consumption of ceramics outside normal market patterns and political control.*

### Introduction

Nowadays, Middelburg-in-Flanders (Maldegem, East Flanders Province, Belgium) is just a small village in the vicinity of the Dutch border and some major urban centres such as Bruges, Aardenburg and Sluis (Figure 1). However, the street pattern and some remains of fortifications still remind us of its past. In 1448, the city was founded by Pieter Bladelin, treasurer and councillor of the Dukes of Burgundy (Verschelde 1867, 33). Through its creation, Bladelin confirmed his power and justified his pursuit of a noble status (De Clercq *et al* 2007a, 2; De Clercq *et al* 2007b, 12–13). Despite the struggle (1483–1492) between the large Flemish cities and the new count of Flanders, Maximilian of Austria, the town and its castle continued to prosper until the first half of the 16th century (De Clercq *et al* 2007b, 8). Then, with the Spanish king Philip II in power, the suppression of Calvinism led to fierce political resistance. In 1568 Prince William of Orange invaded the Netherlands, an event traditionally considered as the set off of the Eighty Years' War (Parker 2004; 91, 92). As a military stronghold in the frontline of this Spanish-Dutch war, the castle lost its function as a noble residence and the town became a pawn in the particularistic uprising against a centralistic ruler (Haemers 2005, 262). By



**Figure 1**  
The geographical location of Middelburg in 1448  
De Clercq *et al* 2007a, 2, fig 1

the beginning of the War of the Spanish Succession in the early 18th century, Middelburg-in-Flanders was reduced to a small village and its castle served as a stone quarry (Verschelde 1867, 136; Martens 1994, 42; De Clercq *et al* 2007b, 16). For a more in-depth discussion of Middelburg's history, geographical location and town plan, we refer to De Clercq *et al* 2007a.

\* Maxime Poulain  
Wim De Clercq  
Historical Archaeology, Ghent University, Sint-Pietersnieuwstraat 35, B-9000, Belgium  
maxime.poulain@ugent.be  
w.declercq@ugent.be  
www.archaeology.ugent.be/historicalarchaeology

Koen De Grootte  
Flemish Heritage Institute, Phoenixgebouw, Koning Albert II-laan 19 bus 5, B-1210, Brussels, Belgium  
koen.degrootte@rwo.vlaanderen.be

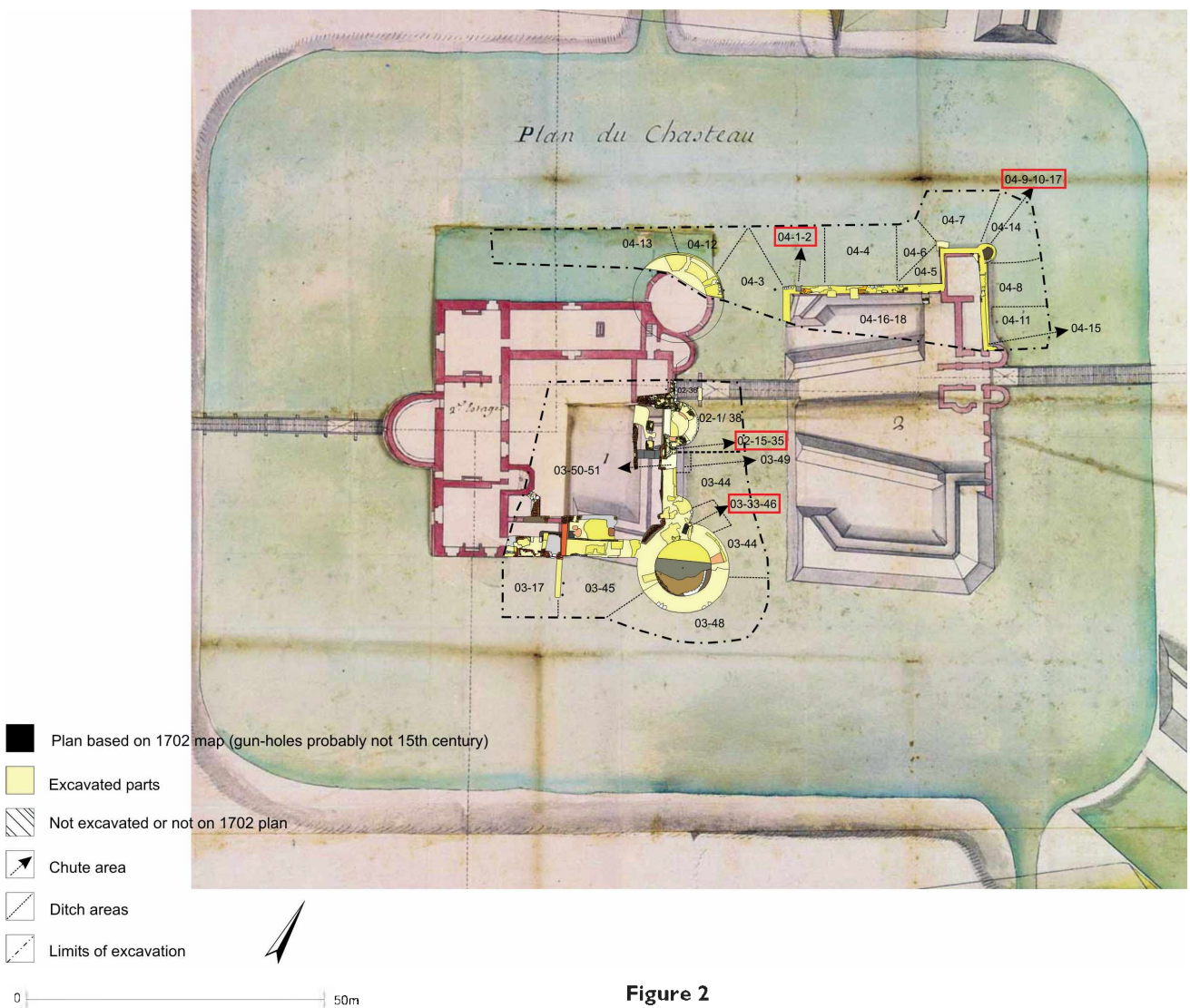
Notwithstanding the fact that many remains were destroyed by building activities in the 1990s, the excavations on this site only started in 2001, following the construction of a new residential area. This rescue excavation was carried out by the community of Maldegem, the Flemish community and Flemish Heritage Institute, the province of East Flanders and Ghent University. Multiple campaigns succeeded one another, of which this article discusses some of the finds made during the excavations of the lower court in 2004. Two garderobe chutes from the upper court have already been examined (De Clercq *et al* 2007a) and will serve as a guiding principle throughout this article. Because of its exceptional value and preservation, Middelburg-in-Flanders became the first archaeological monument to be protected as such by the Flemish government in 2003 (De Clercq *et al* 2007a, 1).

## The garderobe chutes

### Location in the castle

Both assemblages discussed in this article came to light during the archaeological excavations of the bailey in 2004 (Figure 2). Garderobe chute [04/MIKA/1/2] was situated in the northern boundary wall, at 1.75 metres from the north-west corner. It had a square plan and flowed into the northern moat. The back was plastered with a layer of lime mortar. At the height of the foundations, the chute was equipped with a concave and sloping stone plate (De Clercq *et al* 2005, 94).

The eastern end of the northern bailey wall was characterised by a rectangular expansion, measuring 4.65 by 6 metres. On its north-eastern corner, this wing had a tower with a diameter of 2.5 metres. In the corner



**Figure 2**

Map of the defensive system around Middelburg, drawn up in May 1702 by Senneton de Chermont, with projection of the excavation plan and marking of the mentioned chutes. Courtesy Wim De Clercq

between this latrine tower and the eastern wall another garderobe chute, [04/MIKA/9/10], was found (De Clercq *et al* 2005, 95).

### Sampling strategies and taphonomy

As no stratification was observed, both chutes were dug up using artificial spits of ten cm (Figure 3). Each time, a division was made between the fill of the chute and its outflow into the moat (respectively [04/MIKA/1], [04/MIKA/9] and [04/MIKA/2], [04/MIKA/10]). Furthermore, both chutes were sampled for environmental analysis. However, in the context of this article, these samples will not be dealt with.

### Garderobe chute [04/MIKA/1/2]

#### Introduction

The quantification of this chute (Table 1) was made using sherd count and a rim-based minimum number of individuals (MNI). This results in 1529 fragments of pottery, representing 134 individuals. The degree of fragmentation or brokenness, referring to an average numbers of sherds into which pots of a certain type or category break, is rather high (Orton *et al* 1993, 169).

Five ceramic categories can be distinguished: redware, greyware, whiteware, tin-glazed ware and stoneware. Redware is the best represented category (sherd count 87.9%, MNI 88.1%). Together with the greyware (sherd count 5.6%, MNI 6.7%), it is of a local or regional origin. The other ceramic categories are imported, stoneware from the Rhineland (sherd count 1.8%, MNI 1.5%) and tin-glazed ware from different production sites in the Low Countries (sherd count 0.8%, MNI 3.0%). Because of its deviant typology, whiteware (sherd count 2.3%, MNI 0.8%) can also be considered as import. The exact origin could not be determined. With 25 sherds, the difference between a redware or greyware fabric could no longer be made due to the presence of soot and various soil processes.

#### Fabrics and typology

##### Redware

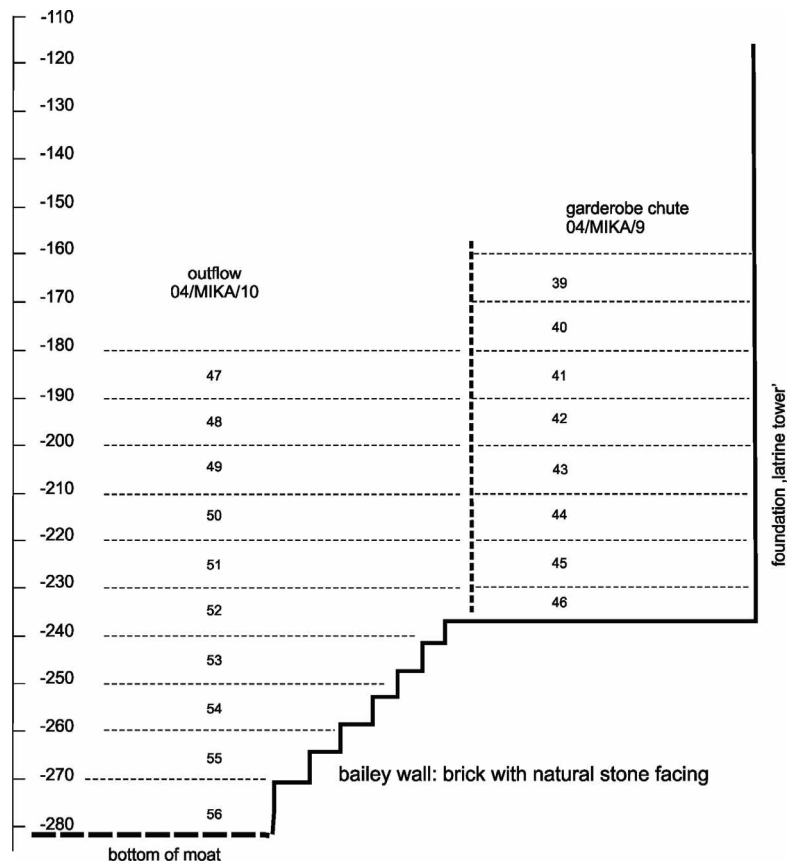
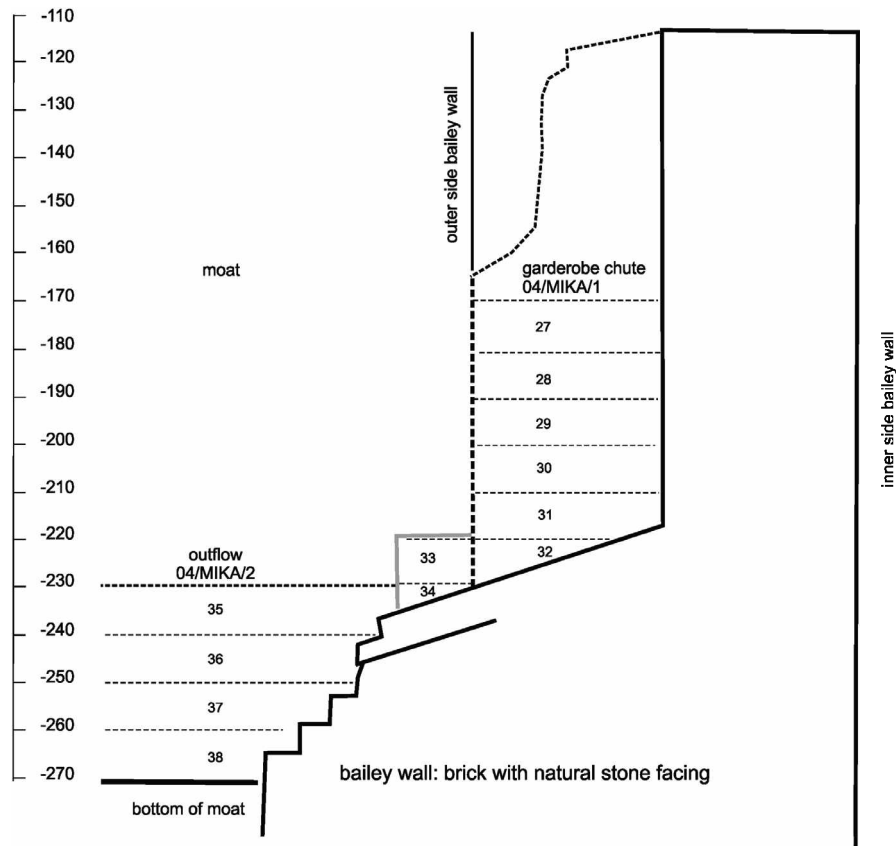
The fabric is hard and dense. The texture of the clay is characterised by the natural presence of fine, rounded and sandy particles and angular quartz. Larger inclusions, such as pottery grit, tertiary pebbles and mica, may occur. Colours range from brown, brown-red to orange-red, with the possibility of a reduced,

**Table 1** Chute [04/MIKA/1/2] pottery quantification

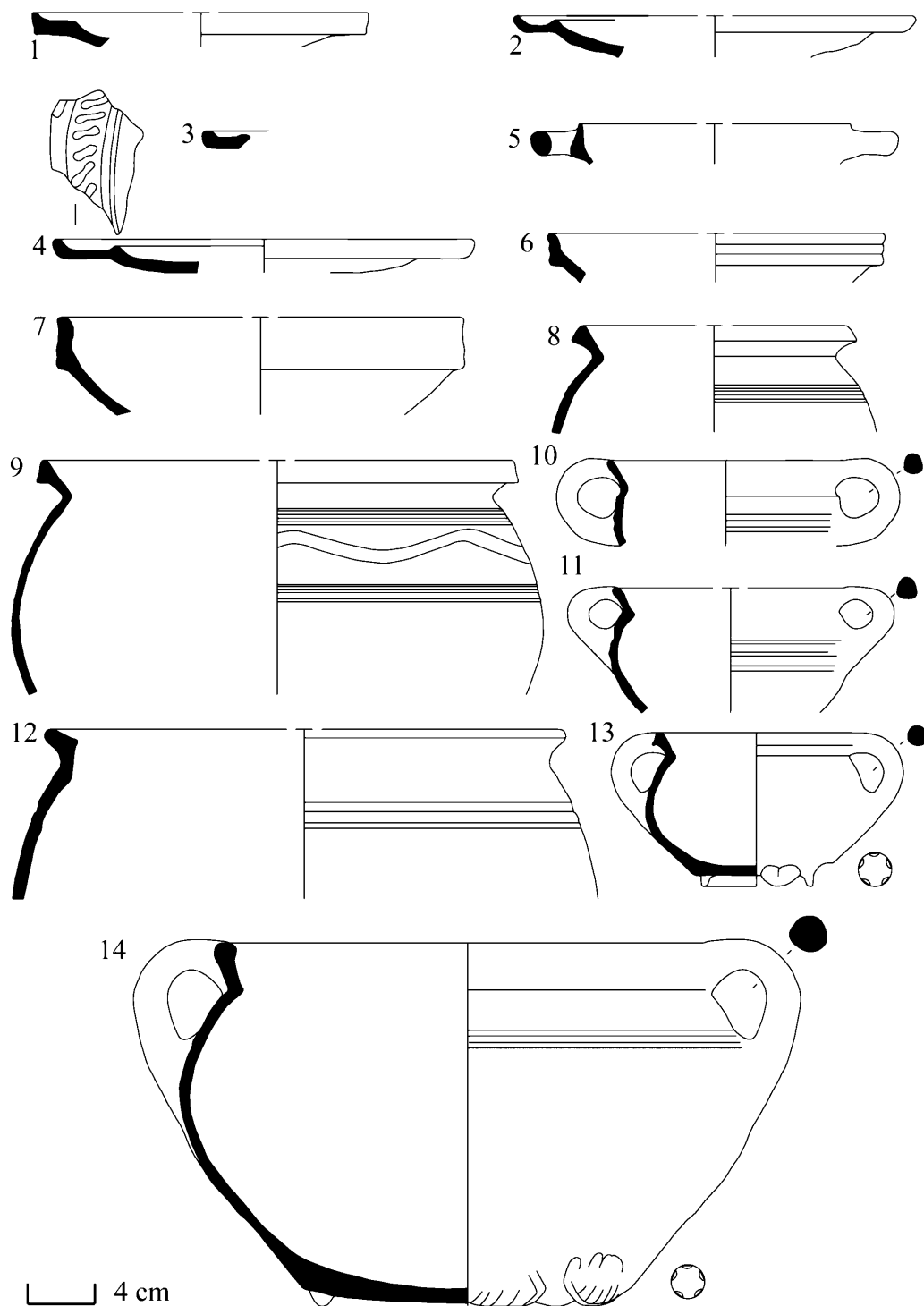
	sherds	MNI	% sherds	% MNI	brokenness
redware	1344	118	87.9%	88.1%	11.4
greyware	86	9	5.6%	6.7%	9.6
whiteware	27	2	2.3%	0.8%	13.5
tin-glazed	12	4	0.8%	3.0%	3.0
stoneware	35	1	1.8%	1.5%	35.0
unknown	25	0	1.6%	0.0%	
total	1529	134	100%	100%	11.4

MNI	redware	greyware	whiteware	tin-glazed	stoneware
plate	4			1	
porringer	3		1		
jug				1	1
double-handled cooking pot	73	5			
frying pan	1				
skillet	3				
large carinated bowl	20				
gallipot	2				
flowerpot	2				
unknown	10	4	1	2	
total	118	9	2	4	1

MNI		
food preparation	82	61.2%
kitchen/stock	20	14.9%
tableware	11	8.2%
hygiene	2	1.5%
other/unknown	19	14.2%
total	134	100%



**Figure 3**  
 Section of garderobe chute [04/MIKA/1/2] (upper) and [04/MIKA/9/10] (lower) indicating the excavated spits. The depth below the surface is in centimetres  
 Courtesy Wim De Clercq



**Figure 4**

Chute [04/MIKA/1/2]. Local or regional redware pottery 1–4 plates, 5–7 porringers, 8–14 cooking pots

grey core. A total of 118 individuals was counted and eight forms could be distinguished: plates, porringers, double-handled cooking pots, a frying pan, skillets, large carinated bowls, gallipots and flowerpots.

The assemblage contains four plates (Figure 4.1–4). They all have a typical upright lip and are lead glazed on the inside. None of them are decorated. Furthermore,

three porringers have been counted (Figure 4.5–7). The flaring body and strap-shaped rim is characteristic of this form. This rim can either be ribbed or plain. At least one individual has two opposing horizontal loop handles springing from the collar (Figure 4.5). The lead glaze on the inside of these porringers is colourless and can be applied on a white slip layer (Figure 4.6).

The double-handled cooking pot or *grape* is by far the best represented form, numbering 73 individuals (Figure 4.8–14, Figure 5.1–6). They all have a wide rim opening, a short neck and a base with thumbed feet, which is typical of the Flemish coastal area (Verhaeghe 1997, 23–24; De Groote 2008, 419). Most of them are covered with a colourless lead glaze and blackened by soot, indicating an intensive use. Several subtypes can be distinguished on the basis of rim shape and volume. What is particular, is that the cooking pot with a small volume is the best represented subtype. Nineteen individuals (28.8%) have a diameter of 12 to 16 cm. Cooking pots with diameters of 17 to 21 cm and 22 to 26 cm both represent 24.2% (16 MNI). The diameter of another eleven individuals (16.7%) goes from 27 to 31 cm. Finally four individuals (6.1%) have a diameter between 32 and 36 cm. Despite this discrepancy in rim diameter, the proportion of the measurable cooking pots remains the same, with a width/height ratio of 1:0,7 (Figure 4.13–14). Compared to other sites in Belgium, the *grapes* in this assemblage are rather low and open. The width/height ratio of the redware double-handled cooking pots in the St. Salvator abbey of Ennebeke, dated 1450–1550, ranges between 1:0.9 and 1:1 (De Groote 2008, 162, table 15). Likewise, in the *Hof van Hoogstraten*, Brussels, the majority of the double-handled cooking pots, dated 1525–1625, consists of high, closed forms (Van Eenhooge 1999; 282, 297). Another form that can be associated with cooking, is the frying pan (Figure 5.7). Only one individual was counted. It is characterised by a rounded rim, a convex base, traces of soot and the presence of lead glaze on the inside.

Three individuals were identified as skillets (Figure 5.8–10). Although the typical handles were missing, one can assume that it does concern skillets as pouring lip, lead glaze on the inside and soot traces are present and similar examples were found in the upper court chutes (De Clercq *et al* 2007a, 10, Figure 7.22–26). The large carinated bowl, *teel* in Dutch, was used to skim cream off milk. However, the presence of soot traces on some fragments may indicate a secondary function. A total of twenty individuals has been counted. Some common characteristics are the wide strap- to cuff-shaped rim with pronounced lower lip, the base with thumbed feet, a wide pouring lip and the application of lead glaze on the inside (Figure 5.11–13, Figure 6.1–3). Only one individual (Figure 6.4) has two horizontal, strap-shaped handles. Two rims with a flattened top on an outstanding collar indicate the presence of gallipots or concave-sided jars (Figure 6.5–6).

In addition, two bases can also be interpreted as belonging to ointment jars (Figure 6.7–8). Their flat-turned base is characteristic of this form. Chemical analysis on a local redware gallipot, found during the excavations elsewhere in the castle, indicated that it contained an ointment made of lead plaster mixed with beeswax (Baeten *et al* 2010). This medicinal mixture could also have been the content of the

redware gallipots in this assemblage. Finally, two flowerpots were counted. A first flowerpot has a square, outstanding rim with upright lip and a cylindrical body (Figure 6.9). The second individual also disposes of a square, outstanding rim (Figure 6.10). However, in this case, it is flattened and provided with a grooved top. As it is usual on flowerpots, no traces of glaze were found.

### Greyware

All of the greyware consists of the same fabric. It is once again characterised by the dense, natural presence of fine and sandy particles. Angular quartz and iron oxides may be present. Its hardness is variable and colours range from grey to brown with a well-defined black core. Nine individuals were counted. Only five of these could be identified (Figure 6.11–15). They all belong to the form type of the double-handled cooking pot. Their characteristics are similar to the ones in redware. The collared rim dominates and traces of soot are present on most of the individuals. A flat-turned base fragment, possibly a beaker or small jug, rests undetermined (Figure 6.16).

### Whiteware

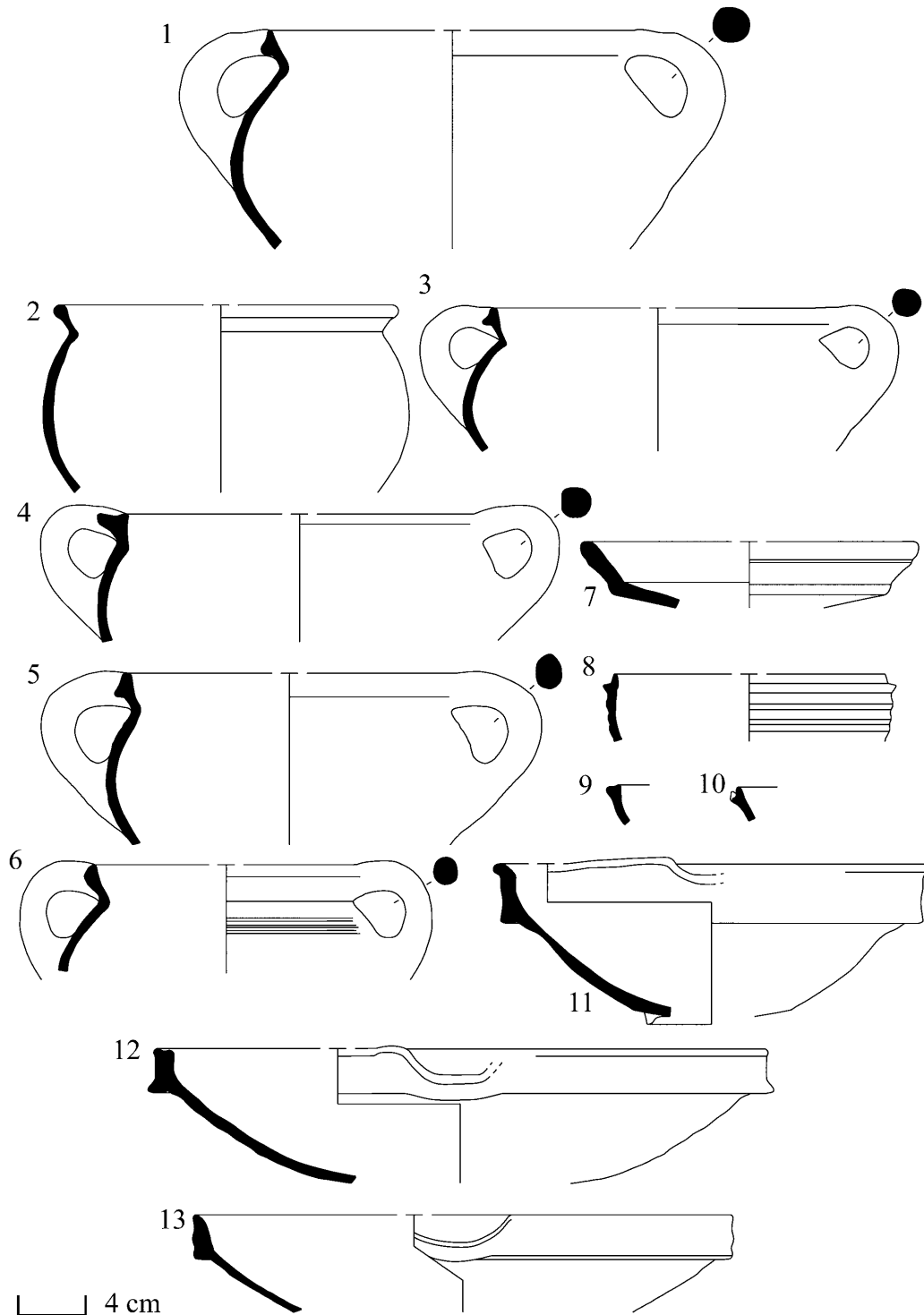
As the design of these ceramic forms deviates from local productions, it can be assumed that the whiteware category concerns imported material. Several fabrics were distinguished, indicating multiple provenances. Only two individuals were counted of which one could be identified as a porringer (Figure 6.17). The porringer has a simple, upright rim, two horizontal strap-shaped handles and is characterised by a colourless lead glaze.

### Tin-glazed ware

The assemblage contains four individuals of tin-glazed pottery, of which three could be identified as a plate and two jugs. Once again, several fabrics were present, indicating different sites of production, probably all from the Low Countries. A first fragment is from a maiolica jug, characterised by a cylindrical collar and a thorn on the transition from collar to shoulder (Figure 6.18). The fragment is affected by humic acids, making it impossible to determine its original colour scheme. Likewise, a base fragment could be identified as originating from a second maiolica jug (Figure 6.19). This base is concave, whereas its body has a more convex design. Once again, degradation by humic acids makes it impossible to determine its colours.

Based on its decoration and colour scheme, a third fragment probably originates from the city of Antwerp (Figure 6.20). This plate is characterised by an outwardly kinked rim and concave base. Except for the base, the fragment has an all-over white-coloured tin glaze. The inside is decorated with polychrome floral and fruit motives in blue, orange, yellow and green.



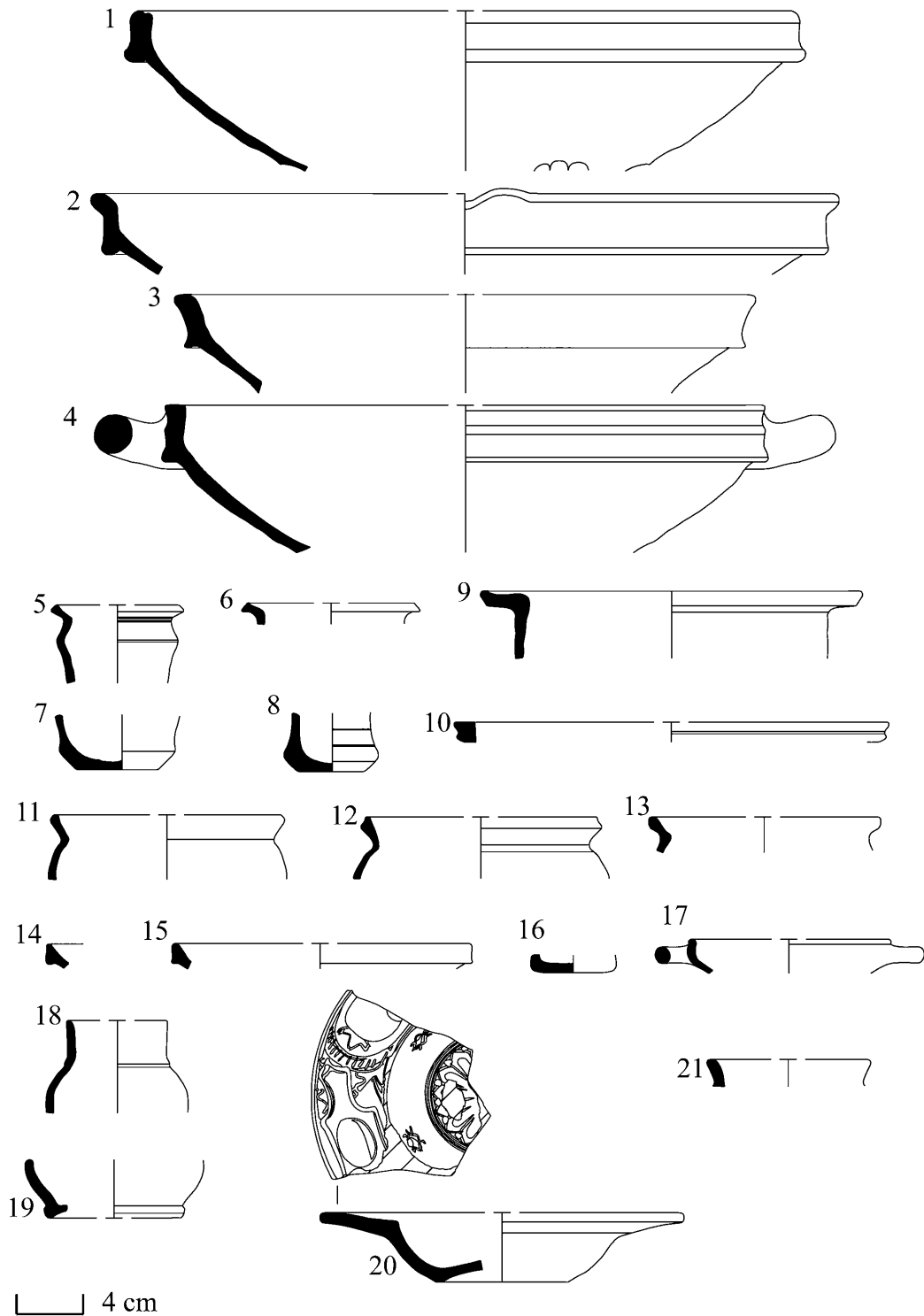


**Figure 5**  
 Chute [04/MIKA/1/2]  
 Local or regional redware pottery 1–6 cooking pots, 7 frying pan, 8–10 skillets,  
 11–13 large carinated bowls

**Stoneware**

Only one stoneware jug was found in this chute. The fabric of this jug is grey-coloured, very hard and originates from the Rhineland. But, as pottery from Raeren and Aachen cannot be distinguished on a mere visual basis, the provenance could not

be narrowed down any further (Hurst *et al* 1986; 190, 192; Gaimster 1997, 224–226). Both on the in- and outside, this stone-ware jug is covered with a grey-brown *engobe* and is salt glazed (Figure 6.21).

**Figure 6**

Chute [04/MIKA/1/2]

Local or regional redware pottery 1–4 large carinated bowls, 5–8 gallipots, 9–10 flowerpots

Local or regional greyware pottery 11–15 cooking pots, 16 undetermined

Imported whiteware pottery 17 porringer

Low Countries maiolica 18–19 jug, 20 plate

Rhenish stoneware 21 jug

**Garderobe chute [04/MIKA/9/10]****Introduction**

The quantification (Table 2) was made using sherd count and a rim-based minimum number of individuals (MNI). This results in a total of 797 sherds, representing 128 individuals. Despite the fact that the number of pottery fragments is almost half of that in the former chute, the number of individuals is similar, the result of a rather low degree of fragmentation. Nevertheless, the same five ceramic categories are present. The vast majority of the redware (sherd count 87.0%, MNI 90.6%) and greyware (sherd count 3.4%, MNI 1.6%) is of a local or regional origin. However, at least one oxidized individual is imported. Likewise, whiteware (sherd count 1.4%, MNI 0.8%), tin-glazed ware (sherd count 1.5%, MNI 3.1%) and stoneware (sherd count 6.8%, MNI 3.9%) are imported.

**Fabrics and typology****Redware**

The fabric of the locally produced redware has the same characteristics as the one described in chute [04/MIKA/1/2]. One individual deviates from this fabric and should be considered as import. This fabric is orange-red and has a dense, fine and sandy grain with inclusions of round quartz and micas. The clay of this fabric originates from the formation of Tegelen, and Bergen op Zoom was the main production centre (Groeneweg 1992, 119). In total, 116 individuals were counted, representing twelve form types: plates, porringers, a jug, double-handled cooking pots, frying pans, skillets, bowls, basins, large carinated bowls, a colander, a chamber pot and gallipots.

The plates are, parallel to the former chute, all characterised by a rim with upright lip. On the basis

**Table 2** Chute [04/MIKA/9/10] pottery quantification

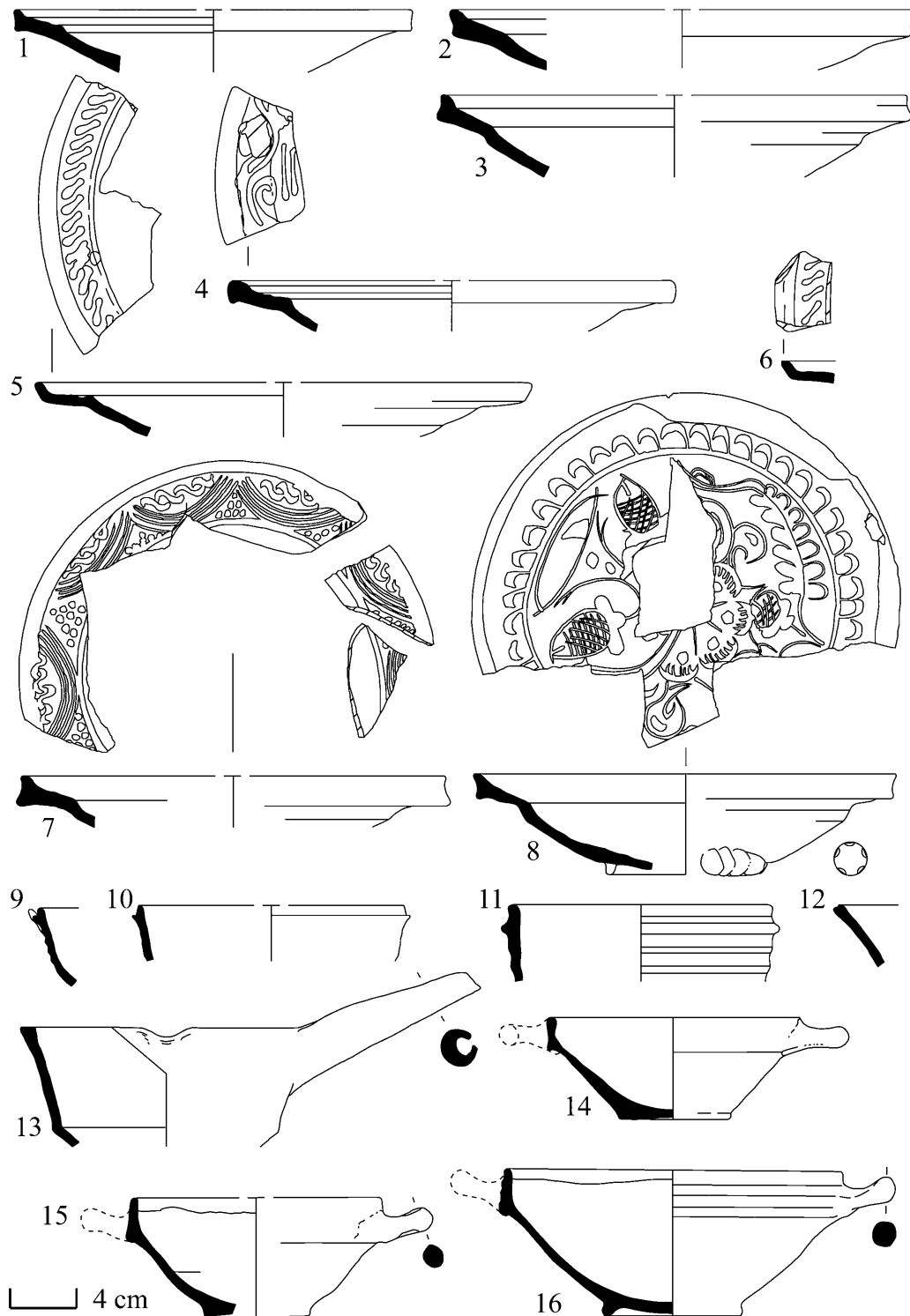
	sherds	MNI	% sherds	% MNI	brokenness
redware	693	116	87.0%	90.6%	6.0
greyware	27	2	3.4%	1.6%	13.5
whiteware	11	1	1.4%	0.8%	11.0
tin-glazed	12	4	1.5%	3.1%	3.0
stoneware	54	5	6.8%	3.9%	10.8
total	797	128	100%	100%	6.4

MNI	redware	greyware	whiteware	tin-glazed	stoneware
tankard					1
plate	8				
porringer	14				
dish				1	
jug	1				4
double-handled cooking pot	35				
frying pan	8				
skillet	5		1		
bowl	3				
basin	2				
large carinated bowl	8				
colander	1				
chamber pot	1				
gallipot	2			1	
unknown	28	2		2	
total	116	2	1	4	5

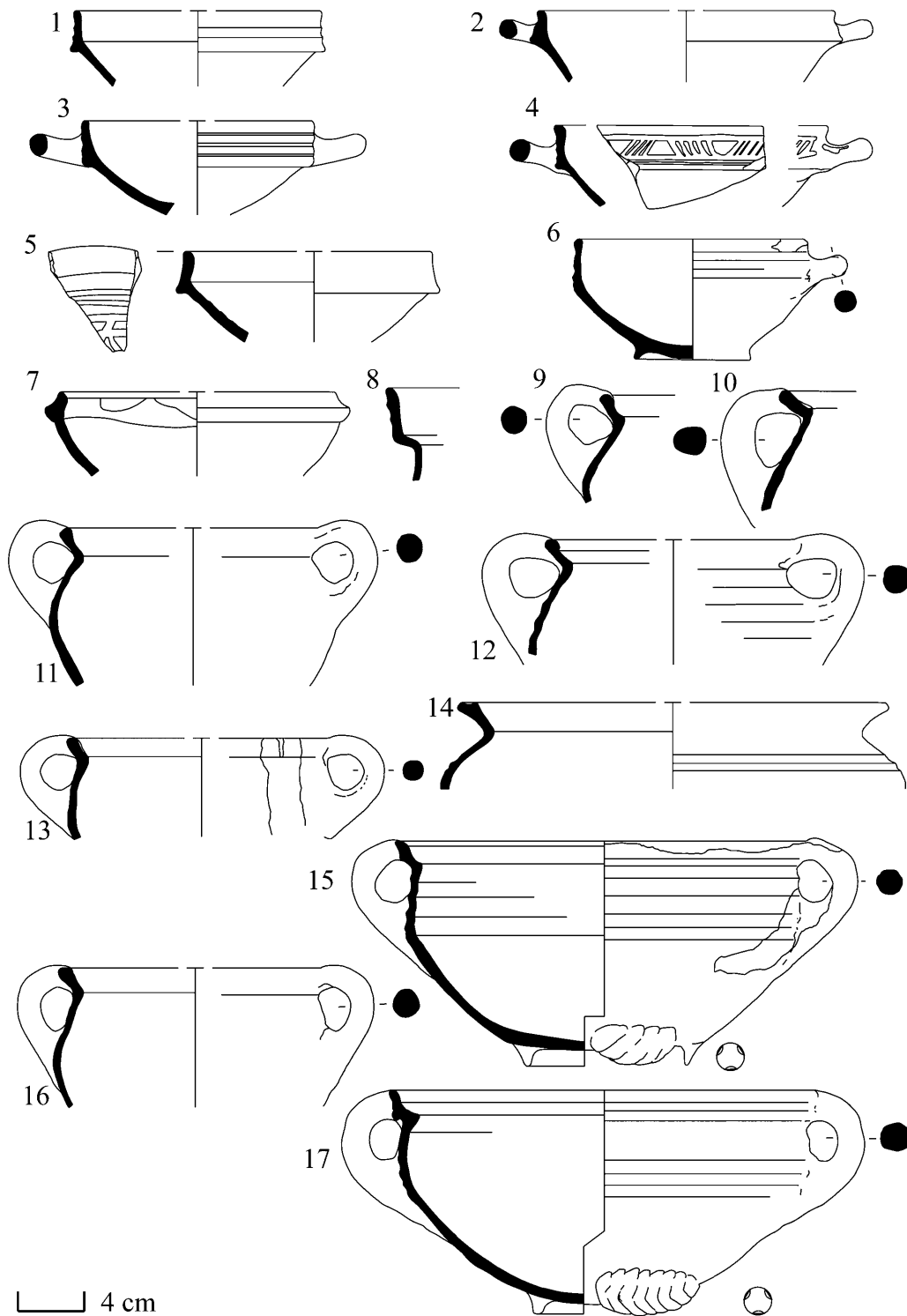
MNI		
food preparation	49	38.3%
kitchen/stock	17	13.3%
tableware	24	18.8%
hygiene	6	4.7%
other/unknown	32	25.0%
total	128	100%



**Figure 7**  
 Chute [04/MIKA/9/10]. Local or regional redware pottery  
 1–8 plates, 9–13 skillets, 14–16 porringers

of the decoration, the eight individuals can be grouped. A first group (Figure 7.1–3) is marked by the mere presence of a colourless lead glaze, whereas a second group (Figure 7.4–6) is characterised by the application of a white slip decoration on the inside. Two different schemes were used, one using a S-scroll, the other

having a more irregular form. In the last group, decoration was incised using the sgraffito technique (Figure 7.7–8). Once again, two patterns can be distinguished. The first has a geometrical motif, while the second consists of acorns and stylised floral motives. The skillet is represented by five individuals, which



**Figure 8**  
 Chute [04/MIKA/9/10]. Local or regional redware pottery  
 1–7 porringers, 8 jug, 9–17 cooking pots

can be divided in two subtypes. A first one contains three individuals and consists of an upright rim with thorn, a ribbed body and a pouring lip (Figure 7.9–11). A second subtype, containing two individuals, has a rim with grooved top, a pouring lip and a sharp transition to a convex base (Figure 7.12–13).

Fourteen individuals are determined as porringers. Several subtypes can be distinguished. A first type has a strap-shaped rim, two horizontal handles and a sometimes slightly concave base or a convex base on a footring (Figure 7.14–16, 8.1–3). The inside is always covered with a colourless lead glaze. Its design reminds

us of the large carinated bowl or *teíl*. Two fragments of this subtype stand out by their decoration with sgraffito and white slip decoration (Figure 8.4–5). A second type is characterised by an upright, ribbed rim, one horizontal handle and a convex base on a footring (Figure 8.6). Finally, a possible third type consists of an inwardly bent rim with a heavy thorn on a hemispherical body (Figure 8.7).

Only one jug was recognised. It is characterised by a ribbed rim on a narrow collar (Figure 8.8). The double-handled cooking pot is, once again, the most dominant form. The 35 individuals are characterised by at least one of the following features: an outstanding collar, two vertical handles, a thumbed base, traces of soot, a colourless lead glaze and small dimensions (Figure 8.9–17, 9.1, 3). One fragment stands out by the presence of two horizontal handles (Figure 9.2). The domination of cooking pots with small volume is more pronounced in this chute. Eighteen individuals (69,2%) have a diameter of 13 to 17 cm. However, with a width/height ratio of 1:0,5 to 1:0,6, the measurable cooking pots in this assemblage are rather low in comparison to chute [04/MIKA/1/2] and the chutes in the upper court (Table 3).

Eight frying pans were found (Figure 9.4–11). They all have a pouring lip, a pinched handle, a thorn on the transition to a convex base and lead glaze on the inside. Based on form and width/height ratio two groups can be distinguished: the typical wide shallow type on a slightly convex base (Figure 9.4–7) and a smaller and deeper type on a flat or slightly concave base (Figure 9.8–11). The rim can either be outstanding and thickened or have a more complex design. The basin is characterised by a Y-shaped section of the rim (De Groote 2008, 284–285) and thumb impressions on an applied clay strip underneath (Figure 9.12, 10.1). A horizontal handle probably belongs to this form type (Figure 9.13). Three bowls were present in this assemblage. Two subtypes can be distinguished. Bowls having a rim with upright lip, hemispherical body and convex base on a footring form the first subtype (Figure 10.2–3). A second type can be seen as a variant and has a base on four thumbs (Figure 10.4). Seven large carinated bowls are of a local or regional origin. They have a strap-shaped rim, wide pouring lip and a convex base on thumbs (Figure 10.5–11). One *teíl* is produced in a different fabric and has a deviant design with a strong sickle-shaped rim (Figure 11.1). This micaceous fabric, originating from the formation of Tegelen, together with the particular design suggest a

provenance from or around Bergen op Zoom. One individual was identified as a colander (Figure 11.2). Its rim with upright lip and hemispherical body reminds us of the bowl type. Another fragment (Figure 11.3) indicates that this form type was equipped with handles. Chamber pots are mostly characterised by the presence of urea residue. Only one individual was present in this assemblage (Figure 11.4). The fragment has a rim with upright lip and one vertical handle. Moreover, the body's centre of gravity is rather low and its base is supported by a footring. Finally, the gallipot is represented by two individuals. The fragments have a simple rim on an outstanding collar with concave-sided body (Figure 11.5–6). A base fragment may also be interpreted as part of a gallipot (Figure 11.7).

### Greyware

The fabric is similar to the one in chute [04/MIKA/1/2]. Two individuals were counted. Unfortunately, their fragmentary state does not allow any form identification.

### Whiteware

The whiteware category is represented by one individual, a skillet (Figure 11.8). It is characterised by an upright rim with thorn, pouring lip, massive handle and colourless lead glaze on the inside. The fabric is soft, cretaceous and has a dense, fine and sandy grain.

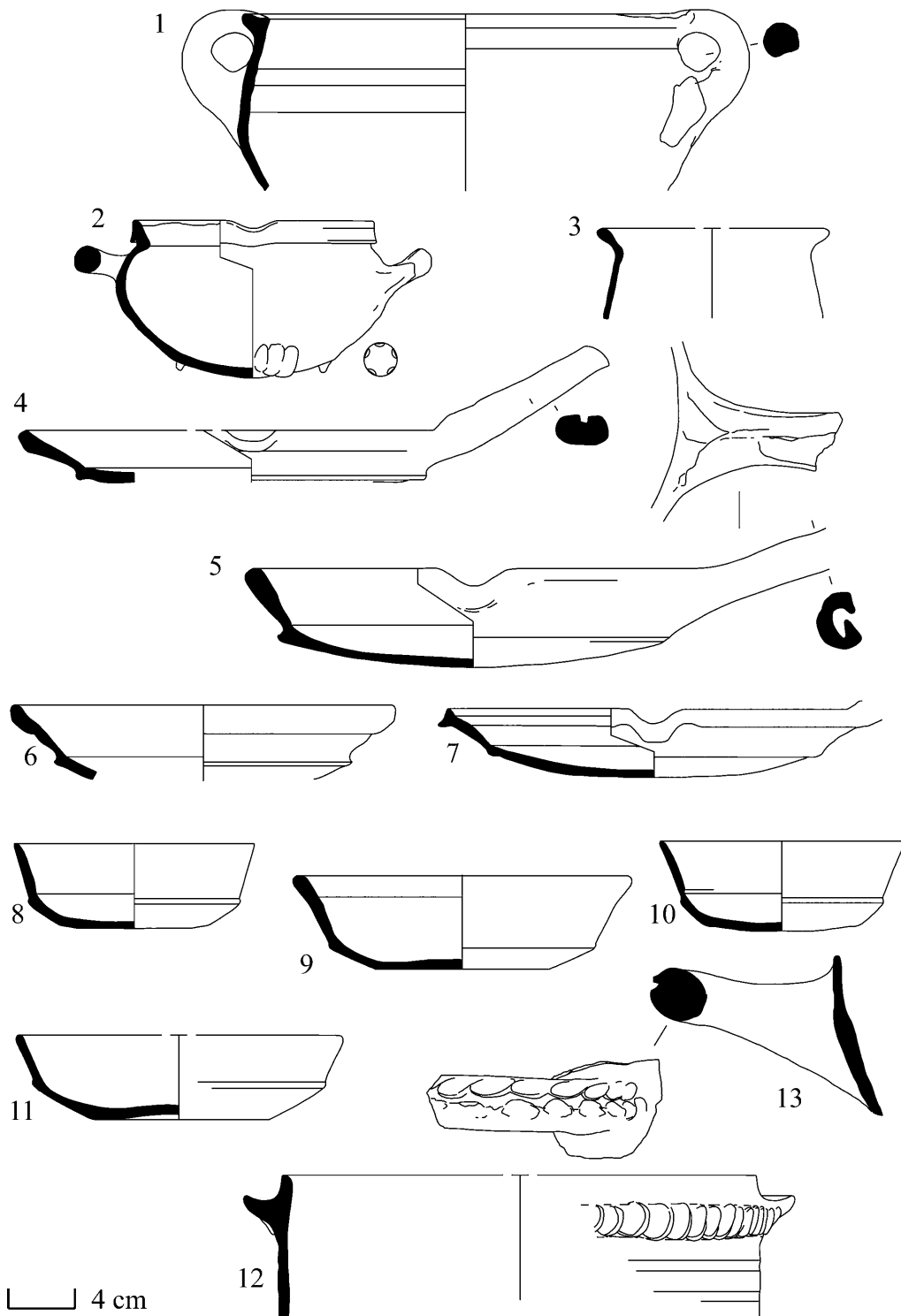
### Tin-glazed ware

The fabric of the tin-glazed ceramics in this chute is soft and has a dense, fine and sandy grain. Larger inclusions, in the form of iron oxides, may occur and colours range from off-white to pink. Only two of the four individuals can be identified with certainty. The first one is a maiolica *albarello*, characterised by a rounded rim, cylindrical body with two thorns and a concave base (Figure 11.9). In the centre, a yellow zigzag line runs along a series of blue 'V's. This combination of yellow and blue is typical of the late 16th century (Vandenberghe 1983, 81; De Clercq *et al* 2007a, 14; Veeckman 2010, 180–181). A parallel has been found in Antwerp (Dumortier 2002, 41, fig 19). A fragment of a dish has an outwardly bent rim with upright lip (Figure 11.10).

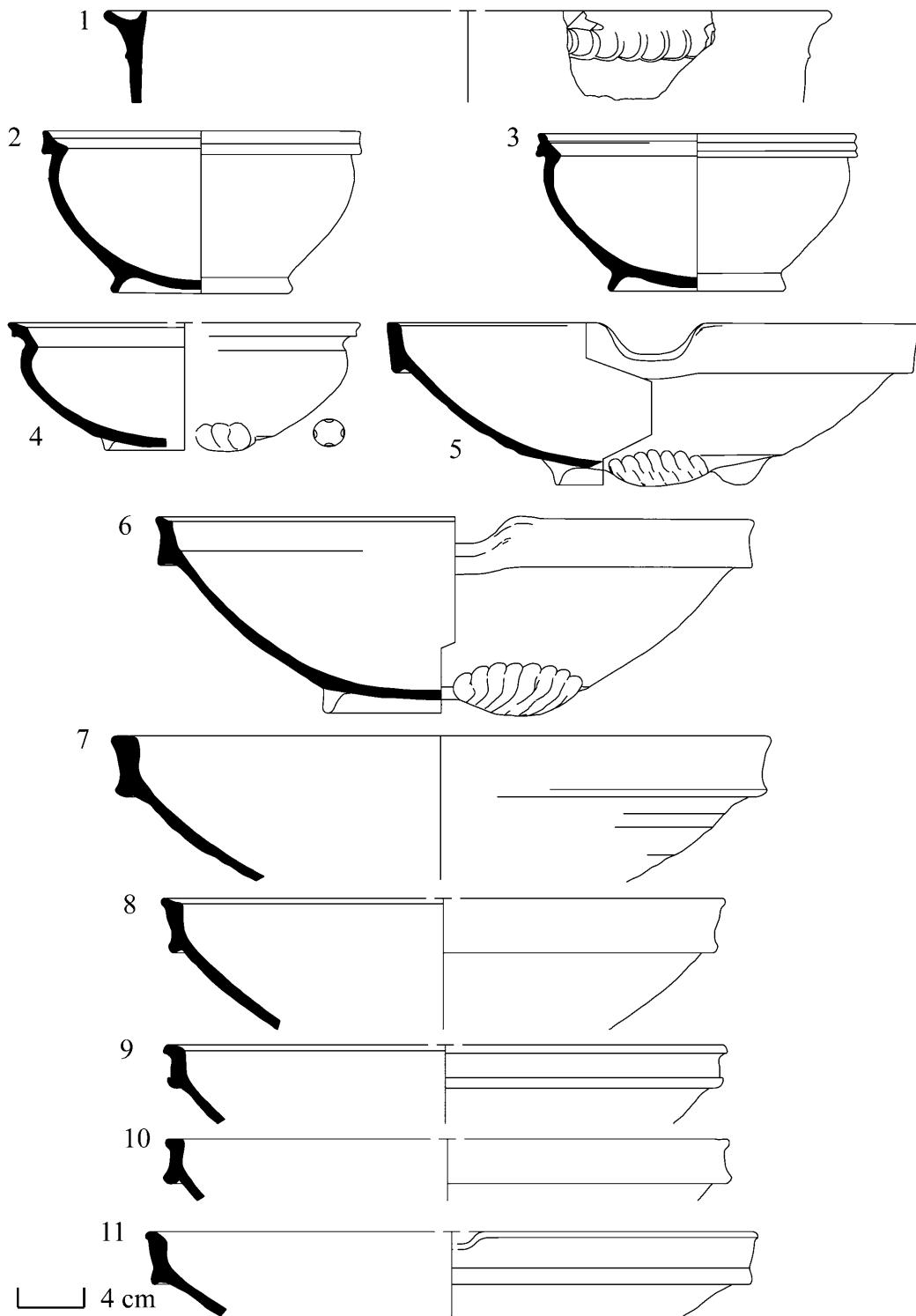
**Table 3** width/height ratio cooking pots (cm)

De Clercq *et al* 2007a, 8

	upper court			[04/MIKA/1/2]		[04/MIKA/9/10]		
width	11	15	20	12	30	15	28	28
height	8	11	15	9.1	22.3	9.4	14.2	14.9
ratio	1:0.73	1:0.73	1:0.75	1:0.76	1:0.74	1:0.63	1:0.51	1:0.53

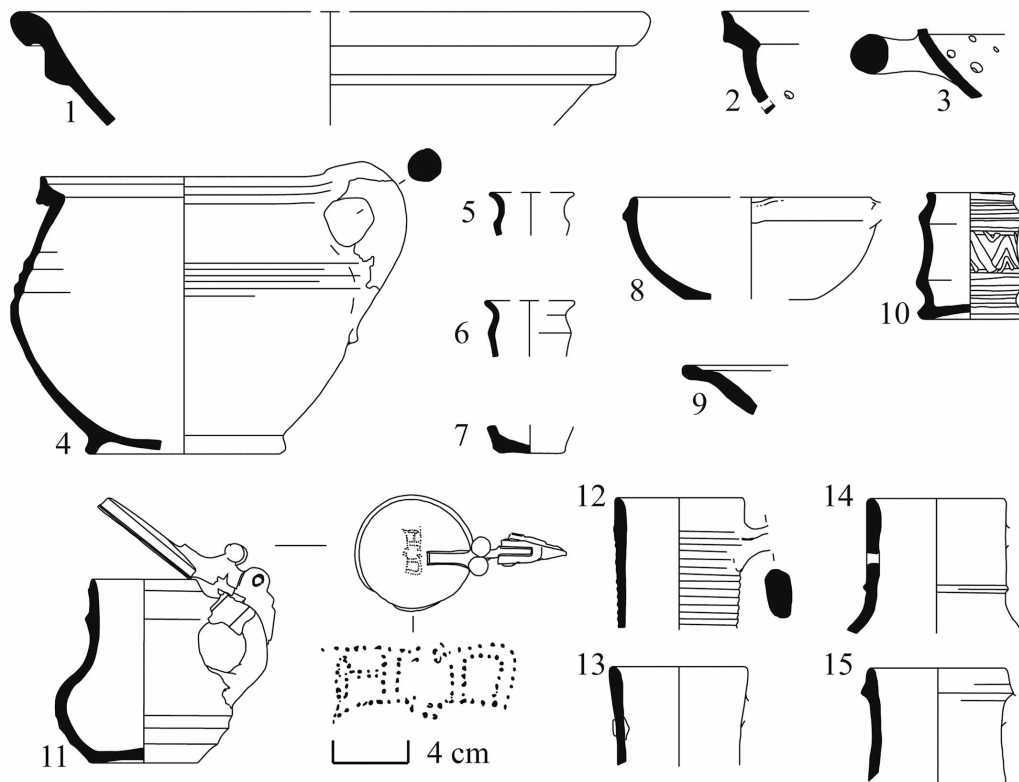


**Figure 9**  
Chute [04/MIKA/9/10]. Local or regional redware pottery  
1–3 cooking pots, 4–11 frying pans, 12–13 basins



**Figure 10**  
 Chute [04/MIKA/9/10]. Local or regional pottery  
 1 basin, 2–4 bowls, 5–11 large carinated bowl



**Figure 11**

Chute [04/MIKA/9/10]

Imported redware pottery **1** large carinated bowlLocal or regional redware pottery **2–3** colanders, **4** chamber pot, **5–7** gallipotsImported whiteware pottery **8** skilletLow Countries maiolica **9** albarello, **10** dishRhenish stoneware **11** tankard, **12–15** jugs

### Stoneware

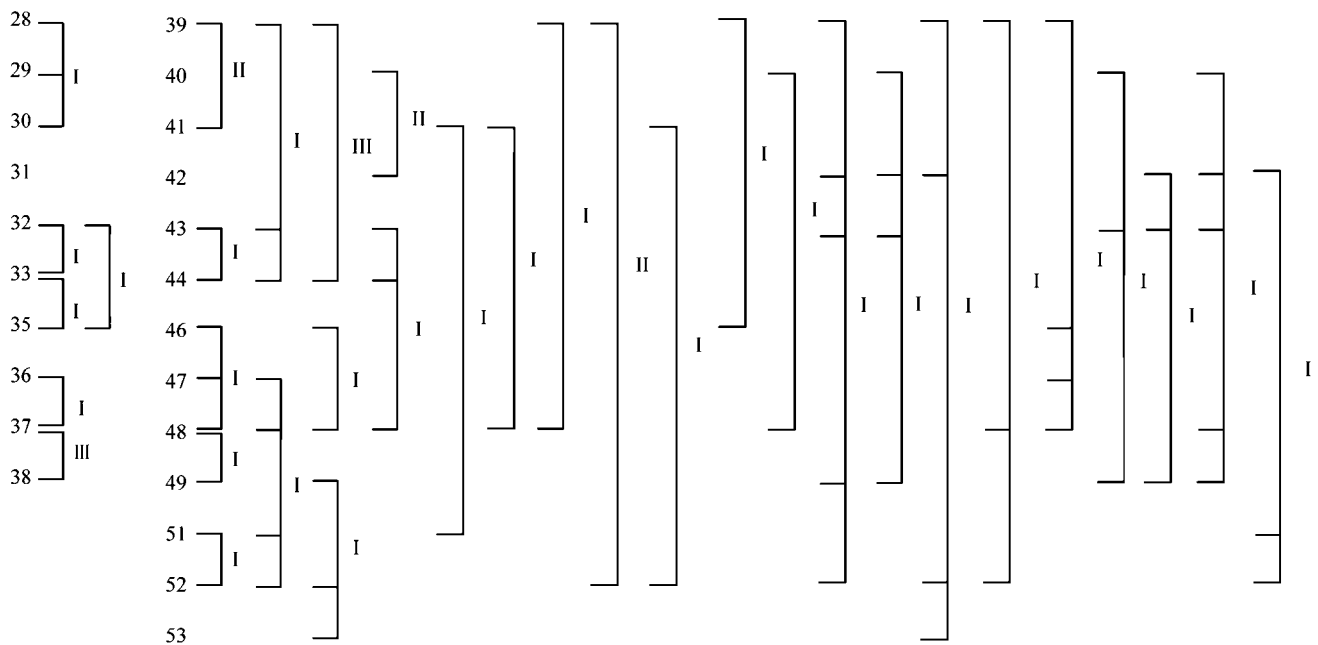
Stoneware is the best represented import category with five individuals. Forms are restricted to table vessels: jugs and a tankard. This tankard has an upright rim, vertical handle, ribbed body and concave base (Figure 11.11). The preservation of its pewter lid which contains a punched inscription with the initials 'AD' is remarkable. Although it is highly hypothetical, this may refer to a canon with the name Adolf d'Hooge who is known to have lived at the castle in 1578–1579, *ie* before its military occupation (Van Vooren 1987; 55, 60). The other individuals are jugs (Figure 11.12–15). Several subtypes can be distinguished. They are typical for the second half of the 16th century or even late 16th century (Hurst *et al* 1986; 200, 202, 205; Gaimster 1997, 224–226). Two jugs were gauged (Figure 11.13–14). One lead gauge is still preserved in place (Figure 11.13).

### Interpretation and discussion

The sampling strategy that was applied during the excavations (*cfr.* sampling strategies and taphonomy)

allows us to reconstruct the taphonomy of the garderobe chutes. By joining pieces of pottery from different levels, one can obtain an insight into the deposition of these ceramics (Figure 12). On the basis of this method, chute [04/MIKA/1/2] may have developed in several stages. However, this development occurred in a short span of time, as will be exemplified further below. In contrast to the former chute, sherds from the upper and lower levels of chute [04/MIKA/9/10] joined to form complete or almost complete vessels. We should admit, however, that the frequency at which fragments from the artificial spits could be combined is rather low, making the above assumption strongly hypothetical.

The local and regional ceramics in chute [04/MIKA/1/2] provide a broad dating in the 16th century. This dating is confirmed by the find of a mark on a pewter bowl that was also found in this chute. It consists of a crowned hammer. This mark was used until ca. 1575 (Klomp 1999, 285; Linders 2010, 28). Imported pottery allows this dating to be refined to the second half of the 16th century. The garderobe chute is characterised by a high degree of refraction and few complete examples, allowing us to presume a secondary deposition. This deposition may have occurred in several stages.



**Figure 12**

The taphonomy of garderobe chute [04/MIKA/1/2] (left) and [04/MIKA/9/10] (right). The Arabic numerals stand for

the artificial spits, the Roman numerals for the frequency at which sherds from these levels could be combined

The proportion of greyware in this assemblage is somewhat surprising as the production of this type of pottery halted during the second half of the 16th century (De Grootte 2008, 299). Furthermore, there is a presence of gallipots and a lack of chamber pots and stoneware drinking vessels, although the latter could be explained by the growing popularity of glass (De Clercq 2007a, 20). The few imported ceramics may indicate a limited supply network. And, finally, the amount of small-sized cooking pots is much higher than average. The material in itself does not justify an in-depth socio-economic interpretation. But compared with the chutes of the upper court, a same basic composition of the ceramic assemblages can be observed (Table 4). For the upper court chutes the whole assemblage was studied, including glass vessels, coins and jettons, metal objects, lead shot, animal remains, fruits and seeds, pollen and charcoal (De Clercq *et al* 2007a). Through the combination of the archaeological information with the historical record about the military occupation of the castle (1578–1590), the reflection of a war context could be assumed.

If the ceramics were consumed in times of war, the large number of small cooking pots ‘may reflect a system in which individuals had to prepare their own meal and had to carry their own personal vessel’ (De Clercq *et al* 2007a, 20). The assumption of a military presence could further be confirmed by the finds of granite cannonballs and building debris. It indicates that the lower court was damaged during the Eighty Years’ War (De Clercq *et al* 2004, 289). Based on the ceramics, the following questions can be asked: did the lower court, in addition to the upper court,

accommodate soldiers or do we merely see the reflection of a kitchen context in a period of civilian occupation?

The locally or regionally produced forms in the other lower court chute [04/MIKA/9/10] provide a general dating in the second half of the 16th century. Several imported items can be dated in the late 16th century, such as some tin-glazed vessels. In contrast to the former chute, the material is characterised by a rather low degree of refraction and many complete shapes. However, as many sherds from the upper layer connect to fragments of the deepest layer, it concerns no primary deposition. This difference may reflect different patterns of refuse disposal.

A comparison of both chutes in the bailey displays both resemblances as differences. Contrasting chute [04/MIKA/1/2], is the presence of a chamber pot and some richly decorated forms in chute [04/MIKA/9/10]. Moreover, a second difference is situated in the presence of small frying pans and the much larger amount of porringers. Finally, the larger share of imports and one individual originating from Bergen op Zoom may indicate a broader supply network. There are, however, also some resemblances as is clear from the large number of small cooking pots and gallipots. If the material is partly civil, the historical sources give two possible options. First it might relate to the period immediately before the military occupation of the castle, but already during the period of the Eighty Years’ War. This hypothesis could be confirmed by the tankard with the initials ‘AD’. Or, secondly, it could point to the civilian interlude after 1590.

We can conclude that both chutes from the lower court have in general a comparable composition and dating as those of the upper court, which allows a

**Table 4** Comparison of form types in the castle's garderobe chutesDe Clercq *et al* 2007a, 8, table 1; 15, table 2

	Chute [A]	Chute [B]	Chute [04/MIKA/1/2]	Chute [04/MIKA/9/10]
double-handled cooking pot	25.0%	14.7%	58.2%	27.3%
skillet	9.8%	2.9%	2.2%	4.7%
frying pan	2.2%		0.7%	6.3%
lid	1.1%			
colander	1.1%	2.9%		0.8%
large carinated bowl	4.3%	20.6%	14.9%	6.3%
bowl	4.3%			2.3%
plate			3.7%	6.3%
porringer	6.5%	8.8%	3.0%	10.9%
dish	4.3%	8.8%		0.8%
chamber pot		8.8%		0.8%
tankard	2.2%	2.9%		0.8%
jug	3.3%	2.9%	1.5%	3.9%
oil jug	5.4%	5.9%		
basin				1.6%
gallipot/albarello	21.7%	11.8%	1.5%	2.3%
bird pot	2.2%	2.9%		
spindle whorl	1.1%			
flowerpot			1.5%	
other/unknown	5.4%	5.9%	12.7%	25.0%

first interpretation of the socio-economic situation during the Eighty Years' War. As similar well-dated assemblages are not yet available in the region (De Clercq *et al* 2007a, 51) they form a chronological and typological anchor point for further research. The general observations made during the analysis of the garderobe chutes of the upper court and the connected interpretations seem also to apply to the lower court chutes.

As the established economic networks broke down during this period of war, the expression of status and identity through the consumption of food and material objects must have been difficult. However, several indications of elite consumption were found (De Clercq *et al* 2007a, 52). This is combined with evidence of a military presence, such as lead shot and some specific ceramic indications. Gallipots may have been used by a surgeon, doctor or pharmacist to treat wounded soldiers and the large number of small cooking pots may indicate the consumption of food in individual portions, what is expected in a military context (De Clercq *et al* 2007a, 20). Finally, the interpretation is in line with the historical evidence. In contrast to the original elite occupation phases, there was no need to empty both chutes in times of war.

## Acknowledgements

Our gratitude goes out to the 'Agency for Innovation by Science and Technology in Flanders (IWT)' and to Dr Davy Herremans (Ghent University) and Jan Moens (Flemish Heritage Institute) for their contribution to this article.

## References

- Baeten, J Romanus, K Degryse, P De Clercq, W Poelman, H Verbeke, K Luypaerts, A Walton, M Jacobs, P De Vos, D Waelkens, M, 2010, 'Application of a multi-analytical toolset to a 16th century ointment: identification as lead plaster mixed with beeswax', *Microchemical Journal*, 95, 227–234.
- De Clercq, W, Pype, P, Mortier, S, 2004, 'Archeologisch onderzoek in Middelburg-in-Vlaanderen. Drie jaar opgravingen op het opper- en neerhof van het kasteel van Pieter Bladelin', *Heemkundige kring het Ambacht Maldegem*, 10, 272–295.
- De Clercq, W, Pype, P, Mortier, S, 2005, 'Archeologisch onderzoek in Middelburg-in-Vlaanderen (O.VI.). Een bilan na drie jaar onderzoek op het opper- en neerhof van het kasteel van Pieter Bladelin', *Archaeologia Mediaevalis*, 28, 93–101.
- De Clercq, W, Caluwé, D, Cooremans, B, De Buyser, F, De Groote, K, Deforce, K, Ervynck, A, Lentacker, A, Mortier, S, Pype, P, Vandenberghe, S, Van Neer, W, and Wouters, H, 2007a, 'Living in times of war: waste of c. 1600 from two garderobe chutes in the castle of Middelburg-in-Flanders (Belgium)', *Post-Medieval Archaeology*, 41/1, 1–63.
- De Clercq, W, Dumolyn, J and Haemers, J, 2007b, 'Vivre Noblement: Material Culture and Elite Identity in Late Medieval Flanders', *Journal of Interdisciplinary History*, 38/1, 1–31.
- De Groote, K, 2008, *Middeleeuws aardewerk in Vlaanderen. Techniek, typologie, chronologie en evolutie van het gebruiksgoed in de regio Oudenaarde in de volle en late middeleeuwen (10de–16de eeuw)*, Brussels, Vlaams instituut voor het onroerend erfgoed.

- Dumortier, C, 2002, *Céramique de la Renaissance à Anvers. De Venise à Delft*, Brussels, Éditions Racine.
- Gaimster, D, 1997, *German Stoneware 1200–1900. Archaeology and cultural history*, London, British Museum Press.
- Groeneweg, G, 1992, *Bergen op Zooms aardewerk. Vormgeving en decoratie van gebruiks-aardewerk gedurende 600 jaar pottenbakkersnijverheid in Bergen op Zoom*, Bergen op Zoom, Gemeente Bergen op Zoom.
- Haemers, J, 2005, 'Middelburg na Pieter Bladelin. De juridische en militaire strijd tussen vorst, stad en adel om sociale erkenning en politieke macht (1472–1492)', *Handelingen van het Genootschap voor Geschiedenis*, 142/3–4, 215–265.
- Hurst, J G, Neal, D S, van Beuningen, H J E, 1986, *Pottery produced and traded in north-west Europe 1350–1650*, Rotterdam, Stichting Het Nederlands Gebruiksvoorwerp.
- Klomp, M, 1999, 'Metalen voorwerpen', in M Bartels (ed.), *Steden in Scherven. Vondsten uit beerputten in Deventer, Dordrecht, Nijmegen en Tiel (1250–1900)* 1, Zwolle en Amersfoort, Stichting Promotie Archeologie en Rijksdienst voor het Oudheidkundig Bodemonderzoek.
- Linders, L, 2010, *Invloed van het tingehalte op het corrosiegedrag van archeologische bronzen*, MA Thesis, Artesis Hogeschool Antwerpen (unpublished).
- Martens, M, 1994, *Pieter Bladelin ca. 1410–1472 en Middelburg in Vlaanderen 1444–1994*, Maldegem, Perka.
- Martens, M, 1997, 'Het kasteel van Middelburg', *Heemkundige kring het Ambacht Maldegem*, 3, 175–189.
- Orton, C, Tyers, P and Vince, A, 1993, *Pottery in Archaeology*, Cambridge, Cambridge University Press.
- Parker, G, 2004, *The Army of Flanders and the Spanish Road, 1567–1659: The logistics of Spanish Victory and Defeat in the Low Countries' Wars*, Cambridge, Cambridge University Press.
- Vandenberghe, S, 1983, 'Archeologisch onderzoek van een post-middeleeuwse beerput op de binnenkoer van het Hof van Watervliet', in S. Vandenberghe (ed), *Het Hof van Watervliet in de Oude Burg te Brugge*, Brugge, Marc Vandewiele.
- Van Eenhooge, D, 1999, 'Grafelijk afval. Onderzoek van een beerput uit het Hof van Hoogstraten', *Archeologie in Vlaanderen*, 5, 263–301.
- Van Vooren, G A C, 1987, 'Middelburg in Vlaanderen tijdens de woelige jaren 1578–1583', in A Bauwens (ed), *Opstand en verval. Aspecten van het dagelijkse leven in het Brugse tijdens de laatste decennia van de 16de eeuw*, Brugge, Jempie Herrebout.
- Veeckman, J, 2010, 'Sherds from a church. Maiolica production waste from the Augustinian friary in Antwerp', in K De Groote, D Tys and M Pieters (eds), *Exchanging Medieval Material Culture. Studies on archaeology and history presented to Frans Verhaeghe*, Relicta Monografieën 4, Brussels, Vlaams Instituut voor het Onroerend Erfgoed.
- Verhaeghe, F, 1997, 'Middeleeuwse keramiek in Vlaanderen: productie en consumptie', *Vlaanderen*, 46.3, 13–29.
- Vershelde, K, 1867, *Geschiedenis van Middelburg in Vlaanderen*, Brugge, Edward Gailliard en Co.

## Résumé

En 1448, la fondation de la nouvelle cité de Middelbourg en Flandre est intervenue dans une région déjà très urbanisée aux alentours d'Aardenburg, de Damme et de Sluis. L'élan dynamique caractéristique de cette cité a vite pris fin. Avec les troubles religieux qui éclatent dans la seconde moitié du 16<sup>ème</sup> siècle, la cité s'est retrouvée en première ligne de la guerre opposant l'Espagne aux Pays-Bas. Cet article examine les céramiques retrouvées en 2004, lors des fouilles archéologiques de deux conduits de garde-robe de la cour inférieure du château. L'analyse de ces assemblages soulève des questions relatives à la 'consommation' hors-normes de céramiques, en dehors des pratiques normales du marché et du contrôle politique.

## Zusammenfassung

1448 erlebte die bereits stark urbanisierte Region um Aardenburg, Damme und Sluis die Gründung einer neuen Stadt: Middelburg-in-Flandern. Die Blütezeit des Beginns, die diese Stadt kennzeichnete, endete schon bald. Mit dem Ausbruch der Religionskriege in der zweiten Hälfte des 16. Jahrhunderts lag die Stadt an der vordersten Front des spanisch-niederländischen Krieges. Dieser Artikel untersucht die Töpferwaren aus zwei Aborterker-Fallrinnen aus dem unteren Hof des Schlosses, die während der archäologischen Ausgrabungen von 2004 ans Licht kamen. Die Analyse dieser Assemblagen wirft einige Fragen zum Verbrauch von Keramik außerhalb normaler Marktstruktur und politischer Kontrolle auf.