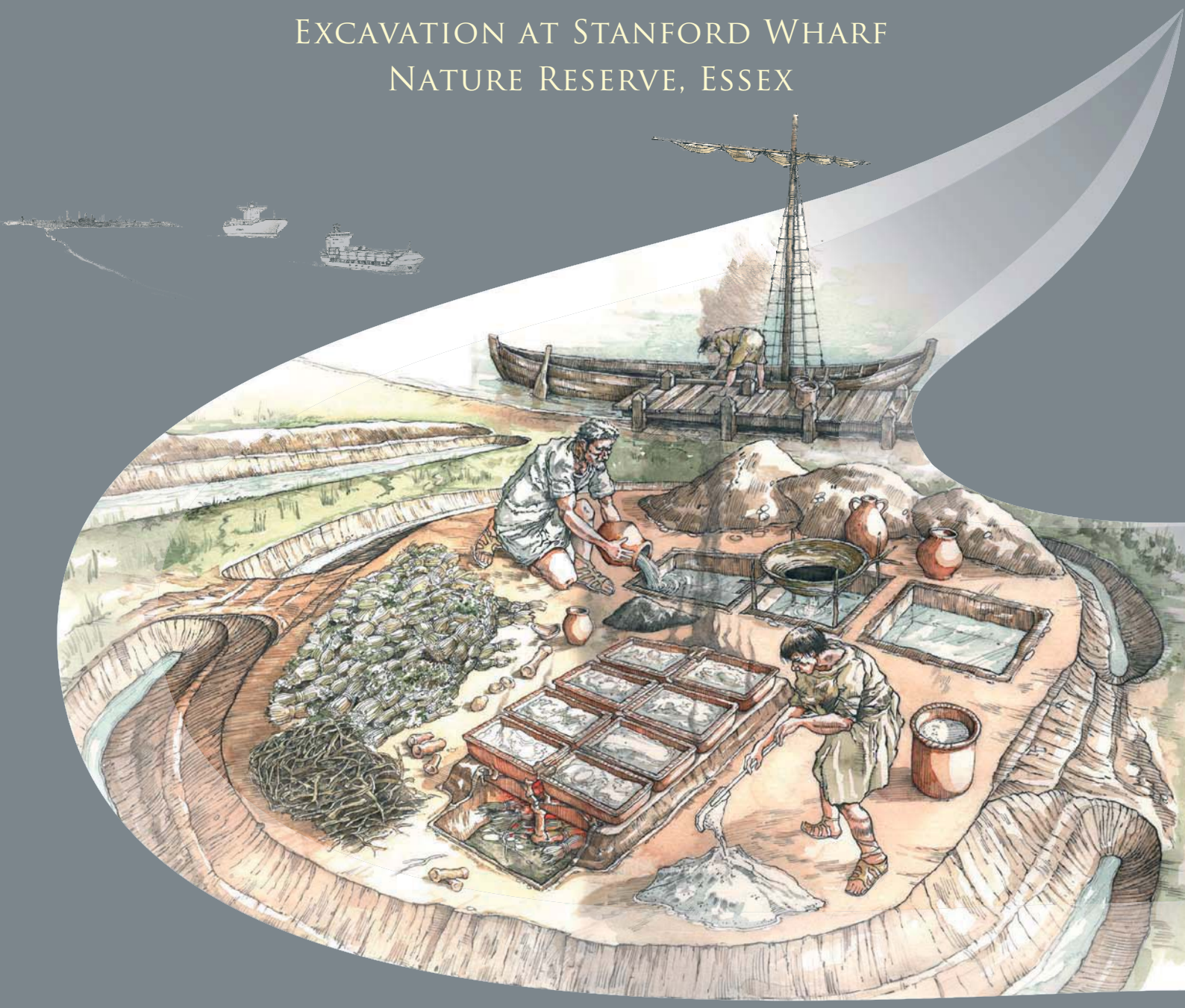
London Gateway

Iron Age and Roman Salt Making in the Thames Estuary

Excavation at Stanford Wharf Nature Reserve, Essex



Specialist Report 2

Middle Iron Age and Roman Pottery

by Edward Biddulph and Dan Stansbie,
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Introduction

A little over 14,500 sherds, weighing almost 210 kg, were recovered from Stanford Wharf Nature Reserve. Over 90% of the pottery by sherd count was recovered from Area A. Just 8% was collected from Area B, while Areas B North, C, D and the watching brief area contained minor quantities only (Table 2.1).

Roman-period fabrics were identified using the series devised by the Essex County Council Field Archaeology Unit (ECC FAU), ensuring compatibility with other major Essex sites. Quantification of fabrics encountered at the site is presented in Table 2.2. Detailed fabric descriptions have not been provided, but where possible reference has been made to the National Roman Fabric Reference Collection handbook (NRFRC; Tomber and Dore 1998), where comprehensive descriptions can be found. Fabric descriptions may also be found in the Chelmsford corpus (Going 1987). Form identification follows Going's Chelmsford typology (1987, 13-54), supplemented by the *Camulodunum* series (Hawkes and Hull 1947; Hull 1967; Bidwell and Croom 1999, 468-487). Throughout the report, occasional reference has been made to regional and international corpora, such as Young's Oxfordshire series (1977), Dragendorff's (and other's) samian typology (cf. Webster 1996), and Dressel's amphora types (cf Peacock and Williams 1986).

Within each context group, the pottery was sorted first into fabrics and then into record groups or 'sherd-families' – collections of sherds sharing certain characteristics, such as rims belonging to the same vessel or pieces with particular decoration, or simply a mass of undiagnostic body sherds. Each sherd-family was quantified by weight in grammes and sherd count. Vessels were quantified by minimum vessel count (MV), based on a count of rims, and estimated vessel equivalents (EVE), which was calculated from percentages of surviving rims (thus 100% of a vessel's rim equals 1 EVE, 50% equals 0.5 EVE, and so on).

The Iron Age pottery was recorded in a similar way to the Roman-period pottery, except that forms were given basic descriptions and paralleled where possible to types identified at the Iron Age sites of Little Waltham, Essex (Drury 1978), and

Farningham Hill, Kent (Couldrey 1984). During recording, record groups were assigned to fabrics based on principal and subsidiary inclusion types and coarseness. For the purpose of analysis, these codes have been subsumed into broader categories based on principal inclusion type: sand, glauconitic sand, flint and shell.

Fabrics

(NRFRC codes and Chelmsford fabric numbers given in parentheses after entries.)

A Amphorae

ABAET	South Spanish amphora fabric (BAT AM 1-3; Chelmsford 55)

B Black-burnished wares

BB	Unspecified wheel-thrown black-burnished wares
BB1	Dorset black-burnished ware (DOR BB 1; Chelmsford 40)
BB2	Colchester/Kent wheel-thrown black-burnished ware (COL/CLI/COO BB 2; Chelmsford 41)

C Calcareous/shelly wares

ESH	Early shell-tempered ware (Chelmsford 50)
LSH	Late shell-tempered ware (HAR/ROB SH; Chelmsford 51)

E Late Iron Age/early Roman 'Belgic' wares

GROG	Grog-tempered ware (SOB GT; Chelmsford 53)
GROGC	Coarse grog-tempered ware

F Fine wares

CEP	Céramique à l'éponge (marbled ware) (EPO MA; Chelmsford 22)
CGRHN	Central Gaulish Rhenish ware (KOL CC; Chelmsford 8)
COLC	Colchester colour-coated ware (COL CC 2; Chelmsford 1)
EGRHN	East Gaulish Rhenish ware (MOS BS; Chelmsford 9)
HAX	Hadham oxidised ware (HAD OX; Chelmsford 4)
MSR	Miscellaneous slipped red ware
NVC	Nene Valley colour-coated ware (LNV CC; Chelmsford 2)
OXRC	Oxford red colour-coated ware (OXF RC; Chelmsford 3)
UCC	Unspecified colour-coated wares

M Mortaria

BUFM	Unspecified buff ware mortarium

COLBM	Colchester buff/white ware mortarium (COL WH; Chelmsford 27)
HAWOM	Hadham white-slipped oxidised ware mortarium
HAXM	Hadham oxidised ware mortarium
MWSRSM	Miscellaneous white- or cream-slipped sandy red ware mortarium
NVCM	Nene Valley colour-coated ware mortarium
NVM	Nene Valley white ware mortarium
OXRCM	Nene Valley red colour-coated ware mortarium
OXWM	Oxford white ware mortarium
SOLM	Soller white ware mortarium (SOL WH)

O Oxidised wares

BUF	Unspecified buff/oxidised/white wares (Chelmsford 31)
COLB	Colchester buff/white ware (COL WH; Chelmsford 27)
NKO	North Kent oxidised ware
PATCH	Patch Grove grog-tempered ware (PAT GT)
PORD	Tilford/Overwey 'Portchester D' ware (OVW WH)
RED	Unspecified oxidised wares (Chelmsford 21)

P Prehistoric (Iron Age) fabrics

FLINT	Flint-tempered fabrics
FLSAND	Flint-and-sand-tempered fabrics
GLAUC	Glauconitic fabrics
SAND	Sandy fabrics
MICW	Miscellaneous Iron Age coarse wares

Q White-slipped wares

HAWG	Hadham white-slipped grey ware
HAWO	Hadham white-slipped oxidised ware (Chelmsford 14)
MWSGF	Miscellaneous white-slipped fine grey ware
MWSGS	Miscellaneous white-slipped sandy grey ware
MWSRF	Miscellaneous fine white- or cream-slipped red-buff wares
MWSRS	Miscellaneous white- or cream-slipped sandy red wares (Chelmsford 15)
NKWO	North Kent white-slipped oxidised ware
OXSW	Oxford white-slipped red ware (OXF WS)

R Reduced wares

ALH	Alice Holt reduced ware (ALH RE; Chelmsford 43)
BSW	Black-surfaced wares (Chelmsford 45)
GRF	Fine grey wares (Chelmsford 39)
GRS	Sandy grey wares (Chelmsford 47)
HAB	Hadham black-surfaced ware (HAD RE 2; Chelmsford 35)

HAR	Hadham grey ware (HAD RE 1; Chelmsford 36)
HGG	Highgate Wood C fine grey ware (HGW RE C; Chelmsford 37)
LGROG	Late Roman grog-tempered ware
MEK	Mayen coarse ware (MAY CO; Chelmsford 54)
NKG	North Kent grey ware (UPC FR; Chelmsford 32)
NVG	Nene Valley grey ware
RET	Rettendon-type wares (Chelmsford 48)
STOR	Storage jar fabrics (Chelmsford 44)
VRGR	Verulamium-region grey ware

S Samian wares

CGSW	Central Gaulish samian ware, mainly Lezoux (LEZ SA 2)
EGSW	East Gaulish samian ware, various sources
SGSW	South Gaulish samian ware, mainly La Graufesenque (LGF SA)

W White wares

NFWW	New Forest white ware (NFO WH)
NGWF	North Gaulish white fine ware (NOG WH 1-2)
NVP	Nene Valley parchment ware (LNV PA; Chelmsford 24)
OXP	Oxford parchment ware (OXF PA)
OXW	Oxford white ware (OX WH; Chelmsford 25)
UWW	Unspecified white wares
VRW	Verulamium-region white ware (VER WH; Chelmsford 26)

Z Other fabrics

UPOT	Unidentified fabrics

Pottery supply and assemblage composition

This section is based on analysis of so-called ‘key groups’. Every individual database entry (usually a fabric group or an individual vessel, or, less typically, an intrinsically interesting sherd) was assigned an earliest and latest date. An earliest and latest date was then assigned to each context on the basis of the range of individual pottery dates. Key groups are those whose overall context-group dates match the contexts’ stratigraphic phase. For example, the pottery from context 1531 (phased to late Roman 2 (LR2)), has a ceramic date of AD 360-400+, and therefore qualifies as a key group. Unless specified otherwise, all form codes (for example G19) are from Going’s Chelmsford typology (Going 1987).

Middle Iron Age (c 400-100 BC)

Just 1% of the pottery assemblage by EVE belonged to contexts dated both ceramically and stratigraphically to the middle Iron Age (Table 2.3). All the pottery was recovered from Area A. The Middle Iron Age group was dominated by glauconitic fabrics (GLAUC), which took a 70% share of the group by EVE. Glauconitic pottery, made with a distinctive fabric tempered with rounded dark grains, was found in quantity at Little Waltham, north of Chelmsford. Petrological examination of fabric samples from that site suggested that the source of the pottery was the same as that for similar Kentish material (Peacock and Williams 1978, 58), whose origin is concentrated in the Medway valley (Pollard 1988, 31). This does not rule out an Essex source for Stanford Wharf's pottery, and indeed glauconite also occurs as greensand in the local Thanet Sands, which lie west of Stanford-le-Hope. Given this geology, and the dominance of glauconitic pottery at Stanford Wharf, a local, rather than Medway, source is likely. Forms conform to types recorded at Little Waltham – jars with everted rims and short pedestal bases (Drury 1978, type 13), jars with an S-profile (for example Drury 1978, types 11 and 14), and jars with vertical rims (Drury 1978, type 4). Necked jars and bead-rimmed jars were also recorded. Flint-tempered pottery (FLINT) accounted for 15% of the phase assemblage. As with the glauconitic pottery, the flint is likely to have been sourced locally; the Bullhead Bed, for instance, which is characterised by rounded flint nodules in clay, lies at the base of the Thanet Sands. Forms were restricted to bead-rimmed jars (as Drury 1978, type 5). Sand-tempered pottery contributed 13% of the phase assemblage. The fabric shared a number of forms with glauconitic pottery, namely S-profile jars and jars with vertical or everted rims. Minor quantities of miscellaneous coarse ware (MICW) and shelly fabrics (ESH, SHELL) were recorded. A small amount of intrusive Roman-period pottery was noted.

Early Roman (c AD 43-120/30)

Two per cent of the Stanford Wharf assemblage was recovered from contexts assigned to the early Roman period on the basis of the ceramics and stratigraphy. Area A contained 10% of the early Roman assemblage (Table 2.4). This belonged almost exclusively to a single group, 6530, which was dated to the first quarter of the 2nd century AD on the basis of a white-slipped fabric (HAWG) from the Hadham region

in east Hertfordshire, with the date supported by a poppyhead beaker (type H6) and high-shouldered necked jar (type G19), both in fine grey ware (GRF). A jar in black-surfaced ware (BSW) and a residual jar in glauconitic ware were also recovered from the context. A globular beaker (type H1) was collected from a context assigned a broader early Roman date. The early 2nd century also saw the arrival of Patch Grove grog-tempered ware from west Kent (Pollard 1988, 39); this is an occasional visitor to Essex, whose distribution rarely extends beyond west and north Kent and the Medway valley.

Most early Roman groups were recovered from Area B (Table 2.5). In contrast to Area A, all the pottery fits within the second half of the 1st century AD. The dominant fabric is early shell-tempered ware (ESH), which accounted for 27% of the Area B early Roman group by EVE. Forms were confined to lid-seated jars (type G5.1). Production of shelly-ware lid-seated jars is attested at Mucking (Rodwell 1973, 22-24) and Gun Hill, West Tilbury (Drury and Rodwell 1973, 82), both a short distance from Stanford Wharf. Fine grey ware (GRF) made a significant contribution at 22% by EVE. A poppyhead beaker (type H6), butt-beaker (type H7), and jars unidentified to type were recorded. Black-surfaced ware (BSW) was another important fabric (17% by EVE). It was available, like ESH, as lid-seated jars only, and a local origin is again likely (Rodwell (1973, 24) notes that such jars in sandy fabrics with little or no shell were fired in Mucking kiln VI). More lid-seated jars were seen in sandy grey ware (GRS), although other forms were available. These included a jar with bifid rim (type G28), a type that was produced at Mucking from the late 2nd century onwards (Rodwell 1973, 26), although production from *c* AD 125 is known at Dagenham (Biddulph 2010, 127). Its presence at Stanford Wharf suggests that the type has earlier origins still. Another form in sandy grey ware was a platter (type A2). More lid-seated jars were seen in sandy oxidised wares (RED), which was additionally available as bead-rimmed jars (type G3) and high-shouldered necked jars (type G20). A large narrow-necked storage jar (STOR, type G36) was another probable local product.

Pottery arrived from outside the region, the most important source in terms of quantity by EVE (10%) being North Kent (NKG). Potters there were responsible for a platter (type A4) and a necked jar (type G17). Fine grey ware arrived from Highgate Wood (HGG), while sandy white ware (VRW) was a product of the Verulamium region. Buff ware reached the site from Colchester, although no form was recognised.

A footring in South Gaulish samian ware belonged to a Drag. 18R or 15/17R platter.

Middle Roman (c AD 120/30-250)

Very few middle Roman 'key groups' were identified; those that were amount to less than 1% of the entire Iron Age and Roman pottery assemblage by EVE (Table 2.6). And indeed, the middle Roman assemblage included a high proportion of residual middle Iron Age forms, notably an S-profiled jar in a glauconitic fabric. Nevertheless, the presence of bead-rimmed dishes (type B2/B4) in black-burnished ware (BB) and sandy grey ware (GRS), as well as a dish with a groove below the rim (type B3) in sandy grey ware, indicates that pottery reached the site in the middle Roman period, probably largely from Mucking where production of those dish forms and fabrics are attested (Rodwell 1973, 20).

Late Roman (c AD 250-410)

Phase LR1

Late Roman pottery recovered from contexts assigned to late Roman phase 1 (LR1) accounted for almost 2% of the entire ceramic assemblage by EVE (Table 2.7). Overall, the pottery spans the late Roman period, but the emphasis is on the earlier part of the period, *c* AD 250-320, to which 38% of the phase group belongs. Just 17% necessarily dates after AD 350.

The phase group is dominated by two fabrics, sandy grey ware (GRS) and black-surfaced ware (BSW). The former took a share within the group of 33% by EVE, and was available as plain-rimmed, groove-rimmed, incipient-bead-and-flanged, and dropped flanged dishes (types B1, B3, B5 and B6 respectively), and necked, bifid-rimmed and small storage jars (type G24, G28 and G42 respectively). A wide-mouthed jar or bowl-jar (type E5) was also recorded. All these types were manufactured at Mucking. An almost identical range of forms was seen in black-surfaced ware, which contributed 44% by EVE; the same dish and jar forms were represented, but the fabric lacked the bowl-jar. A beaker, though unidentified to type, was also noted. Fine grey ware was another important category. Dishes (types B1, B2 and B6) were recorded, along with oval-bodied necked jar type G24 and the ledge-rimmed bowl-jar type E2, another Mucking type (Rodwell 1973, 24). A bead-rimmed dish (type B4) in a sandy oxidised fabric may also have a Mucking origin.

Although contributing small quantities, pottery from a number of regional sources were noted. The Hadham industry was responsible for grey ware (HAR) and fine oxidised ware (HAX), and late shell-tempered ware (LSH) arrived from the Harrold kilns in Bedfordshire or sites in the eastern region. Nene Valley colour-coated ware (NVC) had already been introduced to the site before AD 250 (Table 2.6), but reached the site in greater quantity after that date. Two beakers were represented: a folded beaker with scale decoration (type H32) and a globular, funnel-necked beaker (type H42). A white ware mortarium (too little survived to identify the form) arrived from Oxford. North Kent grey ware (NKG) is likely to have been residual by this phase. Flint-tempered reduced fabric, Rettendon ware (RET) was recorded in this phases. Kilns producing the fabric are known in east central Essex, including Chelmsford and Rettendon itself (Going 1987, 10).

Pottery with continental origins comprised amphorae from southern Spain and samian from central and eastern Gaul. The amphorae fabric is consistent with Dressel 20 olive oil container (ABAET). The Central Gaulish samian (CGSW) included a flanged hemispherical bowl (Drag. 38) and a footring from a deep Drag. 36 flanged dish. The East Gaulish material (EGSW) could not be identified to form. All these continental wares are likely to have been residual at the time of deposition, as importation from their sources ceased by during the first half of the 3rd century.

Phase LR2

More pottery from context-groups dated on the basis of ceramics to *c* AD 250-350 was assigned to late Roman phase 2 (LR2); the pottery took a 5% share of the entire assemblage (Table 2.8). The LR2 pottery was similar to that of LR1 in terms of composition, the two assemblages being broadly contemporaneous. Thus, sandy grey ware (GRS) and black-surfaced ware (BSW) dominated. The sandy grey wares, which accounted for 40% of the phase group by EVE, were recorded as dishes and jars, and to a lesser extent bowl-jars. The range of dishes encountered in phase LR1 – types B1, B3, B5 and B6 – was seen here, along with bead-rimmed dishes B2 and B4. In terms of jars, the standard G24, G28 and G42 types were joined by a black-burnished-style cooking-pot (G9), narrow-necked jar or flask G40, and storage jar G45. The E5 bowl-jar was recorded. Black-surfaced wares contributed a similar range of types – B1 and B6 dishes, G24 and G28 jars, and E2 bowl-jar – that were recorded in the fabric in the phase LR1 key groups, and these were joined by B2/B4 dishes and the G40 narrow-

necked jar or flask. Fine grey ware contributed a smaller, though still significant, proportion (12% by EVE), but a wider range of forms. These included B1, B4 and B6 dishes, E5 bowl-jars, and a carinated bowl, C12. Jars and beakers were also represented, but these could not be identified to type. The B2 dish, and G24 and G40 jars were available in sandy oxidised ware (RED). Most, if not all, the pottery in GRS, BSW, GRF and RED fabrics was of local origin, with Mucking probably being the main source.

Pottery from regional sources took a larger share in this phase compared with the early Roman and LR1 phases. Colchester potters supplied buff ware (COLB) and colour-coated ware (COLC). A bead-rimmed flagon (type J4) was recorded in the former. A white-ware vessel from the New Forest (NFWW) present in the assemblage – not enough of it survived to identify the type – represents a rare arrival in Essex, although New Forest grey ware is known at Chelmsford (Going 1987, 9). North Kent grey ware was recorded, though is likely to be residual; the Patch Grove ware from West Kent may be too, although storage jars, to which the recorded sherds belong, continued to be produced into the 3rd century (Pollard 1988, 212). Nene Valley colour-coated ware (NVC) was relatively well represented at 5% of the phase assemblage by EVE. Two beaker types, both funnel-necked globular beakers (type H41 and H42), were recorded. White ware arrived from the Oxford region. This comprised a mortarium (OXWM) and another, unidentified, type (OXW).

Though residual, samian accounted for 2% of the phase assemblage. A closed form, possibly Drag. 67, was seen in South Gaulish samian ware (SGSW). Central Gaulish potters were responsible for a Drag. 33 conical cup and a Drag. 37 decorated bowl. A Drag. 43 mortarium and body sherds from Drag. 45 mortarium were recorded in East Gaulish samian ware. East Gaulish factories also provided a Drag. 31 dish (recorded as a footring).

A large proportion of the entire assemblage (16% by EVE) was recovered from context groups dated on ceramic grounds to the second half of the 4th century onwards and assigned to late Roman phase 2 (Table 2.9). A much wider range of forms and fabrics was evident in this group compared with earlier key groups. That said, sandy grey ware continued to dominate, and indeed increased its representation to 82% by EVE (although the divisions between black-surfaced wares, fine grey wares and sandy grey wares were not always clear-cut, and in cases of ambiguity, pottery was identified as sandy grey ware by default). Jars took the largest share of

forms in sandy grey ware. Many could not be identified to type, having broken at the rim, although it is likely that most are the oval-bodied and necked type, G24, which is the best represented of the jars identified to type. This is followed by the bifid-rimmed, G28, and the cooking-pot type, G9. Narrow-necked jars (type G35, G36 and G40) were also present, along with a small storage jar (type G42) and ledge-rimmed jar (type G5). Dishes remained another important category. Plain-rimmed (type B1) and drop-flanged (B6) dishes were the principal forms. Bead-rimmed (type B2/B4), groove-rimmed (type B3) and incipient bead-and-flanged (type B5) dishes were recorded, although occurrences are likely to be residual by this date (cf. Going 1987, 14-5). Bowl-jars E2 and E5 were joined by the small, S-profiled, E3. Beakers were represented by the funnel-necked globular beaker H39/H41, a bag-shaped beaker H19, and a narrow beaker, H4, which appears to imitate black-burnished forms (for example Gillam 1976, fig. 2.19). The dishes B1, B2/B4, B3, B5 and B6 were also recorded in black-surfaced ware, as were jars G24 and G28. Fine grey ware was available in small quantities as B1, B2, B3 and B6 dishes. More G24 and G28 jars were recorded in sandy oxidised ware (RED). As in earlier phases, most, of not all, of this material is of local origin.

A local source, probably Mucking, can be suggested for the wheel-thrown black-burnished ware (BB2), although no forms were identified and indeed the material could well be residual. Handmade Dorset black-burnished ware (BB1), on the other hand, arrived mainly, if not exclusively, after AD 350, albeit in small quantities. A dropped-flange B6 dish was identified. Colchester was responsible for buff ware (BUF, BUFM), including a wall-sided mortarium (type D13), although the form was residual at the time of deposition (cf. Hull 1963, *Cam* 501). The growth of the Hadham industry in the second half of the 4th century (Going 1999, 297) is apparent at Stanford Wharf, as the proportion of Hadham products increased from under 1% in phase LR1 to 4% in the latest part of phase LR2. The burnished reduced fabric (HAB) is represented by a B2 dish (probably residual), while the (often burnished) grey ware is represented by a B6 dish, and E3 bowl-jar and a unspecified beaker. Fine Hadham oxidised ware was available as a B2 dish, an E5 bowl-jar and a disc-necked flagon. Late shell-tempered ware was available solely as a necked jar (type G27). A variety of white-slipped grey wares (MWSGF/S) of uncertain source were noted. A plain-rimmed dish (type B1), a necked jar (G24) and a carinated bowl (type C13) were recorded. North Kent products, including Patch Grove ware,

continued to be present as residual occurrences. Like Hadham wares, Nene Valley products were better represented in this latest phase than they had been in earlier phases, although identifiable forms were restricted to funnel-necked globular beakers (type H41). Oxford products had also increased their representation. White ware vessels were joined by red colour-coated ware forms, including a mortarium (OXRCM) and a narrow-necked jar (Young 1977, type C16). So-called 'Portchester D' ware, a sandy oxidised fabric made in the Overwey region on the Hampshire/Surrey border, was available as a jar with everted rim (type G9). Rettendon ware from east central Essex was noted, but no forms identified.

Of the imported wares, samian wares continued to form the largest group, despite being residual at the time of final deposition. A sherd from a decorated vessel was recorded in South Gaulish samian ware (SGSW), while a Drag. 44 bowl was present in Central Gaulish samian ware (CGSW). East Gaulish potters (EGSW) were responsible for Drag. 31 dishes, and Drag. 37 decorated bowls. East Gaulish potters – specifically those working in the Trier region – were also responsible for a relatively rare black-slipped or 'Rhenish' ware beaker (Symonds 1992, fig. 40.771). Lid-seated jars (type G5; Gose 1950, type 546) in coarse Mayen ware (MEK) arrived from the Eifel region of Germany; two examples were recorded.

Chronology

The pottery from the key groups had an overwhelming late Roman emphasis, although pottery deposition occurred throughout the Roman period and in the Iron Age. Some 5% of the pottery by EVE from the key groups was from contexts dated to the middle Iron Age. There were no groups that were dated both on ceramic and stratigraphic terms to the late Iron Age, suggesting a pause in pottery deposition between *c* 100 BC and AD 50. Pottery deposition resumed in the mid 1st century AD – 3% of the key group assemblage belongs to this period – and increased slightly to 4% in the late 1st century AD. Few key groups dated to the 2nd and early 3rd century, suggesting a prolonged drop in the level of deposition during that time. The second half of the 3rd century AD, however, saw a relatively steep rise in the level of deposition. Key groups of this date accounted for 13% of the key group assemblage. Deposition continued more or less at this level into the first half of the 4th century AD, but increased dramatically in the second half of the 4th century to 64% by EVE.

The key group assemblage comprises just 26% of the entire ceramic assemblage by EVE. We can, however, test the strength of its chronological profile by comparing it with the profile derived from the entire assemblage and based on ceramic group or spot dates only, irrespective of stratigraphic phase (Fig. 2.1). Restricting the data to contexts with reasonably narrow date ranges comparable to those obtained from the key groups gives us a dataset representing almost 50% of the entire assemblage. The resulting profile retains the late Roman emphasis and closely matches the key group profile from the middle Iron Age to the end of the 2nd century AD. One clear discrepancy, however, lies in the 3rd century, with the 'all pottery' profile suggesting a significantly greater level of deposition (27% by EVE) in the first half of the 3rd century than is suggested by the key groups.

The reason for this discrepancy is unlikely to reflect a genuine peak of deposition during that time, but instead seems to be a product of ceramic spot dating. The assemblage of context groups dated on ceramic grounds to *c* AD 200-250 amounts to a relatively sizeable 28.4 EVE, but notably within this, not one vessel or fabric group or other 'sherd-family' was dated to between *c* AD 200-250. Context-groups dates were obtained by taking the latest earliest date from all the individual record dates (being in these cases AD 200+) and the earliest latest date, here no later than *c* AD 250, as suggested by forms such as bead-rimmed dishes (cf. Going 1987, 14-5). As the description of assemblage composition above indicates, bead-rimmed dishes continued to appear (whether as residual occurrences or representing continued production of the form, in contradiction of traditional dating) in groups of late 3rd century date and beyond. It is possible, even likely, therefore that contexts dated on ceramic grounds to *c* AD 200-250 should in fact date to AD 250+. This is given support on stratigraphic grounds, as, where phased, contexts dated AD 200-250 were assigned to phase LR2.

As for when deposition at Stanford Wharf ceased, a number of forms and fabrics points to deposition at Stanford Wharf well into the second half of the 4th century AD, but there is nothing to indicate with certainty deposition after AD 400. The principal indicators of pottery supply after AD 350/60, as seen, for example, at Great Holts Farm, Boreham (Martin 2003, 126-7) and Heybridge (Biddulph *et al.* forthcoming), are present at Stanford Wharf. These include Oxford red colour-coated and white-slipped red wares, late shell-tempered ware (see Wallace and Turner-Walker 1998, 101, for a discussion of the dating of this fabric in central Essex), Alice

Holt grey ware, Mayen ware, Portchester D ware, and Céramique à l'éponge, as well as increased proportions of Hadham products in key groups. To this list we can add late Roman grog-tempered ware (LGROG), a fabric rare in Essex, but prolific after the second or third quarter of the 4th century in west Kent where production is likely (Pollard 1988, 149). Its sparse Essex distribution is confined to southern and central Essex, and includes Chigborough Farm, near Maldon (Horsley and Wallace 1998, 153), and Ivy Chimneys, Witham (Turner-Walker and Wallace 1999, 130). A cooking-pot-type jar with everted rim was recorded in the fabric at Stanford Wharf (Pollard 1988, fig. 53.208-9). Of the Oxford products, it is notable too that these include a carinated bowl form with rosette-stamped decoration (Young 1977, type C84). The form was one of the latest products of the industry, with production dating to *c* AD 350-400+ (Young 1977, 170). A white-ware mortarium (Young 1977, type M23) recovered from Stanford Wharf also has a date after 350.

Evidence of pottery use

Indications of pottery use are provided by internal wear, modification to the vessel, internal residues and external deposits, burning, and graffiti. Internal wear was recorded inside eight vessels. Inevitably these are in samian fabrics, which tend to show wear particularly clearly when the distinctive red slip is lifted from the fabric below. Five of these vessels are mortaria – either Drag. 43 or 45. All examples were worn internally across the floor of the vessel, and in one vessel (Drag. 45), from context 5250, the wear extends up the side and terminates in a neat edge level with the base of the form's collar. Wear was recorded on a Drag. 38 flanged bowl from context 6355; the lower wall and base was worn, and there was a clear edge of wear below the level of the flange. Internal wear was also noted on two Drag. 37 decorated bowls. In one (context 5739), the wear was concentrated on the lower wall, rather than base. The existence of wear, and pattern created by it, suggests that these vessels were used for a single purpose intensively or over a long period. The mortaria were presumably used for grinding and pounding foodstuffs, and the flanged bowl may had served a similar purpose; identical wear patterns have been noted on Drag. 38 bowls at Northfleet villa and Springhead in Kent (Biddulph 2011, 150; Seager Smith *et al.* 2011, 118), and Heybridge, Essex (Biddulph *et al.* forthcoming). The wear on the decorated bowl also suggests a robust use; a similar wear pattern was noted on two

decorated bowls from Springhead (Seager Smith *et al.* 2011, 119), and caused, it was suggested by tipping the vessel during use, for instance to beat eggs. Geoffrey Dannell (2006, 158) suggests that Drag. 37 bowls were used as mixing bowls for both wine and ale, based on the evidence of graffiti. The Stanford Wharf bowl may have been used in this way, though how this might have resulted in one part of the vessel being worn is unclear.

Modification was recorded in three vessels. A body sherd in fine grey ware from context 5134 had been trimmed into a roundel and pierced centrally for use as a spindle-whorl. A Drag. 45 samian ware mortarium from context 5250, noted above for its wear, had been trimmed around the top of its collar, presumably after the collar was chipped. A body sherd in grog-tempered ware from context 4558 had been perforated. Repair was evident in a Drag. 37 bowl in Central Gaulish samian ware from context 4225; a repair hole, which was created to take one end of a lead rivet, had been made in the plain zone of the vessel below the rim.

Evidence of burning and residues provides important clues for vessel use, but such evidence at Stanford Wharf is particularly noteworthy, as it potentially relates to salt-production (Table 2.10). Externally burnt or sooted areas were almost entirely confined to jars, particularly oval-bodied necked jars (type G24). External burning was noted on bead-rimmed jars (type G3) and ledge-rimmed jars (G5) to a lesser extent. Most of the jars identified simply as 'G' were glauconitic jars with everted rims dating to the middle Iron Age. Where noted, the burning was concentrated around the shoulder, neck and under the rim. However, as the profiles of the vessels were incomplete, we cannot exclude the possibility that the burning extended further down the vessels and around the base. A very large dropped-flange bowl (as type B5/B6) in a coarse sand and flint 'storage jar' fabric was burnt over all surfaces. Burning of the nature identified above brings to mind placement of the vessels on a hearth. Ordinarily we might suggest that the vessels were used for cooking, but given the site, the vessels may instead (or additionally) have been used for boiling brine. Internal burning or burnt residues were seen on ledge-rimmed jars (type G5). Again, the type of residue points to a cooking-related function. White or cream-coloured lime-scale-type deposits were recorded in a bifid-rimmed G28 jar and a narrow-necked storage jar (type G36). The deposits may similarly have formed through boiling water, with brine evaporation being a strong possibility.

One vessel from Stanford Wharf had been deposited as a grave good in a

cremation burial. A ledge-rimmed jar (type G5.1, SF3001, context 3054) in a flint- and sand-tempered fabric (FLSAND) was recovered from grave 3052 in Area C. The vessel was found with cremated human remains, but was fragmented and not certainly identified as a cinerary container. Indeed, the excavator thought that the jar had been placed on top of the cremated remains. In any case, the vessel's form and fabric suggest that the burial dates to the first half of the 1st century AD, possibly as late as *c* AD 70. Though a single vessel, the selection of a jar is nonetheless consistent with late Iron Age or early Roman norms in Essex. If deposited as a grave good, the jar fits within the jar and bowl-orientated assemblages of accessory vessels that characterise burial practices of 'Belgic' or late Iron Age Essex, as seen as, for example, North Shoebury (Thompson 1995, 88-91). In the Roman period, the jar continued to accompany cremation burials, but typically as the cinerary vessel, rather than a grave good, while accessory vessel assemblages tended to reflect Gallo-Roman tradition and be focused around flagons, platter/dishes, beakers and cups, for example at King Harry Lane, Verulamium (Stead and Rigby 1989; Biddulph 2005).

Graffiti

Graffiti, or possible graffiti, were recorded on four sherds. Two horizontal lines had been scored on a sandy grey ware vessel from context 5041 after firing. Two vertical lines had been scored after firing on the shoulder of a bowl-jar (type E5) in sandy grey ware from context 5546. A line scored after firing on a black-surfaced ware base sherd from context 5250 may have been a partial cross-graffito. A cross was seen, however, within the footring on the underside of a deep Drag. 36 bowl in Central Gaulish samian ware (context 6676).

Pottery production

No pottery kilns were recorded at Stanford Wharf, but three vessels displayed evidence of firing faults, suggesting pottery production nearby, the pottery either having been discarded as a waster, or traded as a 'second'. Two of the vessels were oval-bodied necked jars (type G24); one was in black-surfaced ware and had an uneven rim, while the other, in sandy grey ware, was spalled. Another jar in sandy grey ware (exact type unknown) also had an uneven rim.

Pottery deposition and preservation

Pottery was recovered largely from feature fills and layers. Area B saw the bulk of pottery deposition in the early Roman period. Pottery was concentrated in the saltern, in particular pits, ditches and other cut features associated with it (Fig. 2.2). In Area A, circular building 5760 and rectangular building 6090 were the focus of pottery deposition in the late Roman period. Roundhouse 9501 and its internal features also received pottery, and material was recovered from enclosure ditches 9506 and their associated posthole alignments 9502. More pottery was collected from saltern 5808 in the south-western part of the area (Fig. 2.3).

The pottery from Area A was broadly identical to that from Area B in terms of composition, although a few differences were detected in the late Roman assemblages (Tables 2.11 and 2.12). Dishes were better represented in Area A (28% by EVE) than they were in Area B (13%), whereas jars were better represented in Area B (68%, compared with 56% in Area A). Bowls, bowl-jars and mortaria were marginally better represented in Area B, but there was a slightly higher proportion of beakers in Area A. The proportions of flagons and cups were more or less equal. In terms of wares, coarse reduced wares dominated both assemblages, but were slightly better represented in Area A (88% by EVE, compared with 76% in Area B). Oxidised wares, though, were better represented in Area B (8%, compared with 2%). There was less difference among other wares, although it is notable that there was a slightly higher proportion of samian in Area B. Overall, the differences between the areas do not seem very significant, and it is likely that both areas received pottery from the same sources. That said, the differences in the proportions of dishes and jars between the two areas is interesting, potentially pointing to a less 'domestic', and more 'industrial', profile in Area B compared with Area A, although the slightly higher proportion of samian in Area B appears to counter that view.

As might be expected, pottery in layers was more fragmented than the pottery contained and protected by cut features, such as pits and ditches. The mean sherd weight (weight divided by sherd count) of pottery from layers was 13.2g. This compares to 16.5g obtained from feature fills, and a global average of 14.3g. In terms of site chronology, mean sherd weights did not significantly deviate from the global average throughout the period of activity. A value of 14.1g was obtained for the early

Roman period (or 17.1g for the 'key groups' only), while late Roman pottery (that is, all pottery belonging to contexts dated to phase LR, LR1 and LR2) had a mean sherd weight of 14.4g.

The mean for the entire assemblage compares well to values provided by settlement sites across Essex and in north Kent (Table 2.13), falling below Northfleet Roman villa and Springhead town, but above rural sites. The values suggest that the condition of the pottery from Stanford Wharf, though fragmented, is consistent with pottery that has been deposited relatively close to areas of use and original discard, and contrasts to the pottery from, say, Chignall, which was deposited across outlying buildings and fields some distance from the main focus of occupation. A caveat to this is that pottery can fragment through post-depositional processes, and the heavy clay soils of central Essex are particularly unforgiving. The mean sherd weight of 7g for Strood Hall does not accurately reflect preservation (Biddulph 2007, CD-Rom 272); the value for funerary vessels from that site, which were deposited whole in the grave, was just 3g! An alternative statistic is the mean EVE per vessel, or the 'completeness' statistic, which is calculated by dividing EVE by the number of vessels represented (Orton *et al.* 1993, 178). This is a useful check, as it ignores the problem of sherd fragmentation. It is difficult to assemble comparative values across a wide range of sites, as few sites offer suitable quantification, but the value obtained for Stanford Wharf (0.11 EVE) is comparable to that for Northfleet (0.12 EVE) and Dagenham (0.12 EVE).

Six vessels recovered from Stanford Wharf were complete or substantially complete. These included two vessels collected from quarry/cess pit 1249 in the corner of late Roman enclosure 9506 in Area A. One vessel (SF 1596) was a large, jar-sized globular and funnel-necked beaker (type H41) in a burnished black-surfaced ware that was almost certainly a Mucking product (Rodwell 1973, fig. 10.105). It was found with a smaller version of the same type (SF 1594), although the vessels were not identical. The large beaker contained a remarkable assemblage of well-preserved plant remains, including the seeds or stones of coriander, domestic plum, sloe, fig, wild cherry, and apple (K Hunter, digital volume, part 19). Such an assemblage naturally invites the suggestion of a structured deposit, perhaps made in a propitiatory act. However, analysis of the surrounding pit fill revealed an almost identical plant assemblage to that recovered from the vessel, the only difference being that the remains in the vessel were relatively well protected and so were better preserved that

those without. The beaker deposit also included strong indications of cess, including insects and cereal bran. Overall, then, a special, ritual, deposit is unlikely. But quite why both complete vessels were discarded is uncertain. It is possible that both became contaminated, or were regarded as such, and so deemed inappropriate for continued use. Their deposition may simply have been accidental, but it would be too much to speculate on the possible events which might have led to the vessels being accidentally dropped into the pit.

Three plain-rimmed dishes (type B1) were among the group of complete or near-complete vessels from the site. These were in local reduced fabrics (BB, BSW and GRS). Two vessels were recovered from late Roman layer 5658, while the third was found in ditch 5099, part of late Roman channel 8550/8551. The ditch also contained another near-complete vessel, a bowl-jar (type E5) in black-surfaced ware. None of these vessels had obviously been deposited in some form of structured, ritual, act. All were found with large assemblages of fragmented pottery which had no indications of special deposition. Instead, the existence of complete or near-complete vessels is instead consistent with pottery that underwent relatively few episodes of disturbance and redeposition after original discard close to the area of final burial.

Pottery and salt production

The specialist nature of Stanford Wharf raises questions about the types of pottery represented at the site and what they reveal about its status. If the site did not accommodate a strong domestic element throughout its occupation, then should we be able to detect a difference between this and other sites in terms of assemblage composition? Is there a particular ceramic signature associated with salt-production sites? What sort of vessels should we expect at a saltern? And how does the site rank when placed against farmsteads, villas and other site types of varying status?

There have been a number of connections made between pottery and the salt industry. Pollard (1988, 194) notes that the north Kent pottery industry around Cliffe and the Medway estuary coincide with salt-production sites, and a similar coincidence can be detected along the southern and eastern coasts of Essex, notably around Mucking and in the Blackwater valley. Further afield, Poole Harbour supported both pottery and salt production (Hathaway 2005), and there have been suggestions that

one of the principal products of that industry – the black-burnished ware 'cooking-pot' – was used as a container for the export of salt. At Mucking, the main forms of kiln II were the ledge-rimmed jar (Mucking type F, equivalent to Going type G5) and the undercut-rim jar (Mucking type J, equivalent to Going G24) (Rodwell 1973, 35), and subsequently Rodwell (1979, 161) suggested that type G5 – specifically the shelly-ware G5.1 – was used 'for the storage and transportation of crystalline salt'. The distribution of the form is not in conflict with this. The G5.1 jar is abundant in south Essex sites (eg Wilkinson 1988, 88; Mepham 2009, table 8), and relatively common in central Essex (Going 1987, 23; Symonds and Wade 1999, 458; Biddulph 2007, fig. 3.19.5-8). In addition, the form crossed the Thames and reached north-west Kent; at the Roman town of Springhead, the form made an important contribution to the shelly ware assemblage (Seager Smith *et al.* 2011, 55).

The distribution of the jar cannot necessarily be explained by the provision of salt, as other types manufactured in south Essex are also widespread across southern and central Essex and so may simply have been exported as general domestic ware, and north Kent had its own thriving salt industry. But what isolates type G5.1 from other south Essex forms is that it (and even its sandy grey ware successors, notably the G5.5) appears to have been manufactured almost exclusively in the coastal areas of south and east Essex, and it is possible that the form's strong association with those areas prevented it from being taken up more generally across Essex and incorporated into local pottery repertoires. The jar's use as a salt container is a plausible explanation for this. If, in sites away from southern production centres, the jar was regarded mainly as a salt storage vessel – and the evidence of burning and residues from Stanford Wharf (above) is additionally consistent with boiling brine – then it would rarely have seen domestic use, for instance as a cooking pot, thus reducing the chances of the form being copied by local potters. It is also likely to be significant that the ledge-rimmed jar was one of the few (perhaps the only) south Essex shelly-ware forms recorded at Springhead (Seager Smith *et al.* 2011, 55-8). Other jars encountered – bead-rimmed jars, storage jars, hooked-rim jars and facetted jars – are well known north Kent types (Monaghan 1987, types 3D-3G) but do not (or rarely) appear in potters' repertoires at Mucking and Gun Hill (Rodwell 1973; Drury and Rodwell 1973). This again suggests that the jar did not travel with other pottery in the trade of general household wares, but was isolated and traded for its intrinsic qualities or its contents.

In light of the potential specialist use of the G5.1 jar, it can be suggested that the meaning of the distinctive graffiti associated with the form and scored by the potters before firing is also salt-related. Such graffiti have been recorded at, among other sites, Ardale School, Grays (Wilkinson 1988, fig. 75.99, 102-3), Chelmsford (Going 1987, fig. 49), Mucking (Rodwell 1973, fig. 5.24), Gun Hill (Drury and Rodwell 1973, fig. 17.103-4), West Thurrock (Mepham 2009), Colchester (Symonds and Wade 1999, fig. 6.111.41), Felstead (Going 1987, 102), and across south-east Essex. At least 21 graffiti have been recorded at Springhead (Seager Smith *et al.* 2011, fig. 17) and further North Kent examples are known at Gravesend (Biddulph forthcoming) and Cliffe (Jones 1972, fig. 2). Jones (1972, 337) discusses their function as batch-marks, though does not seem wholly convinced, noting that 'it seems surprising... that they have not been more commonly featured in groups of Romano-British coarse pottery'. The graffiti generally resemble Roman numerals, comprising rows of four or five (occasionally up to seven) vertical bars, sometimes divided into two rows by a horizontal bar across the centre. Other graffiti include boxes, diamonds, crosses, and arrows. Quite how the graffiti might relate to the salt industry is far from clear, and the connection is in any case is undermined by the absence of such graffiti at Stanford Wharf. However, possible interpretations might include a trade mark identifying the saltern that produced the salt or the grade of salt contained in the vessel. Alternatively, the graffiti may represent variations of a limited range of symbols that simply denote salt. In any case, a close relationship between potters and salters would be implied. Resolution of this relationship would certainly benefit from more analysis (focusing on, for example, distribution and vessel size) on the growing dataset of shelly ware jars and graffiti.

Other forms must have taken the place of the G5.1 jar when the form ceased to be produced after the end of the 1st century AD. The necked, oval-bodied jar (type G24), which is a very common jar type at Stanford Wharf (16% of all jars by EVE), is an obvious replacement as a salt container, but necked jars with a bifid rim (type G28) would serve equally well, and both types provide examples of burning and internal scale-type residues. Larger storage jars may have been used too. In the middle Iron Age, residues and burning point to glauconitic jars with everted rims as the principal salt container and evaporation vessel.

With these factors in mind, it is reasonable to expect an assemblage from a (seasonal) salt-production site with little obvious domestic activity to be dominated by

jars, almost to the exclusion of other vessel classes. Margaret Darling's analysis of the pottery from a late Roman salt-production site at Middleton provides support for this. Darling found that the Middleton assemblage was dominated by 'kitchen' forms (principally jars), which took a 60% share by EVE of the assemblage in both phases of activity. Tablewares (dishes and bowls) accounted for less than 10%, and drinking vessels were entirely absent (Darling 2001, fig. 75). Middleton had no known settlement nearby, and the conclusion drawn was that the assemblage was consistent with seasonal, specialised, occupation (Darling 2001, 209). Similarly, at the Roman site at Middlewich in Cheshire, the assemblage which belonged to the period of salt manufacture, dating to the early Roman period, contained the highest proportion of jars compared with subsequent phases, and there was a paucity of drinking vessels throughout (Leary 2008, 92). A guide to the range of pottery expected at salt-production sites in Essex is provided in analysis of pottery from red hills by Jefferies and Barford (1990b, 73-78). That dataset lacks complete quantification, but an impression of composition across a number of red hills is possible from a rough-and-ready count of the vessels mentioned. This gives us a total of 59 vessel, of which 31 (51%) were jars. There were 11 bowls (18%), six beakers (10%), and four dishes or platters (7%). This assemblage is perhaps more diverse than expected, although less so on an individual site level, and Jefferies and Barford (1990a, 35) suggest that the pottery is likely to have been redeposited or brought in with settlement waste or manure, in which case little of it need be associated with the salt industry. Elsewhere, the character of pottery assemblages is variable. Some 288 sherds of pottery were recovered from Scotney Court, an early Roman salt-working site in Romney Marsh, Kent. Vessel quantification is not given in the site report, but the assemblage is clearly dominated by grog-tempered ware jars (Barber 1998, 334-9), and although a black-burnished ware dish and colour-coated beaker were noted, Barber (1998, 351) suggests that the pottery is indicative of low-status occupation relating to the salt-making activity. Two salt-working sites in Funton Marsh in the Medway estuary produced small amounts of residual pottery only (Miles 1965; Detsicas 1984). At the larger salt-production site at the Old Bowling Green, Droitwich, Worcestershire, a much larger pottery assemblage was recorded. Again, vessel quantification is unavailable, but the assemblage comprised a diverse range of vessels, including jars, bowls, dishes, tankards, flagons and beakers. Coarse wares dominated, but Severn Valley ware was important, and fine wares were also present (Rees 1992). In general,

pottery supply is consistent with regional patterns (Rees 1992, 58) and therefore the assemblage does not offer a profile specifically related to salt production. Indeed, briquetage appears to have been the principal medium for salt distribution (Woodiwiss 1992, 183-6).

Returning to Stanford Wharf, one measure we can employ to highlight differences and similarities between the site's assemblage and those from other sites is to compare ratios of jars, open tablewares (dishes and bowls), and drinking vessels (cups, beakers and flagons). Jeremy Evans (2001, 26-31) explored the relationship between these categories and found that basic rural sites have relatively high proportions of jars (typically suggesting continuation of Iron Age cooking and dining practices) and low proportions of dishes/bowls (denoting specialist dining vessels). Urban sites tended to have higher proportions of dishes/bowls and drinking vessels, and fewer jars, while villas lay in between the two site types.

A ternary plot shows the percentages of the three categories derived from twenty-seven groups from Stanford Wharf, areas of Mucking, villas at Northfleet and Great Holts Farm, the farmstead at Strood Hall, a rural and pottery production site at Dagenham, and the settlement and temple site at Ivy Chimneys, Witham (Fig. 2.4). Stanford Wharf's early Roman group (2) is shown near the bottom right point of the plot and is characterised by a relatively high proportion of jars and low proportions of open forms and drinking vessels. These proportions were almost identical to the distribution of pottery types from the south-eastern part of early Roman Mucking (4). Early Roman assemblages from the north-western part of Mucking (3) and Ivy Chimneys (7) and comparatively fewer beakers and higher proportions of jars, while Strood Hall (8) and Dagenham (1) were characterised by relatively high proportions of beakers and low proportions of jars. Northfleet villa (6) is exceptional, having much higher proportions of bowls, dishes and drinking forms, and consequently lies away from the loose cluster of early Roman sites. By the later 3rd to mid 4th century assemblage, the proportion of jars at Stanford Wharf decreased compared with the early Roman period, while the proportion of dishes and bowls increased; the proportion of drinking vessels remained virtually unchanged. The assemblage is functionally close to a contemporaneous group from Great Holts Farm (11). In Stanford Wharf's latest Roman group (27), a decrease in the proportion of dishes and bowls was met by an increase in the proportion of jars. The proportion of drinking forms again remained steady. The profile of the group is similar to those recorded at

Northfleet (20) and Great Holts Farm (22), though also matches profiles from slightly earlier late Roman groups from Strood Hall (14) and Northfleet (12).

The obvious conclusion is that, unlike Middleton and Middlewich, Stanford Wharf cannot be distinguished on ceramic grounds from other settlement sites, in particular Great Holts Farm, Northfleet and Strood Hall, although the assemblage from Area B, with its higher proportion of jars and lower proportions of domestic tablewares compared with Area A (Table 11), is closer to the profile seen at Middleton and Middlewich. How may we explain this pattern? One possibility, assuming that there was little domestic activity at or near the site, is that the already fragmented pottery largely arrived within soils brought in from, say, Mucking, and was spread over areas of the site, perhaps for the purpose of levelling and landscaping. The pattern of deposition across the site, and comparative mean sherd weights (Table 13) suggest otherwise. A more plausible alternative is that Stanford Wharf did in fact see settlement and domestic occupation. Activity recorded at the site may have been seasonal, but occupation there or very close by (possibly on the higher ground of the terrace) was sufficiently sustained in the form of permanent or semi-permanent settlement to allow inhabitants to acquire, use, and discard a similar range and quantity of pottery to that seen at other settlements. This is supported by the evidence of mean sherd weights and complete or near-complete vessels (above). The pottery found across the site included much that was redeposited (as did the red hill pottery seen by Jefferies and Barford (1990a, 35)), but it had been used by people who lived and worked – and died, in the case of Area C burial 3052 – at Stanford Wharf. Moreover, we should not necessarily assume that salt-production sites were essentially aceramic, or included periods of aceramic activity. The chronology of Stanford Wharf – including a low level of early Roman activity and almost no middle Roman occupation – as offered by the pottery is therefore likely to be a reasonable reflection of reality.

Stanford Wharf's assemblage has a profile that matches fairly well those of villa sites (Great Holts Farm and Northfleet) and a farmstead (Strood Hall). Samian is another means by which site type can be assessed. The amount of decorated pottery compared with plain forms provides a useful index. Steve Willis (1998, 105-111; 2005, section 7.3.2) records higher than average proportions of decorated samian at military and urban sites, and lower than average proportions at basic rural sites. At Stanford Wharf 14.5% of all samian by sherd count (out of 137 sherds) was

decorated. An almost identical figure of 14.9% was attained both by EVE and number of vessels (including vessels identified by sherds other than rims) (Table 12). These figures compare with 10% by vessel count at the villa at Great Holts Farm (Dickinson 2003, table 32), and just 4% by EVE at Strood Hall (Biddulph 2007, 138). At Northfleet villa, 12% of samian by EVE was decorated (Biddulph 2011, 148), and as might be expected, a relatively high value of 22% by vessel count was recorded at the North Hill site of the Roman town of Colchester (Willis 1998, table 3). (Given this spread of values, the figure of 22% by vessel count attained at Orsett 'Cock', a farmstead (Cheer 1998, microfiche III; King 1998, 94), seems to be anomalous.) Overall, Stanford Wharf appears to be of middling rank and reasonably level with villas, a view that is consistent with the pattern obtained from the ternary plot.

There is one other aspect of the samian assemblage that deserves mention. Six mortaria, as quantified by number of vessels based on rims, were recovered from the site, representing 13% of all samian vessels. A further five mortaria were identified by body and base sherds. Comparison with local and regional sites suggests that mortaria are over-represented. At Great Holts Farm, four mortaria (or 8%) were recognised out of 48 vessels, based on all sherds (Dickinson 2003, table 32). There was just one mortarium at Orsett 'Cock' among 37 plain forms identified to type and 12 decorated vessels (Cheer 1998, microfiche III; King 1998, 94). Mortaria represented 4% of samian vessels from Northfleet villa, based on all sherds (Mills 2011b, table 23). A high frequency of mortaria was noted at Springhead (Mills 2011a, 10), although overall the form represented just 1% of the total samian assemblage of over 3000 vessels. The reason for the apparent over-representation of samian mortaria at Stanford Wharf is uncertain. It may simply be a question of chance supply and survival. In a samian assemblage the size of that from Stanford Wharf, just one or two occurrences can unduly bias vessel representation. Indeed, with one less mortarium, the assemblage would more closely resemble that from Great Holts Farm. That said, a functional reason for the over-representation could be suggested. As noted above, most of the samian mortaria were worn internally and were therefore well used. It is tempting to link this with the activities undertaken at Stanford Wharf, such as preserving meat or preparing fish sauce. It is, however, difficult to judge precisely where mortaria would fit in to this, and in any case there appears to be no over-representation of coarseware mortaria, as might be expected.

Catalogue of illustrated pottery

By Edward Biddulph and Alice Lyons

Middle Iron Age (c 400-100 BC)

Area A

Posthole 1911, fill 1910

1. Jar with an everted rim, fabric GLAUC.

Red hill deposit 5165

2. Jar with everted rim (Going 1987, type G; Drury 1978, type F13), fabric SAND.

Layer 5711

3. Jar with an everted rim, fabric GLAUC.

Feature 5592, fill 5634

4. Jar with an 'S'-shaped profile, fabric GLAUC.

Red hill deposit 5650

5. Jar with an 'S'-shaped profile, fabric GLAUC.

Pit 5672, fill 5673

6. Jar with an 'S'-shaped profile, fabric GLAUC. Residual in late Roman deposit.

Red hill deposit 6014

7. Jar with an 'S'-shaped profile, fabric GLAUC.
8. Jar with an 'S'-shaped profile, fabric GLAUC.
9. Jar with an 'S'-shaped profile, fabric GLAUC.
10. Jar, fabric GLAUC.

Red hill deposit 6150

11. Jar with an 'S'-shaped profile, fabric GLAUC.
12. Jar with an 'S'-shaped profile, fabric GLAUC.
13. Jar with an 'S'-shaped profile, fabric GLAUC.

Quarry pit 5863, basal fill 5710

14. Jar with an 'S'-shaped profile, fabric GLAUC. Residual in mid Roman feature.

Cut 5145

15. Neckless bead-rimmed jar (Going 1987, type G1; Couldrey 1984, fig. 20.144), fabric ESH.

Circular pit 5475, fill 5168

16. Large ovoid/barrel-shaped jar with bead rim (Going 1987, type G1), fabric FLINT (coarse).

Layer 1875

17. Jar, fabric GLAUC.

Area B

Clay layer/working surface 4213

18. Bowl, fabric GLAUC. Residual in early Roman deposit.

Watching brief area

Red hill 8009

19. Ovoid jar (Drury 1978, type 11), fabric GLAUC, oxidised.
20. Jar (Drury 1978, type 12), fabric SAND, fine and oxidised.
21. Jar with everted rim, fabric SAND, oxidised.
22. Jar with everted rim, fabric MICW, reduced.

Early Roman (c AD 43-120/30)

Area B

Burnt clay layer 4207

23. Platter (Going 1987, type A2), fabric GRS.

24. Neckless, bead-rimmed jar (Going 1987, type G3), Brown surfaces, fabric RED.
25. High-shouldered necked jar (Going 1987, type G20), Brown surfaces, fabric RED.
26. Neckless jar with a ledged rim (Going 1987, G4.2/G5.1 hybrid), fabric ESH.
27. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH.
28. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH.
29. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH.
30. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH.
31. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH.
32. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH. Sandy orange fabric with occasional shell.
33. Ledge-rimmed jar (Going 1987, type G5.1), fabric GRS. Occasional shell in fabric.
34. Bifid-rimmed jar (Going 1987, type G28), fabric GRS.

Ditch 4208, fill 4305

35. Poppyhead beaker (Going 1987, type H6), fabric GRF.

36. Butt-beaker (Going 1987, type H7), fabric GRF.

37. Neckless jar (Going 1987, G1/G5.1 hybrid), fabric ESH.

38. Ledge-rimmed jar (Going 1987, type G5.1), fabric ESH.

39. Wide-mouthed squat bowl (Going 1987, type C33), fabric BUF, sandy fabric.

LR1 – Late Roman phase 1 (c AD 250-400+)

Area A

Ditch 1458, fill 1456

40. Bowl, Drag 37, fabric EGSW. Crudely-decorated, figures are very basic and lack detail.

Layer 5136

41. Mortarium (Going 1987, type D5; Young 1977, type M17), fabric OXWM The spout terminals have grooves in the manner of lion's paws.

42. Narrow mouthed jar fragment, fabric BSW. Heavily rouletted.

Posthole 5545, lowest fill 5546

43. Bowl-jar with a bead rim, concave neck and rounded body (Going 1987, type E5), fabric GRS. Graffito scored after firing: two vertical lines on shoulder.

Layer 1452

44. Narrow necked jar (Going 1987, type G40), fabric NVG.

Pit 1249, fill 1248

45. Beaker with funnel neck and globular body (Going 1987, type H41), fabric GRF. Complete vessel (SF1594), save for fragment missing from rim and neck.

46. Beaker with funnel neck, angular bead rim and globular body (Going 1987, type H41), fabric GRF. Complete vessel (SF1596), Mucking product, as Jones and Rodwell 1973, fig. 10.105.

Layer 5134

47. Trimmed and perforated body sherd (SF1508), fabric GRF. Spindle whorl. Perforation: 6mm diameter; object has diameter of 35mm.

LR2 – late Roman phase 2 (c AD 250-400+)

Area A

Layer 5554

48. Deep dish, and small version of Going 1987, type B3, fabric BSW.

Layer 5658

49. Shallow plain-rimmed dish (Going 1987, type B1), fabric BSW. Near-complete vessel (SF1535).

50. Shallow plain-rimmed dish (Going 1987, type B1), fabric GRS. Near-complete vessel (SF1536).

Gully 6354, fill 6353

51. Large drop-flanged dish (Going 1987, type B5/6), fabric STOR. Coarse fabric.

Layer 5138

52. Deep bead-rimmed dish or bowl imitating Drag. 31 (Going 1987, type B4), fabric BSW.

53. Hemispherical bowl imitating Drag. 38 (Going 1987, type C8), fabric BSW. Grooves on body below flange.

Posthole 5386, fills 5851 and 5852

54. Bowl, Drag. 37, fabric EGSW. 'Advertisement stamp' on external surface of body within the decorated zone. The stamp is vertical and retrograde. Reading: ATTILLVSF. Attilus vi. A Rheinzabern potter who worked during the late 2nd century or first half of the 3rd century AD (Hartley and Dickinson 2008, 314-5).

Gully 6421, fill 6422

55. Mortarium (Young 1977, type M23), fabric OXWM.

Ditch 5099, upper fill 5100

56. Shallow plain-rimmed dish (Going 1987, type B1), fabric BSW.

57. Drop-flanged dish (Going 1987, type B6), fabric GRF.

58. Drop-flanged dish (Going 1987, type B6), fabric GRF.

59. Oval-bodied necked jar (Going 1987, type G24), fabric BSW.

60. Globular beaker, fabric BSW.

61. Globular beaker with pedestal base (Going 1987, type H40), fabric NVC. Lower half complete.

62. Disc-necked flagon (Going 1987, type J9), fabric HAX.

63. Hemispherical bowl with painted decoration, as Young 1977, type P29, fabric OXW.

Ditch 5099, fill 5101

64. Shallow plain-rimmed dish (Going 1987, type B1), fabric BB, ?Mucking product. Complete vessel.

65. Shallow plain-rimmed dish (Going 1987, type B1), fabric BB.

66. Shallow plain-rimmed dish (Going 1987, type B1), fabric HAB.

67. Drop-flanged dish (Going 1987, type B6), fabric BSW.

68. Drop-flanged dish (Going 1987, type B6), fabric BSW.

69. Drop-flanged dish (Going 1987, type B6), fabric BSW.

70. Bowl-jar with a bifid rim (Going 1987, type E5), fabric GRS.

71. Oval-bodied necked jar (Going 1987, type G24), fabric BSW. The rim is uneven, and part of it has been pressed down before firing as if forming a spout. Possible waster or second or deliberately modified rim.
72. Oval-bodied necked jar (Going 1987, type G24), fabric BSW.
73. Oval-bodied necked jar (Going 1987, type G24), fabric GRS. Vessel is hard-fired or over-fired; ?waster.
74. Beaker, fabric UCC. Rouletted on base of neck and shoulder cordon.

Layer 6052
75. Platter, Drag. 18R, SGSW. Burnt, identification of fabric uncertain.
76. Plain-rimmed dish (Going 1987, type B1), fabric BB.
77. Dish, delineated below the rim with a groove (Going 1987, type B3), fabric GRF.
78. Dish, delineated below the rim with a groove (Going 1987, type B3), fabric GRF.
79. Deep bead-rimmed dish (Going 1987, type B4), fabric BB.
80. Bowl-jar or jar (Going 1987, type E/G), fabric RED.
81. High-shouldered neckless jar with everted rim (Going 1987, type G9 or large H6), fabric GRS.
82. High-shouldered neckless jar with everted rim (Going 1987, type G9 or large H6), fabric GRS.
83. Oval-bodied necked jar (Going 1987, type G24), fabric GRS. Overfired.
84. Oval-bodied necked jar (Going 1987, type G24), fabric RED.
85. Oval-bodied jar (Going 1987, type G24), fabric RED.
86. Oval-bodied jar (Going 1987, type G24), fabric GRS. Overfired.
87. Bifid-rimmed jar (Going 1987, type G28), fabric RED.
88. Bifid-rimmed jar (Going 1987, type G28), fabric GRS.
89. Bifid-rimmed jar (Going 1987, type G28), fabric GRS.
90. Beaker, fabric BSW.

Posthole 5858, fill 5859
91. Oval-bodied necked jar (Going 1987, type G24), fabric GRS. Three notches on rim, made after firing.

Layer 5041
92. Bifid-rimmed jar (Going 1987, type G28), fabric GRS. Neckless version of form.

Ditch 6625, fill 6627
93. Necked high-shouldered jar (Pollard 1988, type 28), fabric PATCH.

Ditch 5099, fill 5102
94. Beaker with funnel neck and globular body (Going 1987, type H41), fabric UCC.

Layer 1531
95. Beaker, fabric EGRHN. Relatively rare form, paralleled at Colchester (Symonds and Wade 1999,

fig. 5.38.43-53).

Layer 1539

96. Necked beaker with globular body (Drag. 53); no handles extant. Fabric EGSW, Rheinzabern. Body decorated with barbotine motifs, including a dolphin and leaf. Oswald and Pryce 1920, plate 81, no. 3.

Layer 1534

97. Disc-necked flagon (Going 1987, type J9), fabric HAX. Finger impression below handle.

Area B

Clay layer 4225

98. Bowl, Drag. 37, fabric CGSW. Repair hole through plain zone below rim. Residual in late Roman deposit.

Channel 4412, fill 4407

99. High-shouldered neckless jar with everted rim (Going 1987, type G9), fabric LGROG. The fabric is rare in Essex. Its sparse distribution is confined to southern and central Essex, and includes Chigborough Farm, near Maldon (Horsley and Wallace 1998, 153), and Ivy Chimneys, Witham (Turner-Walker and Wallace 1999, 130).

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Middle Iron Age and Roman Pottery Tables

TABLE 2.1: QUANTIFICATION OF THE IRON AGE AND ROMAN POTTERY BY AREA

Area	Sherds	Weight (g)	MV	EVE
A	13459	190122	1954	224.55
B	1115	18307	164	18.15
B North	5	97	-	-
C	44	778	3	0.72
D	17	55	1	0.12
WB	45	546	6	0.67
TOTAL	14685	209905	2128	244.21

TABLE 2.2: QUANTIFICATION OF IRON AGE AND ROMAN POTTERY BY FABRIC

Fabric	Sherds	Weight (g)	MV	EVE
ABAET	71	3553	1	0.27
ALH	10	318	1	0.1
BB	44	1669	30	3.71
BB1	10	127	3	0.15
BB2	12	78	3	0.18
BSW	1202	19571	233	25.494
BUF	103	1566	14	1.02
BUFM	1	52	1	0.08
CEP	1	2		
CGRHN	22	87		
CGSW	74	1232	24	1.9
COLB	19	303	1	0.65
COLBM	7	431	4	0.53
COLC	10	34		
EGRHN	24	161	3	0.11
EGSW	60	1628	22	1.54
ESH	159	2855	29	2.47
FLINT	184	3881	2	0.47
FLSAND	28	534	2	0.53
GLAUC	699	7257	45	4.43
GRF	593	7983	138	15.18
GROG	18	313	1	0.05
GROGC	10	197		
GRS	9632	124188	1357	159.98
HAB	6	82	2	0.19
HAR	36	534	18	2
HAWG	2	44		
HAWO	3	24	3	0.15
HAWOM	2	49	1	0.06
HAX	110	1286	17	3.04
HAXM	1	6		
HGG	2	12		
LGROG	1	10	1	0.07
LSH	22	161	4	0.32
MEK	2	185	2	0.26
MICW	35	344	2	0.06
MSR	20	186	3	0.33
MWSGF	1	15	1	0.06
MWSGS	10	143	4	0.43
MWSRF	7	70		
MWSRS	4	91		
MWSRSM	4	379	2	0.33
NFWW	1	4		
NGWF	1	3		
NKG	62	662	6	1.04
NKO	7	62		
NKWO	16	152	1	0.07
NVC	306	2806	32	4.07
NVCM	2	266		
NVG	11	163	1	1
NVM	7	209	2	0.11
NVP	17	386	1	0.18
OXP	2	24		
OXRC	28	556	3	0.25
OXRCM	9	120	2	0.18
OXSW	4	10	1	

OXW	15	527	1	0.4
OXWM	22	1214	9	0.62
PATCH	20	763	2	0.37
PORD	3	27	1	0.1
RED	460	5654	58	5.9
RET	16	218	2	0.18
SAND	182	2240	14	1.07
SGSW	11	73	2	0.07
SHELL	9	60		
SOLM	2	53	2	0.09
STOR	153	10216	11	1.07
UCC	9	180	1	1.09
UPOT	7	76		
UWW	36	1444	2	0.21
VRGR	1	47		
VRW	5	49		
TOTALS	14685	209905	2128	244.21

TABLE 2.3: MIDDLE IRON AGE – POTTERY FROM KEY CERAMIC GROUPS, C 400-100BC. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM. G = JAR.

Fabric	G Bead rim	G Everted rim	G Necked	G S-profile	G Unspecified	G Vertical rim	Total	%
ESH	0.03						0.03	1
FLINT	0.47						0.47	15
FLSAND							*	
GLAUC		0.4	0.07	1.58			2.18	70
GRF							*	
GRS							*	
MICW						0.03	0.03	1
MWSRS							*	
RED							*	
SAND		0.17		0.08	0.07	0.09	0.41	13
SHELL							*	
STOR							*	
Total	0.5	0.57	0.07	1.66	0.07	0.12	3.12	-
%	16	18	2	53	2	4	-	-

TABLE 2.4: EARLY ROMAN – POTTERY FROM KEY CERAMIC GROUPS (AREA A), AD43-130. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM.

Fabric	G Jar	H Beaker	Total	%
BSW	0.1		0.1	20
GLAUC	0.08		0.08	16
GRF	0.08	0.23	0.31	63
GRS			*	
HAWG			*	
PATCH			*	
RED			*	
Total	0.26	0.23	0.49	-
%	53	47	-	-

TABLE 2.5: EARLY ROMAN – POTTERY FROM KEY CERAMIC GROUPS (AREA B), AD43-130. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM.

Fabric	A Platters	C Bowls	G Jars	H Beakers	Total	%
BSW			0.71		0.71	17
BUF		0.14			0.14	3
COLB					*	
ESH			1.17		1.17	27
GRF			0.36	0.57	0.93	22
GROG					*	
GRS	0.05		0.36		0.41	10
HGG					*	
MWSRF					*	
MWSRS					*	
NKG	0.15		0.29		0.44	10
RED			0.23		0.23	5
SGSW					*	
STOR			0.23		0.23	5
UPOT					*	
UWW					*	
VRW					*	
Total	0.2	0.14	3.35	0.57	4.26	-
%	5	3	79	13	-	-

TABLE 2.6: MIDDLE ROMAN – POTTERY FROM KEY CERAMIC GROUPS, AD120-250. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM.

Fabric	B Bead-rimmed dish	B Groove-rimmed dish	G Jar	Total	%
BB	0.08			0.08	19
ESH				*	
FLINT				*	
GLAUC			0.18	0.18	42
GRS	0.1	0.07		0.17	40
NVC				*	
SAND				*	
Total	0.1	0.07	0.18	0.43	-
%	23	16	42	-	-

TABLE 2.7: PHASE LR1 – POTTERY FROM KEY CERAMIC GROUPS, AD250-400+. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM.

Fabric	B Dishes	C Bowls	E Bowl-jars	G Jars	H Beakers	Total	%
ABAET						*	
BSW	0.38			1.47	0.04	1.89	44
CGRHN						*	
CGSW		0.01				0.01	0
EGRHN						*	
EGSW						*	
FLINT						*	
GLAUC				0.03		0.03	1
GRF	0.36		0.13	0.2		0.69	16
GRS	0.52		0.08	0.81		1.41	33
HAR						*	
HAX						*	
LSH						*	
NKG						*	
NVC					0.18	0.18	4
OXWM						*	
RED	0.05					0.05	1
RET						*	
SAND						*	
STOR						*	
Total	1.31	0.01	0.21	2.51	0.22	4.26	-
%	31	0	5	59	5	-	-

TABLE 2.8: PHASE LR2 – POTTERY FROM KEY CERAMIC GROUPS, AD250-350. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM.

Fabric	B Dishes	C Bowls	D Mortaria	E Bowl-jars	F Cups	G Jars	H Beakers	J Flagons	Total	%
BB	0.35								0.35	3
BSW	1.84			0.13		1.48			3.45	29
CGSW					0.12				0.12	1
COLB								0.65	0.65	5
COLC									*	
EGRHN									*	
EGSW			0.13						0.13	1
GRF	0.67	0.09		0.35		0.1	0.25		1.46	12
GRS	1.56			0.38		2.8			4.74	40
NFWW									*	
NKG									*	
NVC							0.59		0.59	5
OXW									*	
OXWM									*	
PATCH									*	
RED	0.05					0.38	0.06		0.49	4
SGSW									*	
STOR									*	
UWW									*	
Total	4.47	0.09	0.13	0.86	0.12	4.76	0.9	0.65	11.98	-
%	37	1	1	7	1	40	8	5	-	-

TABLE 2.9: PHASE LR2 – POTTERY FROM KEY CERAMIC GROUPS, AD350-400+. QUANTIFICATION BY EVE. * = FABRIC PRESENT, BUT WITH NO SURVIVING RIM.

FABRIC	B Dishes	C Bowls	D Mortaria	E Bowl-jars	G Jars	H Beakers	J Flagons	K Lids	R Misc	Total	%
ABAET										*	
BB	0.1									0.1	0
BB1	0.01									0.01	0
BB2										*	
BSW	0.68			0.13	0.87	0.03				1.71	4
BUF					0.19					0.19	0
CGSW		0.16								0.16	0
COLB										*	
COLBM			0.17							0.17	0
EGRHN						0.06				0.06	0
EGSW	0.07	0.17								0.24	1
ESH					0.08					0.08	0
GLAUC										*	
GRF	0.4				0.05	0.07				0.52	1
GRS	7.29	0.07		0.59	22.73	0.64		0.01	0.1	31.43	82
HAB	0.12									0.12	0
HAR	0.13			0.12		0.18				0.43	1
HAX	0.03			0.1			1			1.13	3
LSH					0.14					0.14	0
MEK					0.26					0.26	1
MWSGF	0.06									0.06	0
MWSGS		0.19			0.05					0.24	1
NKG										*	
NKO										*	
NKWO										*	
NVC						0.25				0.25	1
NVP										*	
OXP										*	
OXRC					0.14					0.14	0
OXRCM										*	

OXW										*	
OXWM										*	
PATCH										*	
PORD					0.1					0.1	0
RED	0.02				0.53					0.55	1
RET										*	
SGSW										*	
STOR					0.06					0.06	0
UWW					0.16					0.16	0
Total	8.91	0.59	0.17	0.94	25.36	1.23	1	0.01	0.1	38.31	-
%	23	2	0	2	66	3	3	0	0	-	-

TABLE 2.10: POTTERY WITH EVIDENCE OF BURNING OR RESIDUES. QUANTIFICATION BY EVE.

Vessel type	Burning (pre-breakage)	Burning (external)	Internal residue	'Lime scale'	Total
B4	0.09				0.09
D1		0.03			0.03
G	1.68	0.3			1.98
G24		1.29			1.29
G28				0.38	0.38
G3		0.14			0.14
G36				0.23	0.23
G5	0.09	0.91	0.15		1.15
M					
Total	1.86	2.67	0.15	0.61	5.29

TABLE 2.11: COMPARISON OF POTTERY FROM AREAS A AND B: VESSEL CLASS. QUANTIFICATION BY EVE.

Vessel class	Area A	Area B
B Dish	28%	13%
C Bowl	1%	4%
D Mortarium	1%	3%
E Bowl-jar	4%	6%
F Cup	0%	-
G Jar	56%	68%
H Beaker	7%	4%
J Flagon	2%	2%
K Lid	0%	1%
Total EVE	136.8	9.08
Total %	100	100

TABLE 2.12: COMPARISON OF POTTERY FROM AREAS A AND B: WARE. QUANTIFICATION BY EVE.

Ware	Area A	Area B
B Black burnished	1%	3%
C Shell-tempered	0%	2%
F Fine wares	5%	5%
M Mortaria	1%	3%
O Oxidised	2%	8%
P Prehistoric	0%	-
Q White-slipped	0%	-
R Reduced	88%	76%
S Samian	1%	3%
W White wares	1%	-
Total EVE	136.8	9.08
Total %	100	100

TABLE 2.13: INTER-SITE COMPARISON OF MEAN SHERD WEIGHTS (WEIGHT/SHERD COUNT)

Site	Mean sherd weight (g)	Reference
Springhead Roman town	17.8	Seager Smith et al. 2011, table 1
Northfleet Roman villa	15.1	Biddulph 2011, table 21
Stanford Wharf Nature Reserve	14.3	-
Shillingstone Field, Great Sampford	11.8	Martin 1998, 40
Beam Washlands, Dagenham	11.3	Biddulph forthcoming, table 2
Buildings Farm, Great Dunmow	10.9	Wallace 1997, 66
Chignall Roman villa	10.6	Wallace and Turner-Walker 1998, table 11
Strood Hall, Little Canfield	7	Biddulph 2007, CD-Rom 273

TABLE 2.14 INTER-SITE COMPARISON OF PROPORTIONS OF OPEN FORMS, DRINKING FORMS AND JARS. QUANTIFICATION BY EVE.

Plot label	Site and group date	% Dishes/ bowls	% Drinking	% Jars	Reference
1	Dagenham AD43-70	14	21	62	Biddulph 2012, table 3
2	**Stanford Wharf AD43-130**	**8**	**13**	**79**	-
3	Mucking NW AD43-130	2	4	93	S Lucy, pers. comm.
4	Mucking SE AD43-130	5	14	80	S Lucy, pers. comm.
5	Mucking NE AD43-130	10	29	60	S Lucy, pers. comm.
6	Northfleet AD43-130	38	33	27	Biddulph 2011, table 25-31
7	Ivy Chimneys AD43-130	6	0	94	Turner-Walker and Wallace 1999, table 20
8	Strood Hall AD43-130	4	26	64	Biddulph 2007, table 4.23
9	Ivy Chimneys AD260-300	16	28	44	Turner-Walker and Wallace 1999, table 20
10	Ivy Chimneys AD260-300	48	0	52	Turner-Walker and Wallace 1999, table 20
11	Great Holts AD260-300	30	14	42	Martin 2003, fig. 81
12	Northfleet AD250-300	24	5	63	Biddulph 2011, table 25-31
13	**Stanford Wharf AD250-350**	**38**	**14**	**47**	-
14	Strood Hall AD250-350	24	7	58	Biddulph 2007, table 4.23
15	Northfleet AD300-370	32	3	58	Biddulph 2011, table 25-31
16	Great Holts AD300-330	32	4	58	Martin 2003, fig. 82
17	Ivy Chimneys AD300-330	34	30	36	Turner-Walker and Wallace 1999, table 20
18	Ivy Chimneys AD300-330	50	3	44	Turner-Walker and Wallace 1999, table 20
19	Ivy Chimneys AD340-360	33	8	53	Turner-Walker and Wallace 1999, table 20
20	Northfleet AD350-400+	25	2	67	Biddulph 2011, table 25-31
21	Great Holts AD360-400+	25	14	54	Martin 2003, fig. 86
22	Great Holts AD370-400+	24	1	71	Martin 2003, fig. 88
23	Ivy Chimneys AD360-400+	54	0	42	Turner-Walker and Wallace 1999, table 20
24	Ivy Chimneys AD360-400+	49	5	46	Turner-Walker and Wallace 1999, table 20
25	Gt Dunmow shrine AD350-400+	25	16	51	Going and Ford 1988, fig. 52
26	Strood Hall AD350-400+	23	13	52	Biddulph 2007, table 4.23
27	**Stanford Wharf AD350-400+**	**25**	**6**	**68**	-

TABLE 2.15: SAMIAN BY WARE AND FORM. QUANTIFICATION BY MINIMUM NUMBER OF VESSELS (MV) / EVE.

Form	CGSW	EGSW	SGSW	Total
Drag. 18/31	2/0.11			2/0.11
Drag. 18R			1/0.04	1/0.04
Drag. 27			1/0.03	1/0.03
Drag. 31	4/0.26	6/0.22		10/0.48
Drag. 31 or 31R		1/0.13		1/0.13
Drag. 31R	1/0.03			1/0.03
Drag. 32		3/0.25		3/0.25
Drag. 33	2/0.22			2/0.22
Drag. 36		2/0.09		2/0.09
Drag. 37	2/0.17	2/0.17		4/0.34
Drag. 38	3/0.2	3/0.19		6/0.39
Drag. 43		1/0.13		1/0.13
Drag. 44	2/0.24			2/0.24
Drag. 45	3/0.33	2/0.13		5/0.46
Drag. 53		1/0.18		1/0.18
Lud. Tf’		1/0.05		1/0.05
Lud. Tx	1/0.03			1/0.03
Beaker	1/0.05			1/0.05
Cup	1/0.1			1/0.1
O&P, LV, 13	1/0.13			1/0.13
Total	23/1.87	22/1.54	2/0.07	47/3.48

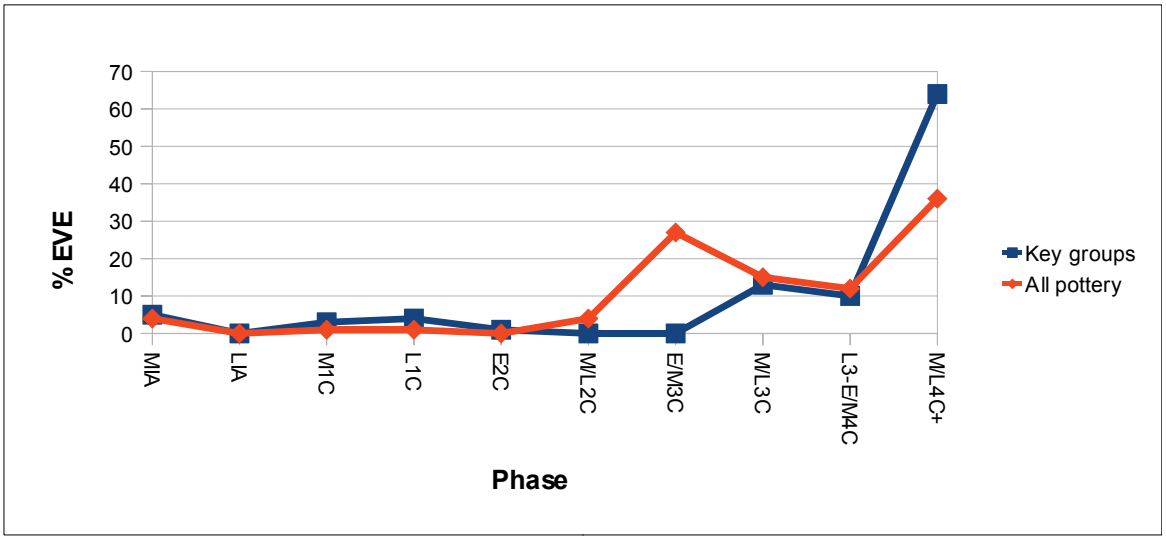
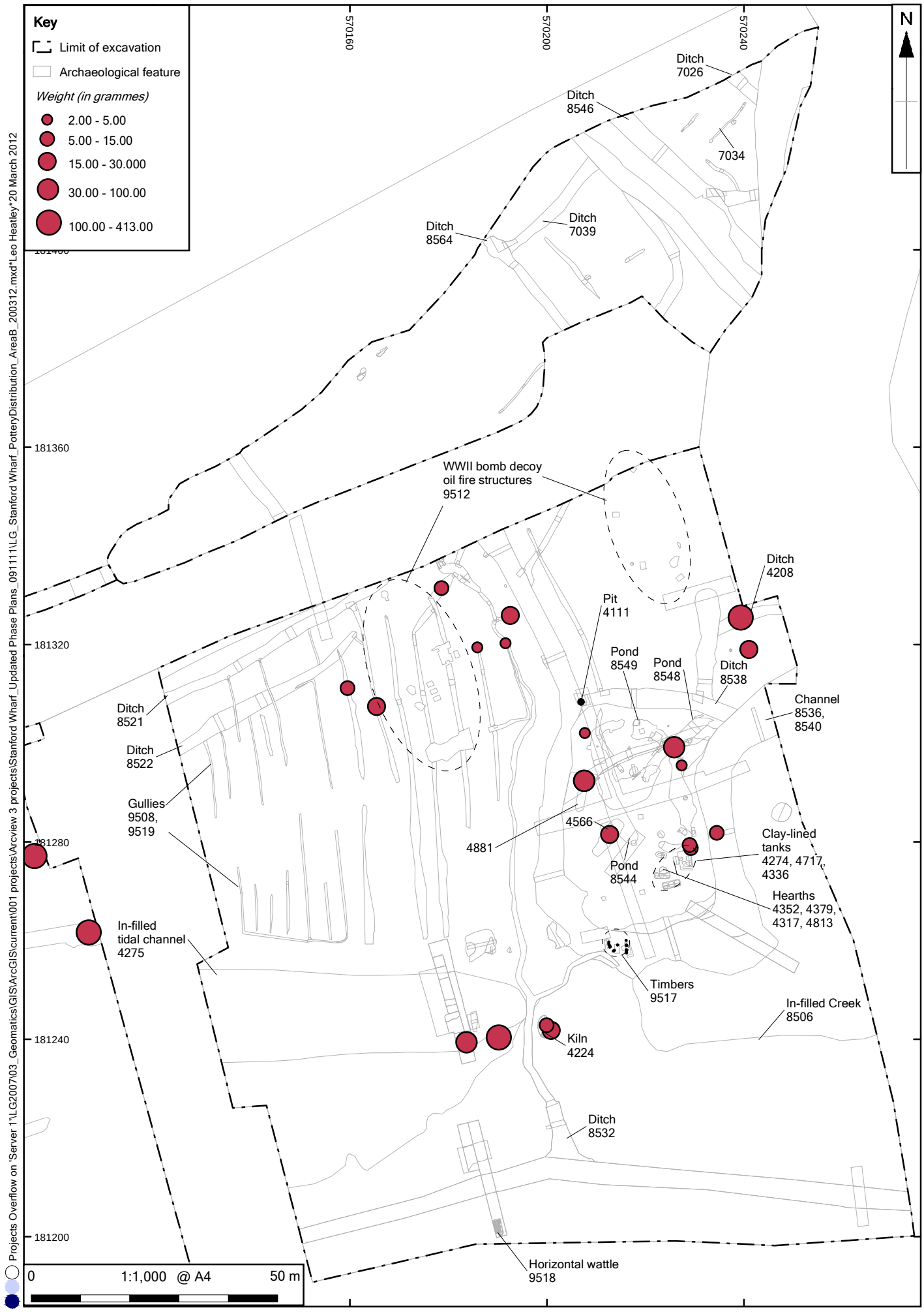
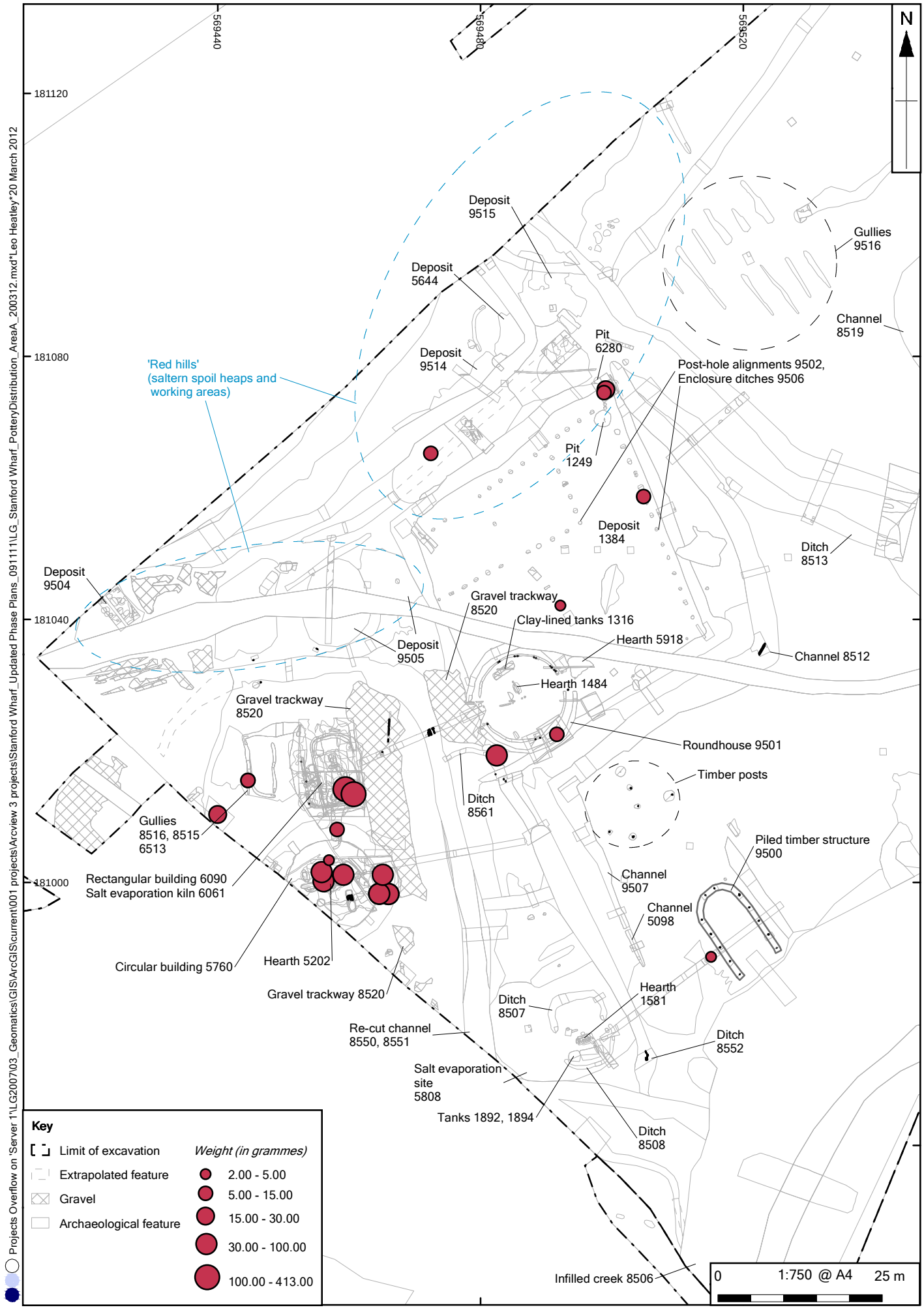


Figure 2.1: Chronological distribution of the pottery. Quantification by EVE. Phases: middle Iron Age (MIA), late Iron Age (LIA), mid 1st century AD (M1C), late 1st century AD (L1C), early 2nd century AD (E2C), Mid-late 2nd century AD (M/L2C), early-mid 3rd century AD (E/M3C), mid-late 3rd century AD (M/L3C), late 3rd-mid 4th century AD (L3/M3C), M/L4C+ (mid-late 4th century AD+).



Stanford Wharf: Plan of Area B showing the distribution of Roman pottery



Stanford Wharf : Plan of Area A showing the distribution of Roman pottery

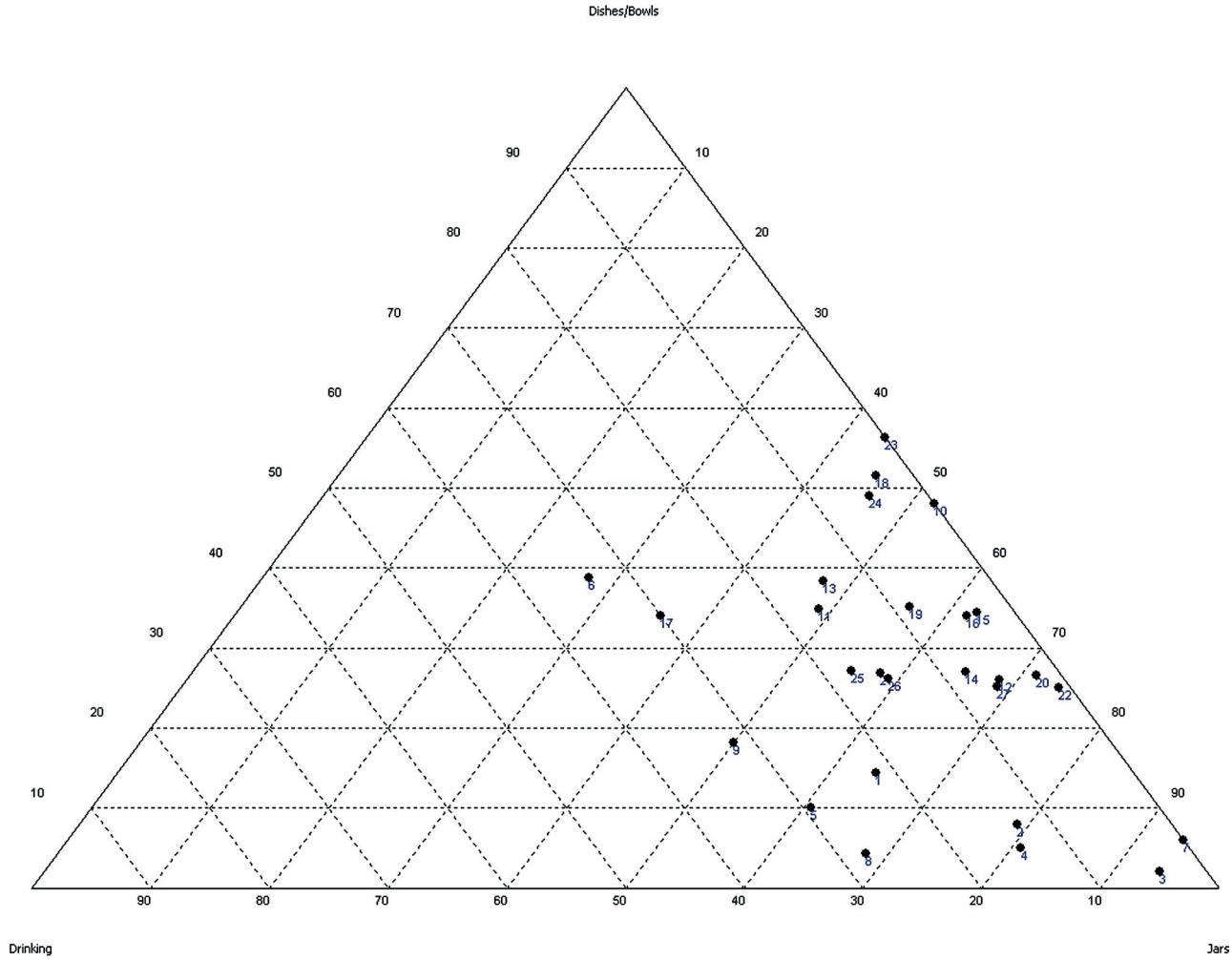


Figure 2.4: Ternary plot comparing functional distribution of pottery across selected sites. (See Table 2.14)

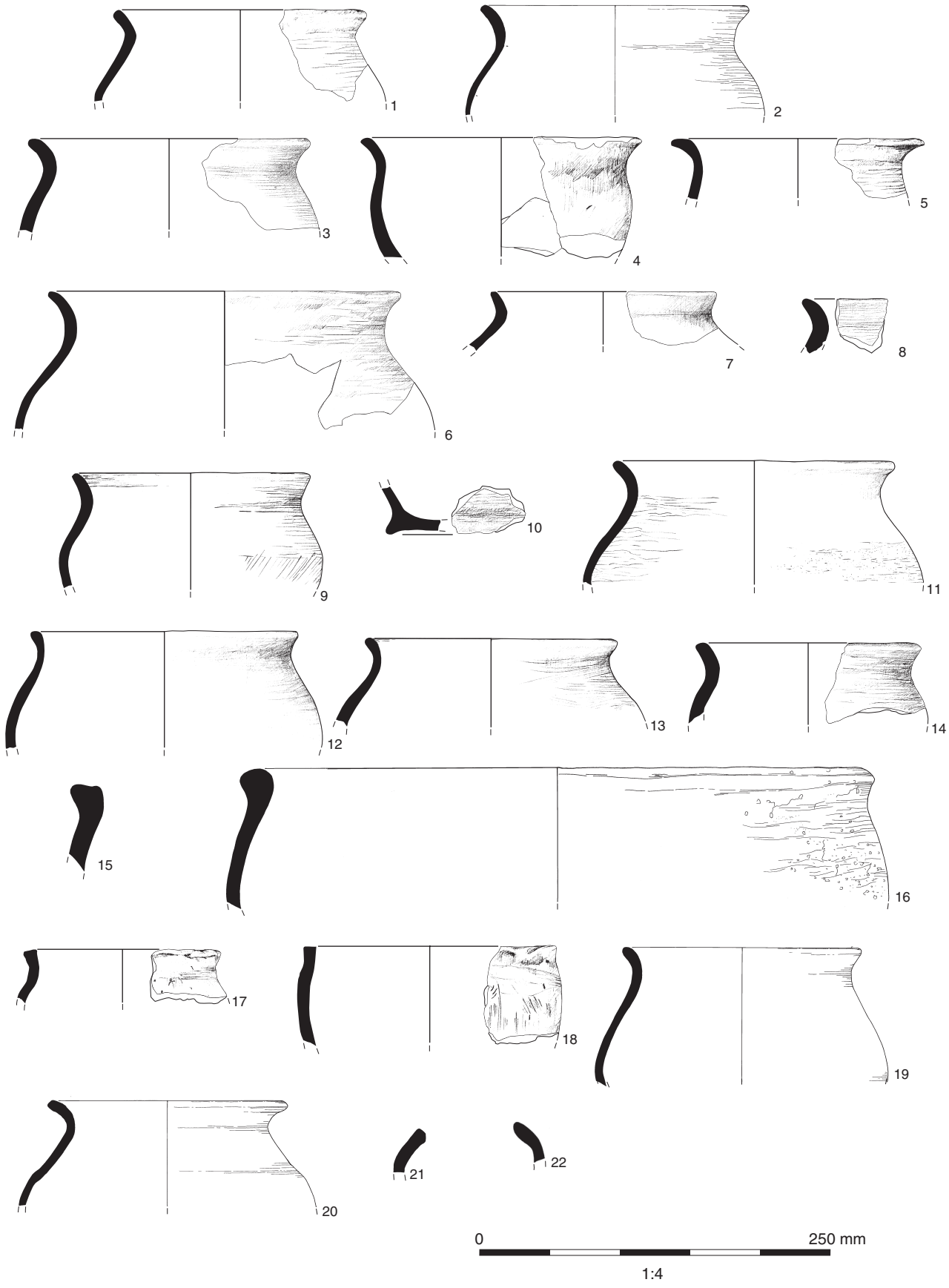


Figure 2.5: Middle Iron Age pottery

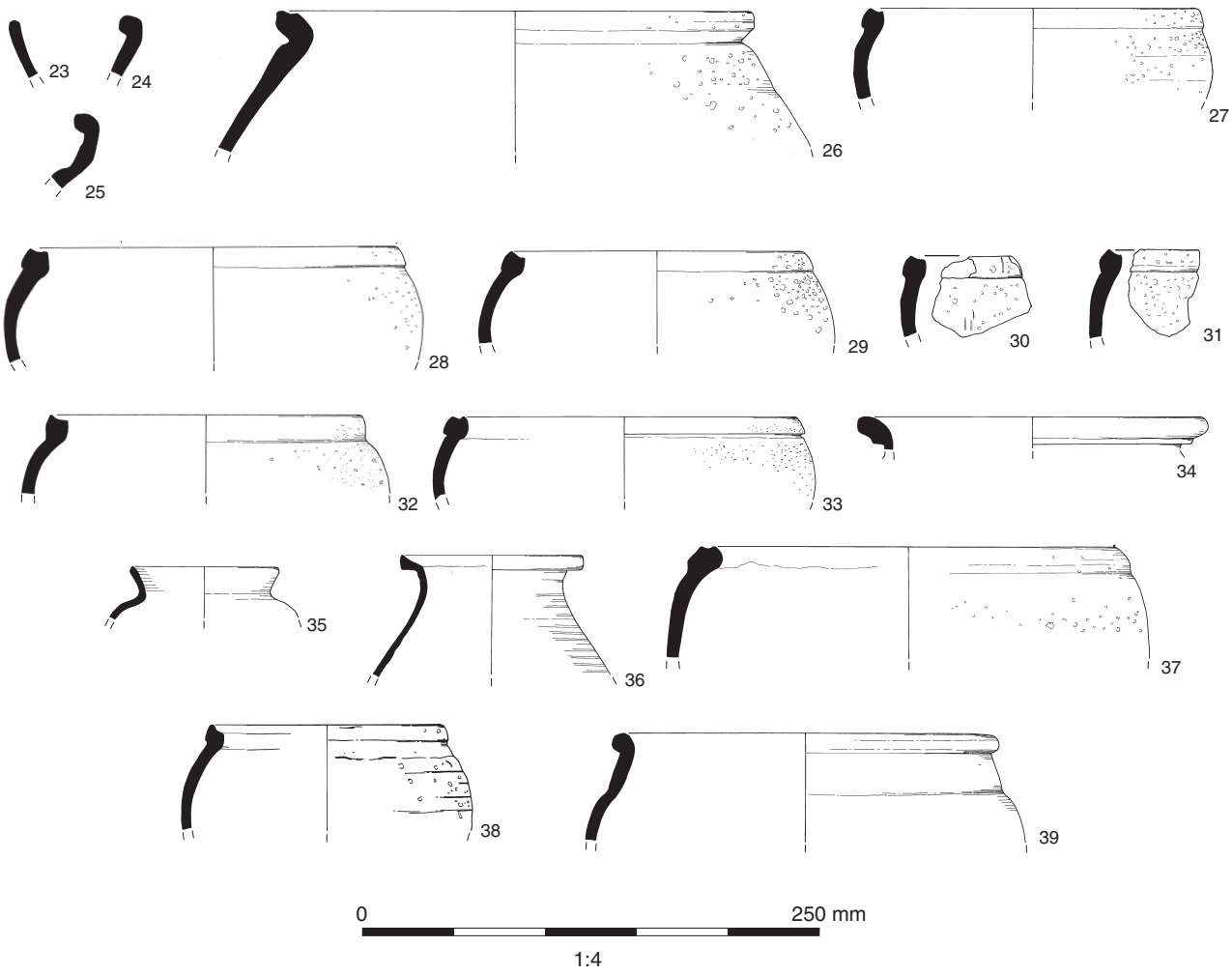


Figure 2.6: Early Roman pottery

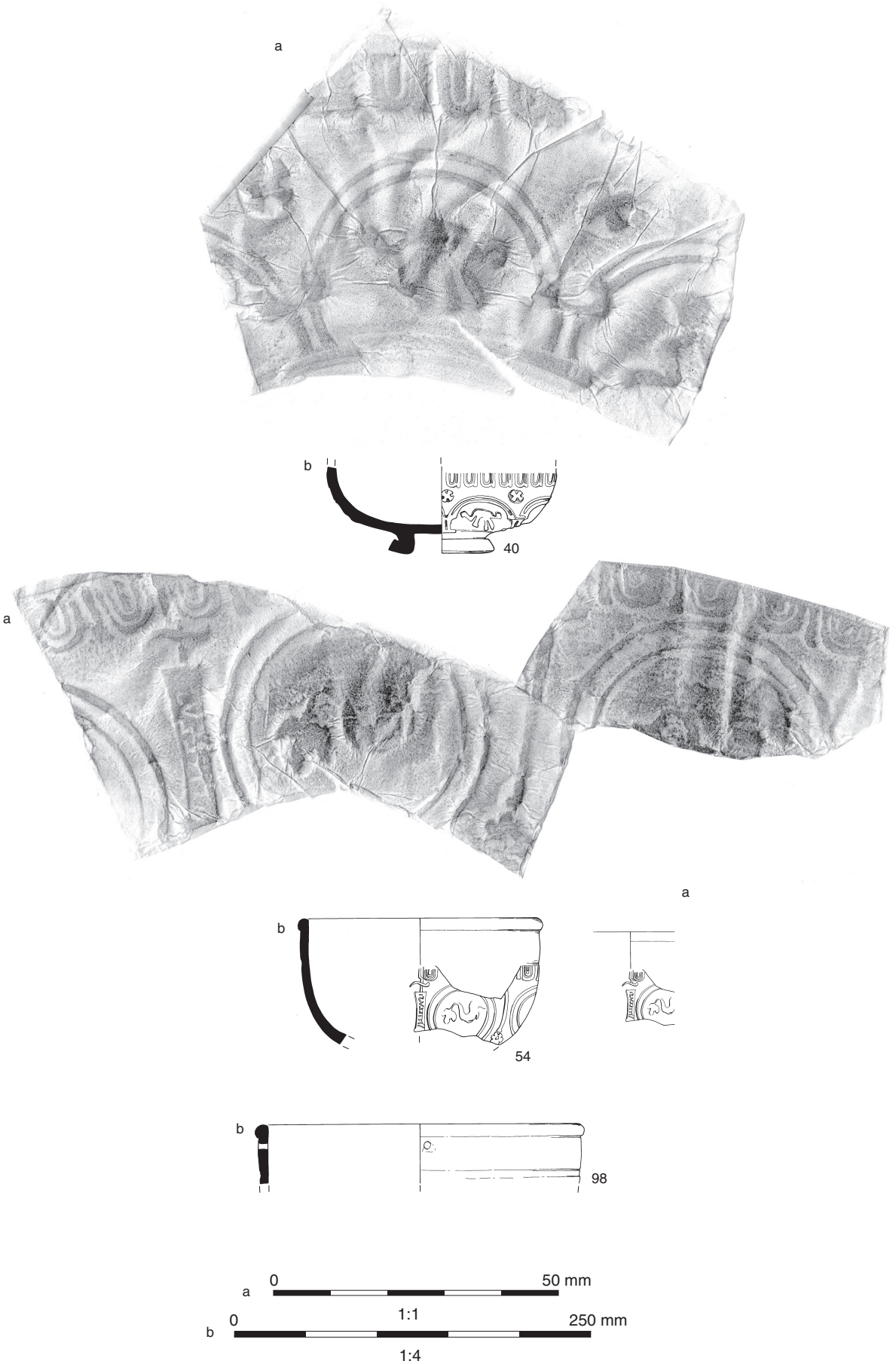


Figure 2.7: Later Roman pottery, catalogue nos 40, 54 and 98

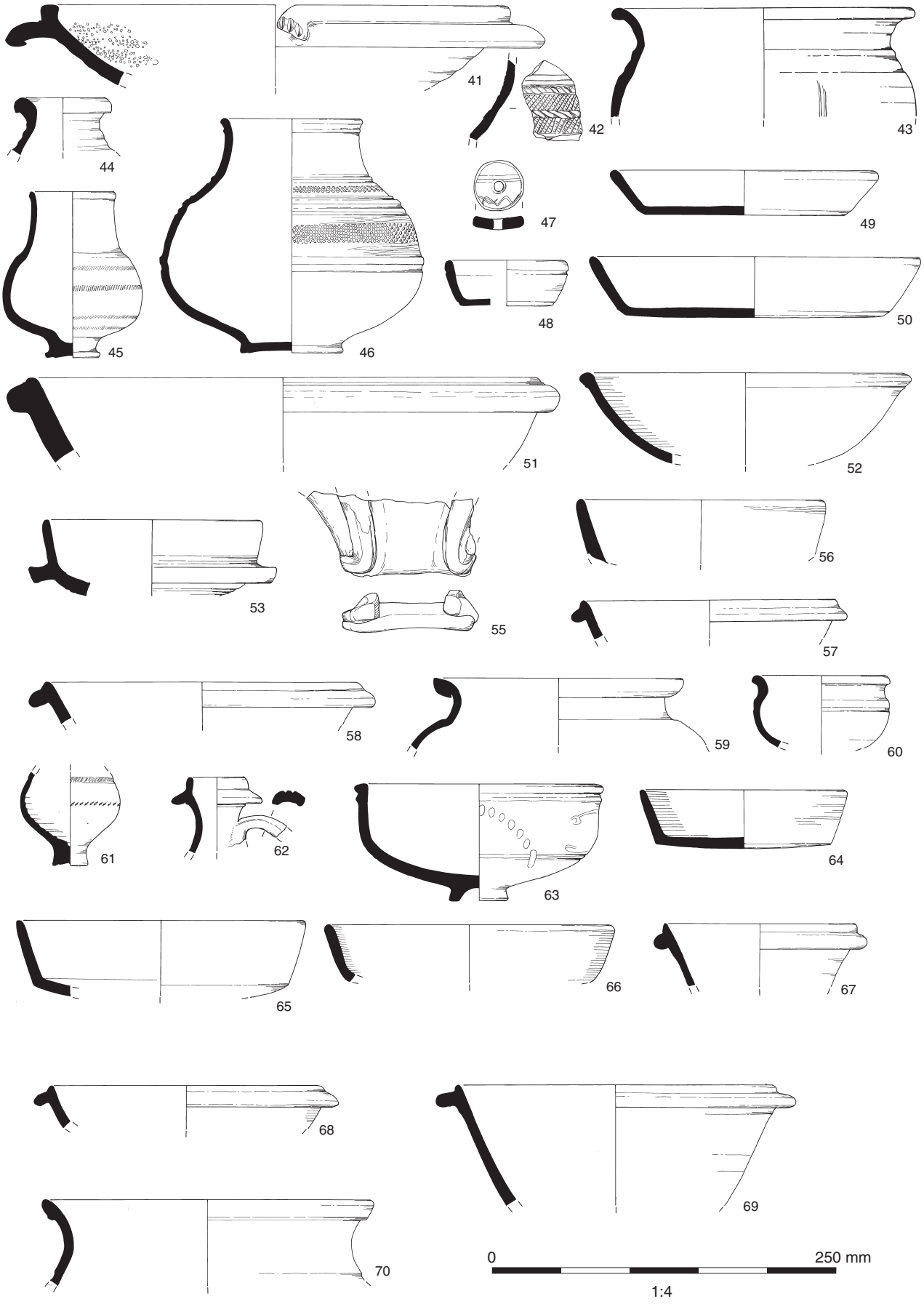


Figure 2.8: Later Roman pottery, catalogue nos 41-70

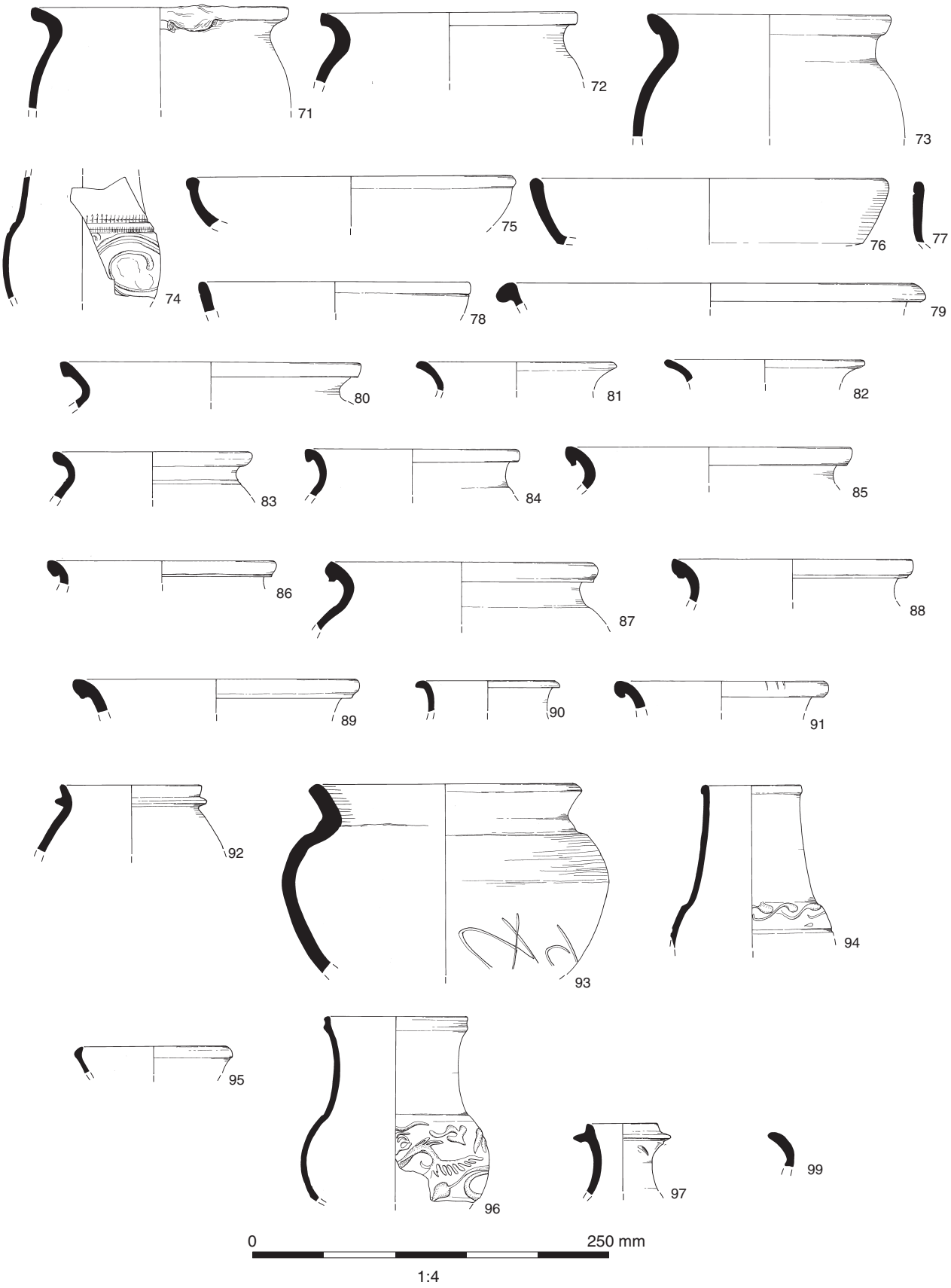


Figure 2.9: Later Roman pottery, catalogue nos 71-99

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