

ROMAN BOUNDARIES, ROADS AND RITUAL: EXCAVATIONS AT THE OLD SORTING OFFICE, SWAN STREET, SOUTHWARK

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SUMMARY

This paper details the excavations conducted by Pre-Construct Archaeology Ltd at the Old Sorting Office, Swan Street, London Borough of Southwark. It attempts to place the site in its setting within the Roman settlement of Southwark, and considers the land-use, in the context of Roman ritual, the landscape, funerary and economic activity in the area. During the Roman period the site lay at the southern margin of the Southwark settlement. The earliest activity on site, which was dated to the early to mid-1st century AD, consisted largely of agricultural features such as field ditches and drainage gullies together with a large ditch which may have marked the southern boundary of the Roman settlement. From the mid-1st century up to c.AD 140 a series of features, including pits and wells or ritual shafts, represents the growth of the settlement beyond its boundaries into former agricultural land. The period c.AD 140–250 witnessed a dramatic decline in activity on the site although wells and ritual shafts were still present. The late Roman period saw a further decline in activity with an absence of ritual shafts suggesting a change in religious attitudes. Medieval features dating from the 12th–14th centuries were revealed linked with the spread of Southwark along Borough High Street and Great Dover Street, whilst a number of post-medieval features survived later widespread modern truncation to reveal the growth of the urban area in the 17th century. The site is notable for its apparent ritual activity, which is represented by the placement of human and animal body parts and complete or near-complete pots both in boundary ditches and within the well and shafts. The site's location between the cemetery

at Lant Street and the temple complex at Tabard Square may be of significance in this respect. The ritual activity is discussed at length placing it in both its pre-Roman and Roman context.

INTRODUCTION

The Old Sorting Office site (TQ 3245 7968) lies on the junction of Swan Street and Great Dover Street, c.1km south of London Bridge and the Thames (Fig 1). It is bounded to the east by Swan Street, to the north by Great Dover Street, to the west by properties along Borough High Street, and to the south by Avon Place.

The excavation (Site Code: SWN 98) was conducted in October and November 1998, and consisted of an area c.2,500m² towards the north end of the Old Sorting Office (Fig 2). The southern end of the site had been double-basemented, removing all archaeological deposits. The majority of the north end had been basemented to the level of the natural sand and gravel, leaving only the base of intrusive features. In addition, the archaeology was further truncated by numerous large concrete pier bases, walls, and service runs.

The only area (110m²) where the complete sequence survived was at the northern end directly adjoining Great Dover Street. In this sector demolition works had removed the majority of the post-medieval deposits down to the top of the Roman levels prior to the arrival of

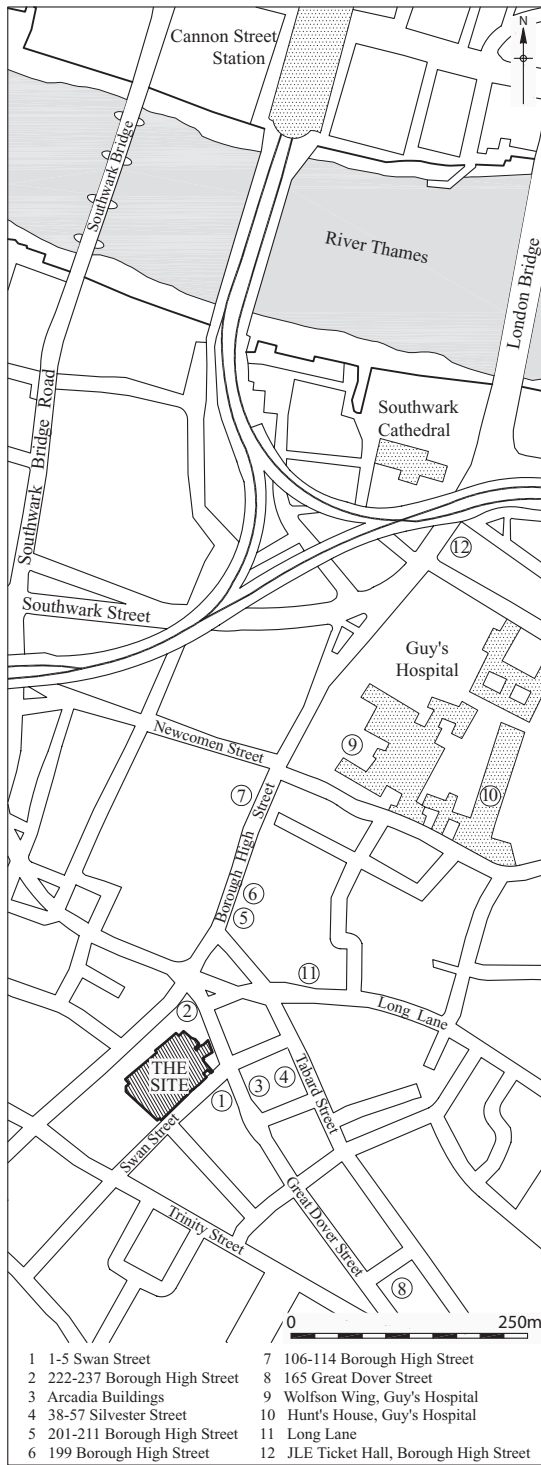


Fig 1. Site location

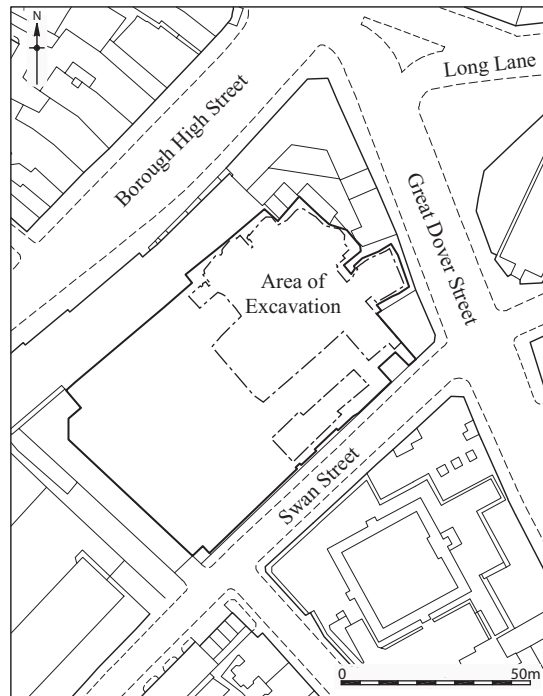


Fig 2. Excavation area

the archaeological team. The full sequence of the post-medieval deposits was, however, visible along the Great Dover Street frontage. The main body of this paper deals with the pre-Roman and Roman development of the site.

ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

The late Iron Age and Roman topography comprised numerous braided channels which formed part of the Thames floodplain. Between these channels, gravel islands of higher, drier ground provided a focus for settlement (Fig 3). The height above sea level of the gravel eyots is generally around +1.60–1.70m OD (Graham & Hinton 1988), with the base of the nearest channel to the Old Sorting Office site being recorded at -0.20m OD (Ferretti & Graham 1978).

A maximum tidal amplitude of *c.*0.0m to +1.25m OD has been suggested (Yule 1988) for early Roman Southwark, while the waterfront excavations along the north bank of the Thames would indicate a maximum amplitude of -0.5m to +1.5m (Brigham 1990, 143–5). This suggests that the margins and even the upper areas of these

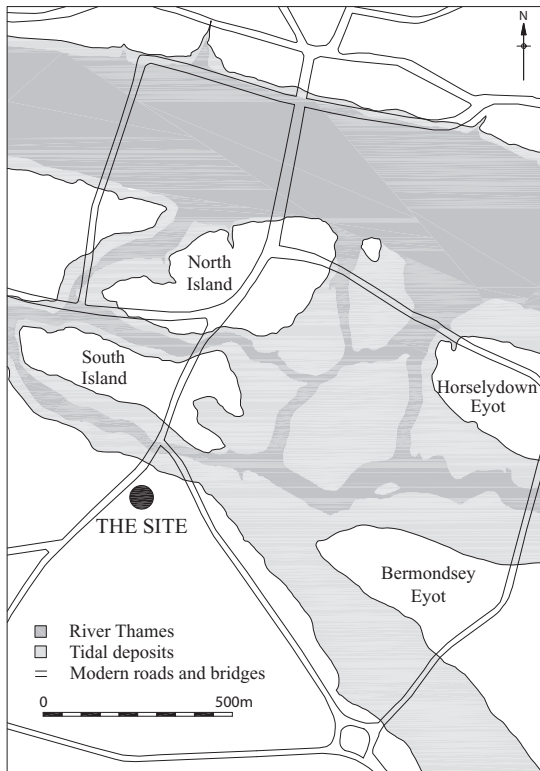


Fig 3. The topography of Southwark

eyots would have been subject to water-logging and periodic flooding. Timber revetting during the later 1st century AD has been recorded at several sites in north Southwark associated with raising and consolidating of the ground surface to the landward side. Evidence for land reclamation represented by the narrowing and backfilling of the channels has also been recorded on Borough High Street (Yule 1988) and more recently at Hunts House and the Wolfson Wing of Guys Hospital (Taylor-Wilson 2002; C Pickard pers comm). This may be due to marine regression from the 1st to 4th centuries AD, attested by the base and top levels of successive waterfront structures in the City (Brigham 1990, 143–5), the result of which is likely to have been a less brackish estuary and the consolidation of the mud flats.

Southwark was the first upstream location where it was possible to bridge the Thames at the time of the Roman invasion in the mid-1st century AD. The settlement of Roman Southwark was concentrated on two gravel islands, now known as the north and south islands. Four

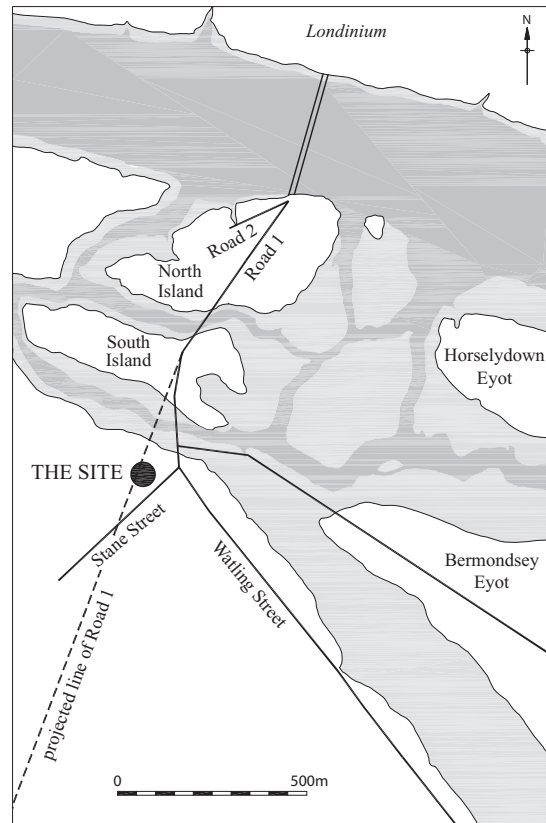


Fig 4. Roman roads with possible projected line of Road 1

Roman roads have been recorded in this area (Graham & Hinton 1988) (Fig 4). Road 1, tentatively dated to AD 45–60, followed the high ground from the bridgehead at London Bridge southwards to meet Watling Street and Stane Street, the roads to the Kent and Sussex coasts respectively, roughly following the line of the current Borough High Street. The junction of these roads is thought to have been around the intersection of Swan Street, Silvester Street, and Great Dover Street, with Watling Street running south-east roughly parallel to Great Dover Street, and Stane Street thought to run south parallel to Swan Street. The fourth road, Road 2, headed south-west from London Bridge.

The Old Sorting Office site lies on the northern edge of the terrace gravels, at the southern edge of one of the Southwark channels, and close to the projected junction of Watling Street and Stane Street. The southern edge of the channel is believed to be $\approx 70\text{m}$ from the north-easternmost part of the site.

Watling Street has been traced in several locations on Borough High Street (Graham & Hinton 1988), and recorded crossing the channel to the north at Arcadia Buildings, Silvester Street (Dean 1980) to the south, and 201–211 Borough High Street (Ferretti & Graham 1978) to the north. The road at this latter point appears to have been carried over the channel on a causeway rather than a bridge, with its foundations consisting of corduroyed timber. It has been postulated that this causeway may only have crossed the silted up edges of the channel and have led to a bridge over the main channel. At Arcadia Buildings, Watling Street consisted of a 12m-wide metalled road surface crossing a smaller tributary channel, with a quarry ditch or more probably a drainage ditch running parallel to the north-east. At 165 Great Dover Street (Mackinder 2000) a 25m length of the road was recorded.

The excavations at 201–211 Borough High Street indicated that the channel was open from the 1st century BC to the early 1st century AD, and that when the causeway and the road were built during the pre-Flavian period the channel became choked with vegetation and was only active during periods of flooding. The environmental information from this site suggests that the channel was filled with sedges and rushes, with a scrub environment, with species such as alder, nettles and campion, on the higher ground around. The road, with its overlapping timber foundation, appears to be of pre-Flavian date, but earlier post lines underlying it may be the remains of a bridge. This suggests that a causeway replaced a bridge when the channel silted up.

Within the main settlement areas the roads were lined with clay and timber buildings (Heard *et al* 1990), later replaced by stone buildings. This pattern is shown at 222–237 Borough High Street (Bird *et al* 1983), immediately to the north of the Old Sorting Office, where a clay and timber building was recorded, at Arcadia Buildings where a clay and timber building was superseded by a second building along the line of Watling Street, and at 38–57 Silvester Street (TAB 93, SMR 091738) where similar stratigraphy was recorded but not excavated (K Wooldridge pers comm). A small gravelled path was also identified at Arcadia Buildings, running at right angles to the road, indicating side streets between building plots.

SITE SUMMARY AND SEQUENCE

The natural: Phase 1

Natural deposits were composed of alluvial Holocene sands overlying terrace gravels. The excavation of basements through the top of the sand had masked the natural topographic profile. However, the sands gave way to gravels to the south and east, suggesting that the natural topography slopes down to the north and west, with the sands getting progressively thicker until no gravels were observed in even the deepest intrusive features.

The highest level recorded on the natural strata was at the untruncated north end where the sands were recorded at +1.58m OD, with the remainder graded to *c.*+1.40m OD. It should be noted that this grading may have distorted the distribution of features to the south and east, with only the deeper features remaining. This is particularly true for Phase 2 and the post-medieval phases.

On the north side of the channel, at 201–211 Borough High Street, the top of these sands was recorded at *c.*+1.70m OD, suggesting either that the land surface on the northern bank was higher or that *c.*0.30m or more of its thickness had been truncated by the basement on the south-west side of the site.

The early Roman: Phase 2

This phase is characterised by linear features (Fig 5) representing a probable agricultural landscape based on a managed field system, comprising field ditches and drainage gullies. These are of early to mid-1st-century date. The remaining features relate to occupation activity to the north, and include ditches, pits, and post-holes, which appear from their alignment to have post-dated the field system. This may be evidence for the establishment of the southern Roman settlement over the top of the established pre-Roman agricultural landscape.

A large (4.5m wide) U-profile ditch ran roughly north to south along the south-west side of the site. This disappeared into section to the north and south, and it is presumed to terminate to the north as it was not observed across the remainder of the area. Pottery from the fills of this ditch is dated to *c.*AD 43–60 (Assemblage 1, Lyne 2000) and the assemblage includes three sherds of Early Roman Sand-tempered A and B ware as well as nine sherds from an early Alice

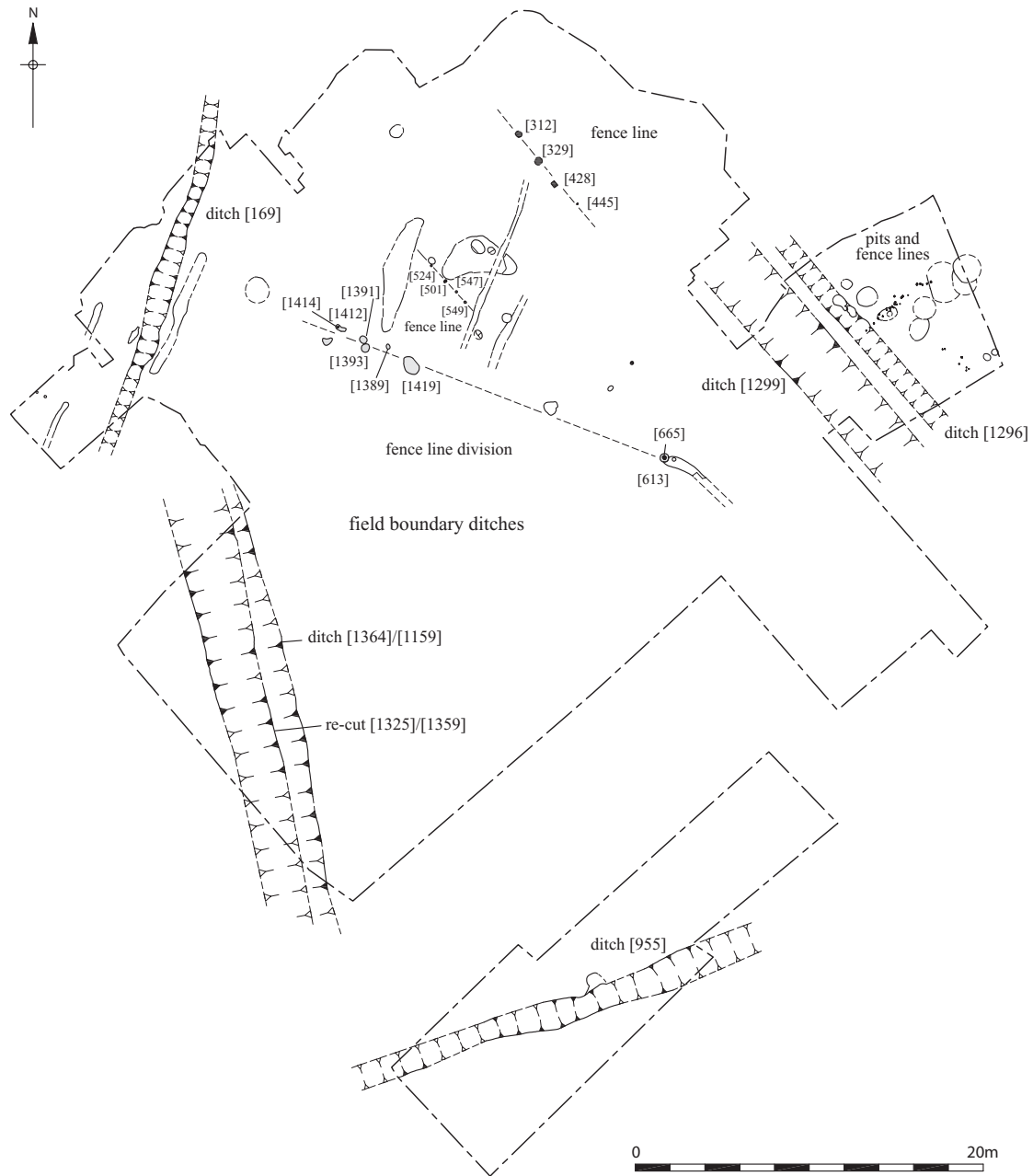


Fig 5. Phase 2 features

Holt/Surrey ware type 1-20 jar (Lyne & Jefferies 1979).

This ditch was recut and pottery from the fills was again pre-Flavian, with sherds from a Terra Nigra platter of CAM 13 form (c.AD 43–70, Fig 6.1), a bead-rim jar in North Kent Shell-tempered ware (c.AD 43–80, Fig 6.2), a necked

grog-and-sand-tempered jar (Fig 6.3), and a moulded jar rim in Sugar Loaf Court ware (c.AD 50–60, Fig 6.4). The presence of sherds of Alice Holt/Surrey ware from vessels dating to AD 55–120 in the upper fills suggests that the feature was backfilled at a later stage to level the area.

To the north, a smaller U-profile ditch was

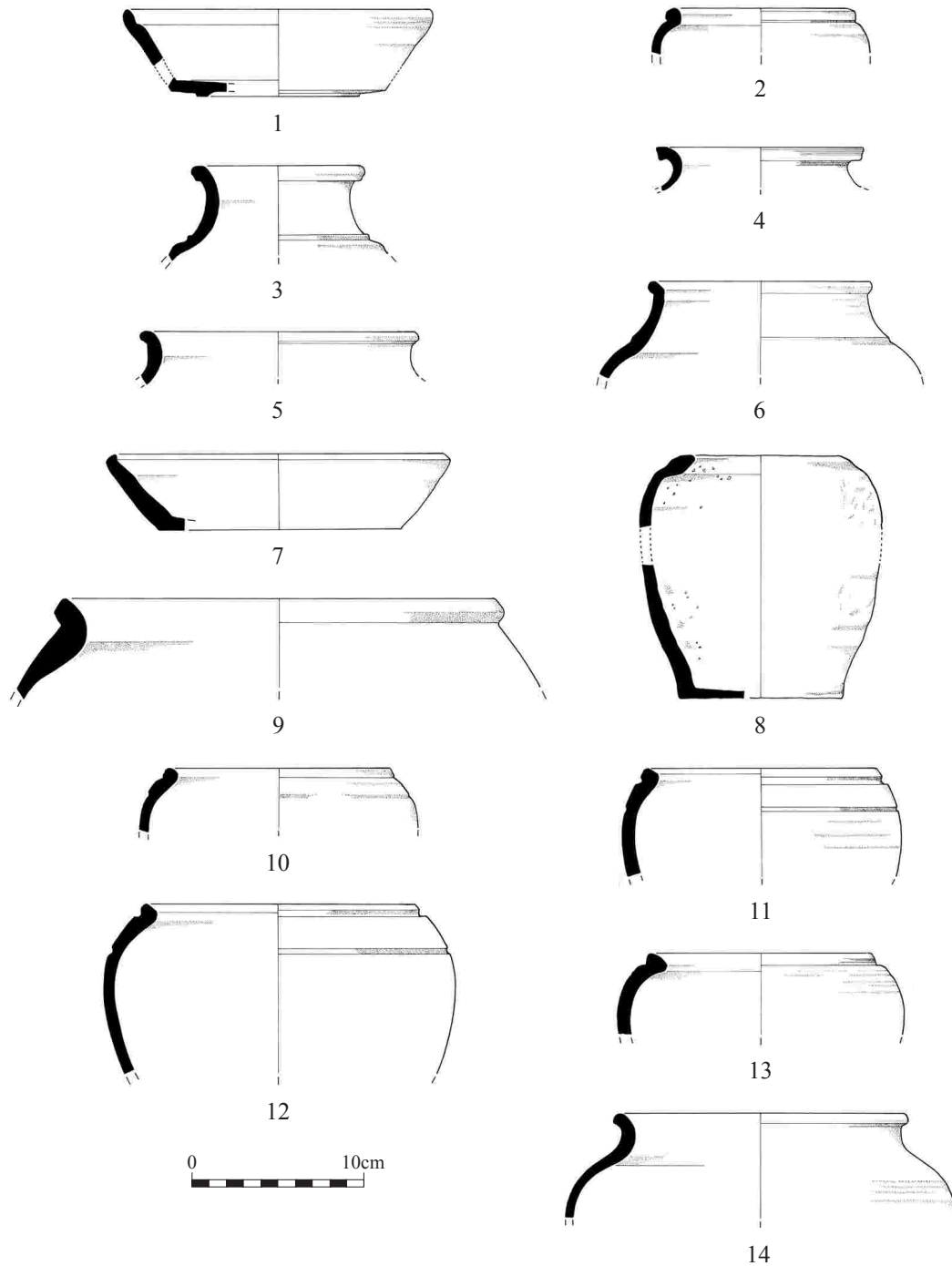


Fig 6. Pottery Nos 1-14

recorded on roughly the same alignment. Pottery dates this feature to AD 43-70. To the south a ditch of similar dimensions ran roughly east to

west, continuing into the section at both ends.

It is thought that these three ditches represent field boundaries. Associated were sections of six

gullies. These all ran on north-east to south-west alignments, and probably represent smaller surface drainage in the fields defined by the major ditches, a likely necessity in this area, with its braided channels and the flooding hazard. Pottery from these features suggests a date of AD 43–80. To the south, and running at right angles, a series of post- and stakeholes was recorded; these produced two sherds in Alice Holt/Surrey ware (AD 55–120). The postholes may represent a fence line within the field system; they probably pre-date the construction of the roads in the area, and their alignment reflects this.

To the north end of the site a 3m length of ditch was identified, truncated by later features. It had straight sides and a flat base. There were no finds from this feature. It was on a north-west to south-east alignment, compared to the general north–south and east–west alignments of the other ditches, suggesting that it may follow a different set of boundary criteria, possibly respecting the line of the channel to the north-east rather than Stane Street to the south-east, and by implication that it may have had a differing function. This ditch appears to have been superseded late in the phase by a second, larger ditch on the same alignment, *c.*1m to the south. Finds were limited to two sherds of pottery dated to *c.*AD 43–50.

Four possible fence lines were recorded. All respect the north-west to south-east alignment of the ditches, implying a relationship to those rather than to the field system. The first consisted of a line of four stakeholes to the north. Parallel to these, *c.*8.5m to the south, was a further line of four stakeholes.

To the north of these ditches two further fence lines were found. The first comprised 28 stakeholes on a north-east to south-west alignment. The second ran at right angles to this, and on the same alignment as, possibly forming a fence along the truncated line of, ditch [1296]. A series of cuts may represent rubbish pits at the back of settlement activity. The change of alignment observed may be an indication of changing land use during this period, with encroachment or imposition of settlement onto the agricultural landscape. The ditches and their associated fence lines may represent a boundary, albeit much truncated by later activity, possibly parallel to the projected line of Stane Street.

The remaining features of this phase are confined to the north and west as a result of the levelling and consist of isolated pits, postholes,

and amorphous features which may be quarry pits, suggesting that the land here was outside any settlement. The absence of clear structural elements would indicate that settlement activity was further to the north, outside the area of excavation, possibly in the form of ribbon development along the projected line of Watling Street or along the south bank of the channel. The presence of a vestigial boundary, in the form of a heavily truncated ditch, may suggest that it forms the boundary between the late Iron Age/early Roman settlement of Southwark and agricultural land to the south. This boundary appears to have been of some importance as it was cut twice on the same line.

Small quantities of lithics and prehistoric pottery were also found. Most of this earlier material comes from later contexts and must be regarded as residual; its presence is however an indication of earlier land use. Altogether 41 lithics were recovered (Bishop 1999), 54% of which were complete flakes and blades. The assemblage appears to date from the Mesolithic to the Bronze Age and attests to activity over a considerable period. Although redeposited all the lithics were in reasonably good condition, indicating only minimal taphonomic displacement.

The Roman: Phase 3

This phase is divided into four sub-phases, reflecting the continuity of Roman occupation of the site and the changing land use. The features appear to indicate encroachment onto the agricultural land, and represent the southward growth of the settlement during the 1st and 2nd centuries and its subsequent contraction.

Pre-Flavian and early Flavian (c.AD 50/55–60): Phase 3a

This phase is represented by 49 features composed of ditches, pits, a line of stakeholes, and three wells (Fig 7). The features represent an increase in activity to the north and, presumably, a displacement of the agricultural landscape from the preceding phase. The phase is characterised by the reinforcement of the northern boundary, with a possible side road or farm track being established through the boundary. The first sign of the use of the site for ritual purposes comes in the form of three wells or ritual shafts, and the presence of possible votive offerings in the boundary ditches.

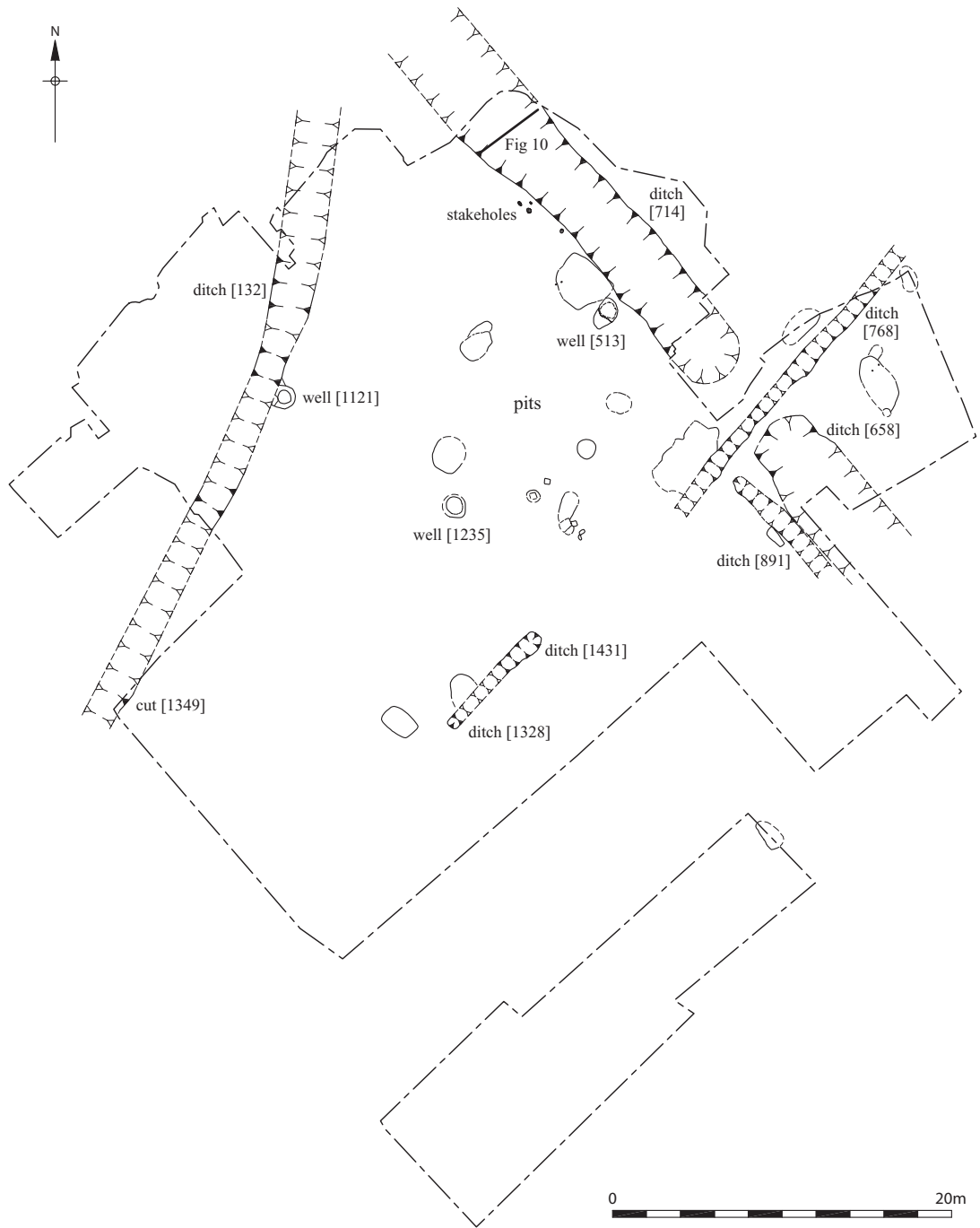


Fig 7. Phase 3a features

The major features consist of two large ditches on the north side of the site. The first [714] had a U-shaped profile and is *c.*4.5m wide, running north-west to south-east (Fig 7). This continued

into section at both ends, and is assumed to have terminated under the south-eastern baulk. Next to this a similar sized ditch with a terminus to the north-west, beyond the edge of excavation,

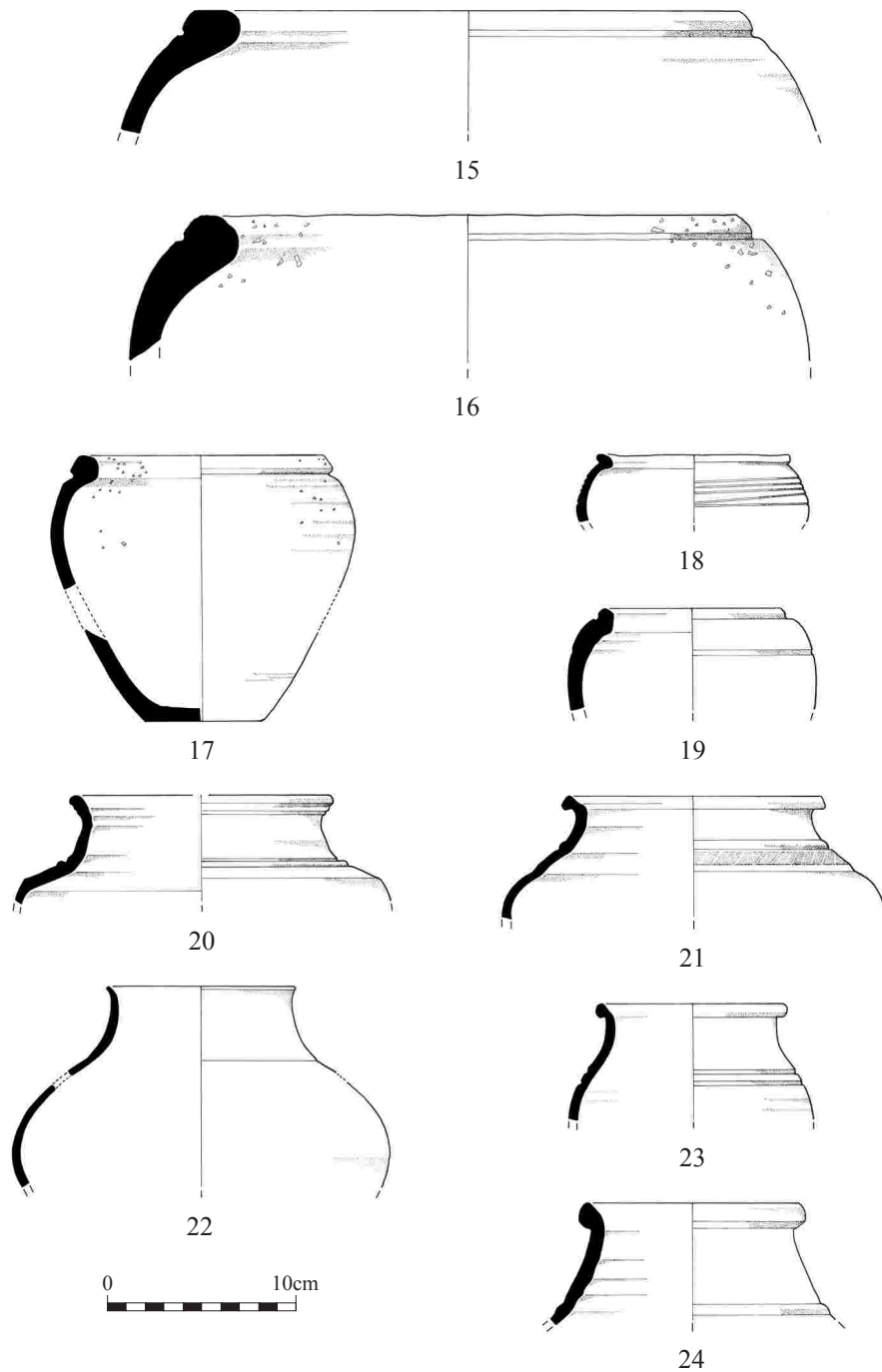


Fig 8. Pottery Nos 15–24

is assumed to be an extension of [714]. This cut ditch [1299] of Phase 2, and it is thought these features form a re-working of the boundary line established in the earlier phase, with a possible

entrance way introduced through the ditch line, represented by the butt-end of [658] and presumed butt-end of [714].

The pottery assemblage (Lyne 2000, Assemb-

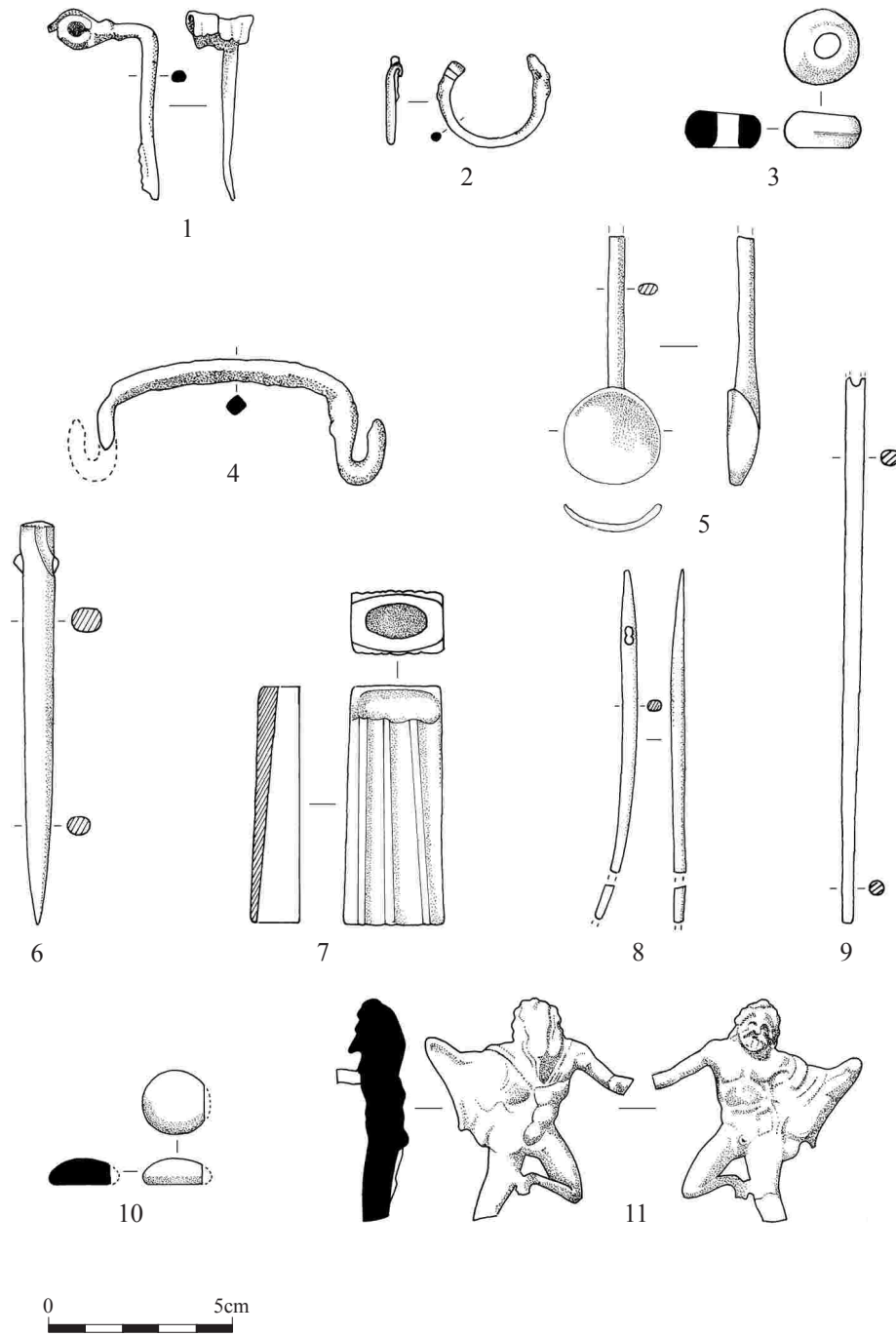


Fig 9. Small finds Nos 1–11

lage 4) from these two ditches is closely dated to between *c*.AD 50 and 60, indicating that the feature was relatively short lived (Figs 6.6–14; 8.15–24; 11.25–29). The lower fills of ditch [714]

contained polished ‘Belgic’ grog-tempered ware in the Late Iron Age tradition dating to before AD 60 (Fig 6.6–7), while nearly all of the Alice Holt/Surrey greywares from it (*c*.AD 50–120) come

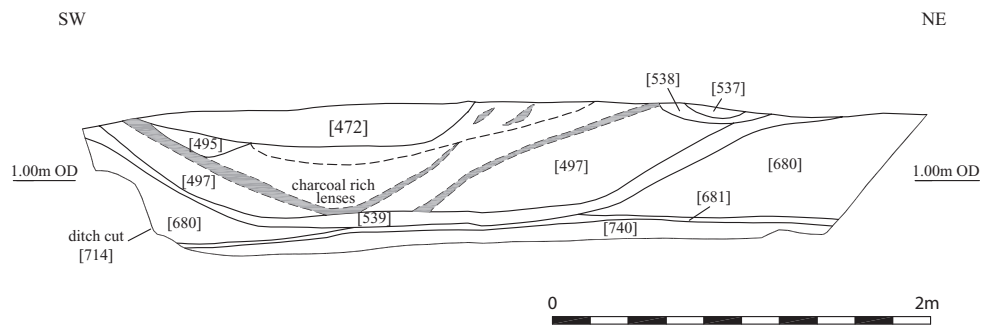


Fig 10. Section of ditch [714]

from the upper fills (Fig 8.19–21). The samian from this ditch is all South Gaulish and includes stamps of Modestus (*c.*AD 45–70) and Celer (*c.*AD 40–65) on Dr 29 bowl sherds. An incomplete bow brooch (SF 28, Fig 9.1) dated to the 1st century AD was also recovered and a 1st-century penannular brooch (SF 36, Fig 9.2) with a flat, rolled coil terminal was found in ditch [658].

Tip-lines visible in the sections of ditch [714] (Fig 10) suggest that material was dumped from the north, another indication that settlement activity lies in this direction. Four stakeholes to the south of ditch [714] may be the remains of a fence line further reinforcing the boundary represented by [714]/[658].

Two disarticulated human femurs were recovered from the lower fills of ditch [714]. These came from two separate sample slots *c.*5m apart. Faunal remains (Armitage 2000) from the same contexts include the near-complete articulated skeletal remains of a sheep and a goat aged 3–4 years, and the articulated remains of the left foreleg of a horse. It is of note that of the few articulated elements from the site, six out of eleven (55%) were recovered from three ditches interpreted as being boundary ditches, and three out of eleven (27%) were associated with human remains.

On the west side of the site a linear U-profile ditch [132] was recorded on a roughly north–south alignment. This appears to have been recut, and respects the line of ditch [169] in Phase 2. This would suggest that this boundary line is of significance, having been maintained and reworked through these phases. The pottery from this feature indicates a date of *c.*AD 43–70, with three amphora stoppers among the assemblage, a probable 1st-century sestertius (SF 7; Stabler 2000), and a 1st-century rosette

brooch fragment (SF 3). Cut [1349] to the south is probably a continuation of this feature, but too little survived in the excavation area to be certain.

Three smaller ditches were recorded. The first of these was a north-east to south-west aligned, U-sectioned feature [768]. It ran through the presumed entrance way in ditches [714] and [658], at right angles to this ditch line. Included in the finds (Lyne 2000, Assemblage 5) was a shattered, but reconstructable Verulamium Region Whiteware flagon of Frere Type 107 (1972, *c.*AD 60–90), into the side of which a small hole had been drilled before it was broken. At the south-western end of [768] a section of U-shaped ditch [891] was found running at right angles to it.

A second ditch [1431], *c.*13.25m to the south, probably forms a continuation of the same line as [768], and further south still cut [1328] probably constitutes a butt-end of [1431]. The pottery from the fills of this feature (Lyne 2000, Assemblages 6 and 7) includes large fresh sherds from a small wheel-turned, bead-rim jar (Fig 11.30), a butt-beaker copy with rouletting over its body (Fig 11.31) in Early Roman Sand-tempered ware, large fragments from a South Gaulish samian Dr.15/17 platter, and the complete upper half of a flagon of Frere Type 112 in Verulamium Region Whiteware (1972, *c.*AD 60–75). The size of the fragments found and the presence of the half flagon suggest a purposeful placement of the pieces as votive offerings in the ditch terminal rather than waste disposal.

A copper-alloy figurine of Hercules (SF 70, Fig 9.11) was also found in the fill. This consisted of a well modelled male nude possibly dressed in a lion skin (Wardle 2000). A circular-sectioned bar projecting from the back of the (broken)

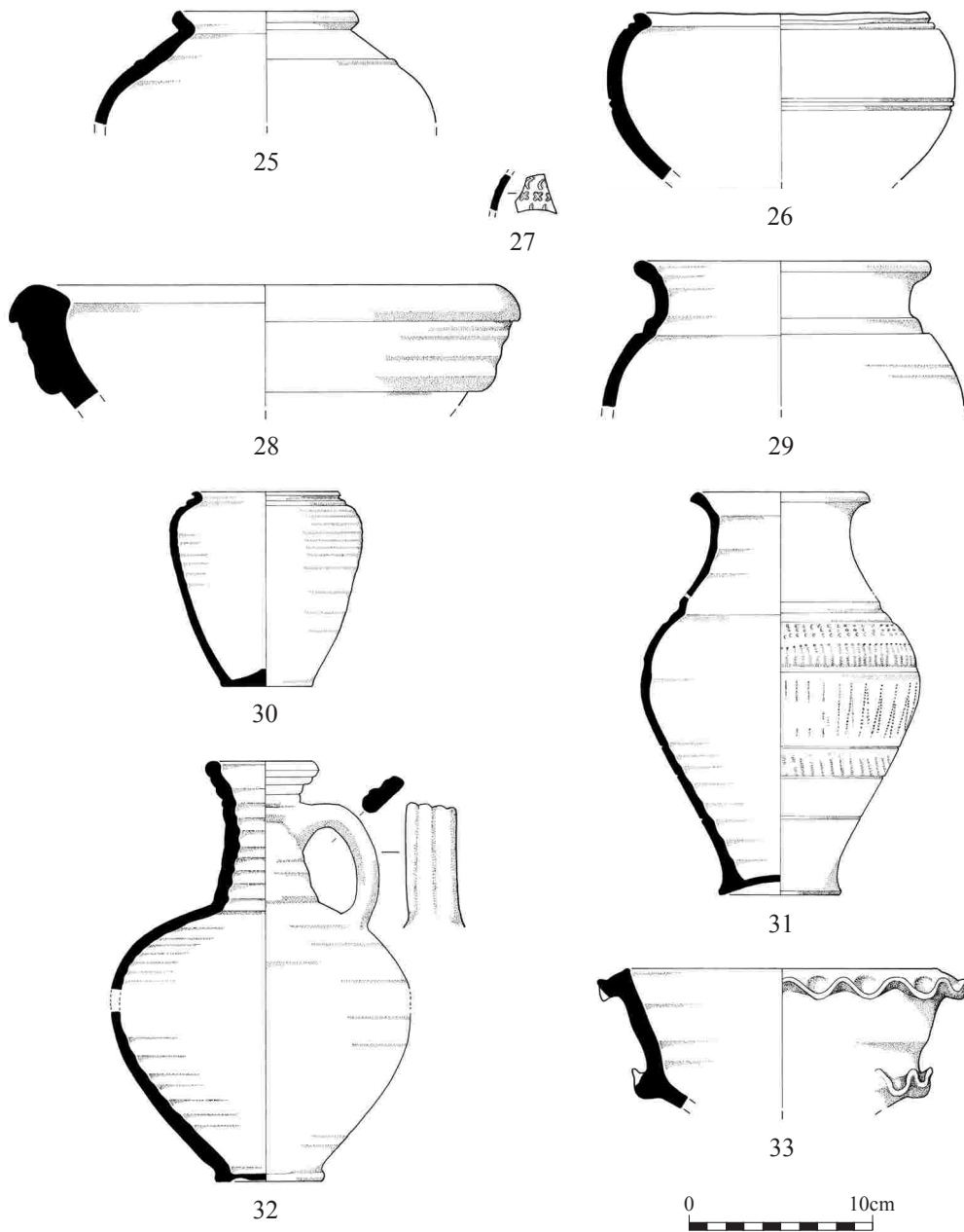


Fig 11. Pottery Nos 25–33

left leg may be an attachment, perhaps joining the figure to others in a group or to a support. The right forearm, which may have held a club, is also missing. The early date and its classical style indicate that it was made on the Continent, in Gaul or perhaps Italy.

It is not clear what the function of these ditches was, but their alignment through the inferred entrance way of ditches [714] and [658] suggests drainage along the side of a thoroughfare through the boundary and into open land beyond. There is, however, no direct

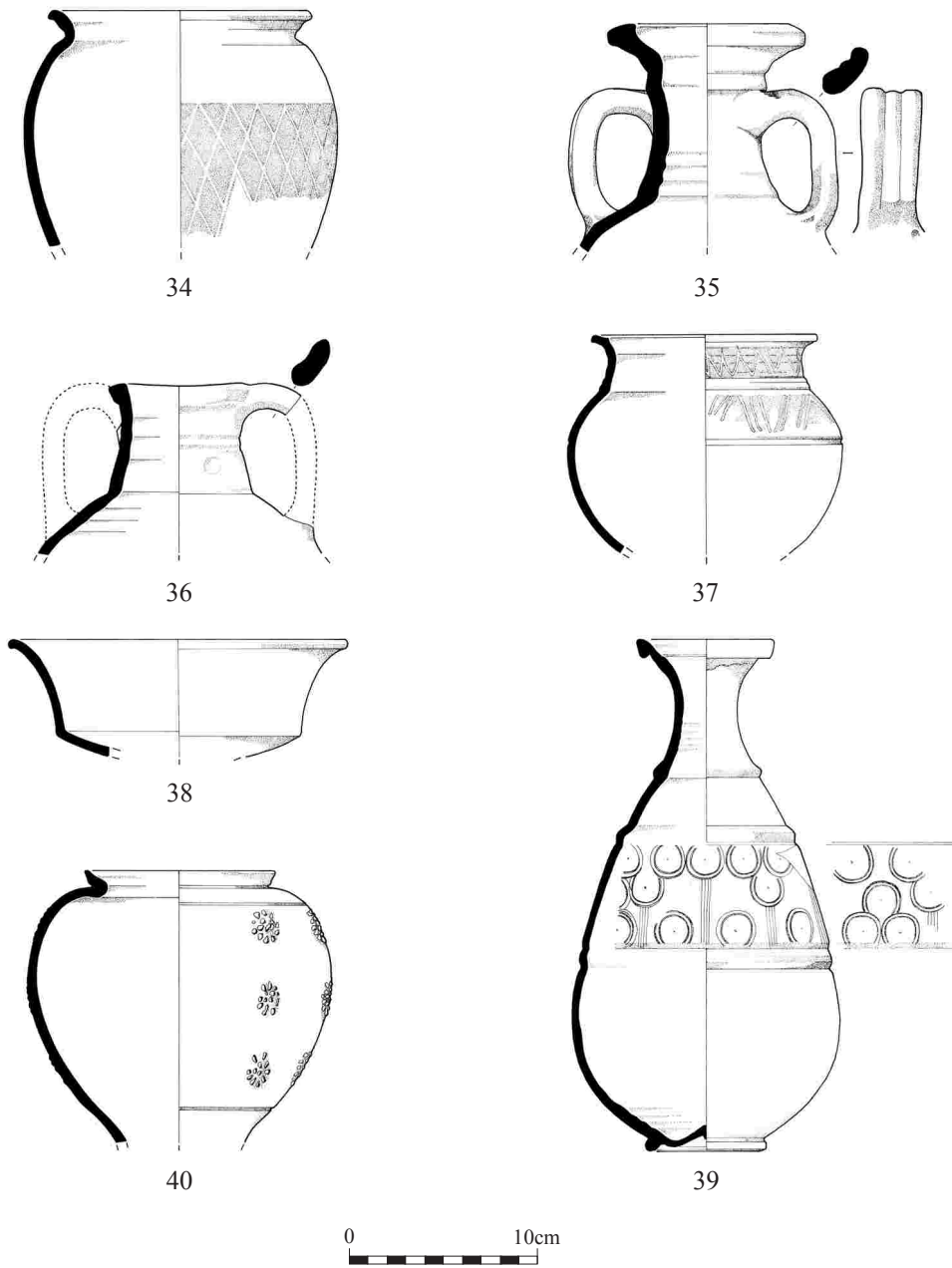


Fig 12. Pottery Nos 34-40

evidence to support this (for example in the form of metalling), or indeed a second set of ditches defining the northern side of any such route, and this interpretation must therefore remain tentative.

A small track leading from Watling Street

was, however, recorded at Arcadia Buildings to the east of the site, and it is possible that this alignment of ditches constitutes the outline of a similar track. It is possible that it was unsurfaced, or, more likely, that the basementing of the site removed any surfacing, leaving just the

delineating ditches to the side. The pottery suggests that the ditches were dug later in the phase than the establishment of the principal boundary ditches. It is also interesting to note that they were on the same alignment and in the same place as the fence lines in Phase 2, indicating continuity of the boundaries. At 165 Great Dover Street a similar alignment of features was recorded running along, and at right angles to, Watling Street. These were associated with a rectangular post-built building, a well, and a wood-lined pit, and were interpreted as field or garden boundaries (Mackinder 2000).

Three wells were identified. These consisted of two unshored shafts, [513] and [1235], and a shored one, [1121]. The first of these, a circular unshored cut to the west of ditch [714], appears to have collapsed immediately after digging, a slump of natural deposits from the south-western edge having been found. The pottery from the fills (Lyne 2000, Assemblage 13) was limited to 16 sherds of *c.*AD 55–80 date, consistent with a collapse of the sides very soon after excavation.

Well [1235] was a sub-circular unshored shaft in the centre of the site. The fills yielded two complete flagon necks in Verulamium Region Whiteware, one of which showed traces of red paint on the neck (Lyne 2000, Assemblage 14). The third well, [1121], consisted of a circular central shaft of vertical timber planks within a sub-rectangular construction cut. Finds from its fills were probably deposited *c.*AD 70–80 and include a complete but shattered Verulamium Region Whiteware flagon of Frere type 102 (1972, *c.*AD 60–90) (Fig 14.44), the upper part of an orange Dressel 2-4 amphora in Koan³⁷⁸⁶ fabric (*c.*AD 70–100) (Fig 14.45), an aberrant necked and cordoned jar in grey Alice Holt/Surrey ware (Fig 14.46), and a near-complete Lezoux samian Dr.18 platter dated *c.*AD 50–75 with a cursive Latin inscription (Tomlin & Hassall 2000, 442), bearing the name VRBICVS, ‘Urbicus’ (Lyne 2000, Assemblage 12).

The remaining features consist of pits, post-and stakeholes. They are in the main concentrated at the north end of the site and central to the projected entrance way through the boundary ditches. It is notable that the few features present appear to respect either the north–south alignment of ditch [132] or the north-west to south-east alignment of ditches [714]/[658], mirroring the alignments in Phase 2. This suggests that the same boundaries exist to the north-east and west of the site, probably

following the lines of the channel and Stane Street. The small finds from these features (Swift 2000) include a tapering bone knife handle with ribbed decoration and a hole for a tanged blade (SF 46, Fig 9.7), and a gaming counter of black opaque glass (SF 42, Fig 9.10).

Complete and near-complete vessels, including painted and deliberately broken examples, were found in two of the wells, and ditch [768] contained the broken Verulamium Region Whiteware flagon with a small hole drilled through the side. These finds suggest deliberate ritual deposition of these pots in those contexts. In the light of this deliberate deposition, the presence of a goat skeleton, articulated animal parts, and human long bones in the large boundary ditch [714] may indicate further ritual activity. The implications of these features and finds are discussed more fully below.

*The late 1st to early 2nd centuries (c.AD 80–140):
Phase 3b*

The highest density of features is found in Phase 3b. Pits are present over the whole area, with a particular concentration at the north end. This appears to be a period of growth for Roman Southwark, with the abandonment of the early 1st-century boundaries and an expansion of the settlement southwards. The roadway postulated for the previous phase appears to have been maintained with the side ditches being recut. This may have served as a route between parallel property boundaries. The principal features of the phase consist of three ditches and seven wells (Fig 13).

The wells comprised one unshored shaft, two (possibly three) circular shored ones, and three square shored shafts. The fills of circular unshored well [1181] yielded a complete ring-necked Verulamium Region Whiteware flagon of Frere type 241 (1972, *c.*AD 85–105), the side of which had been pierced (Fig 15.50); the lower part of another flagon in the same fabric was also recovered from this feature. The rest of the pottery (Lyne 2000, Assemblage 17) includes a near-complete unguentarium of Frere Type 477 (1972, *c.*AD 105–130) (Fig 15.51), a carinated flanged bowl in micaceous greyware (*c.*AD 85–115) (Fig 15.52), and a closed form with a pedestal base in a largely sand-free orange fabric with external gilt-mica wash (Fig 17.53). This suggests an early 2nd-century date for the use and abandonment of the well. An annular

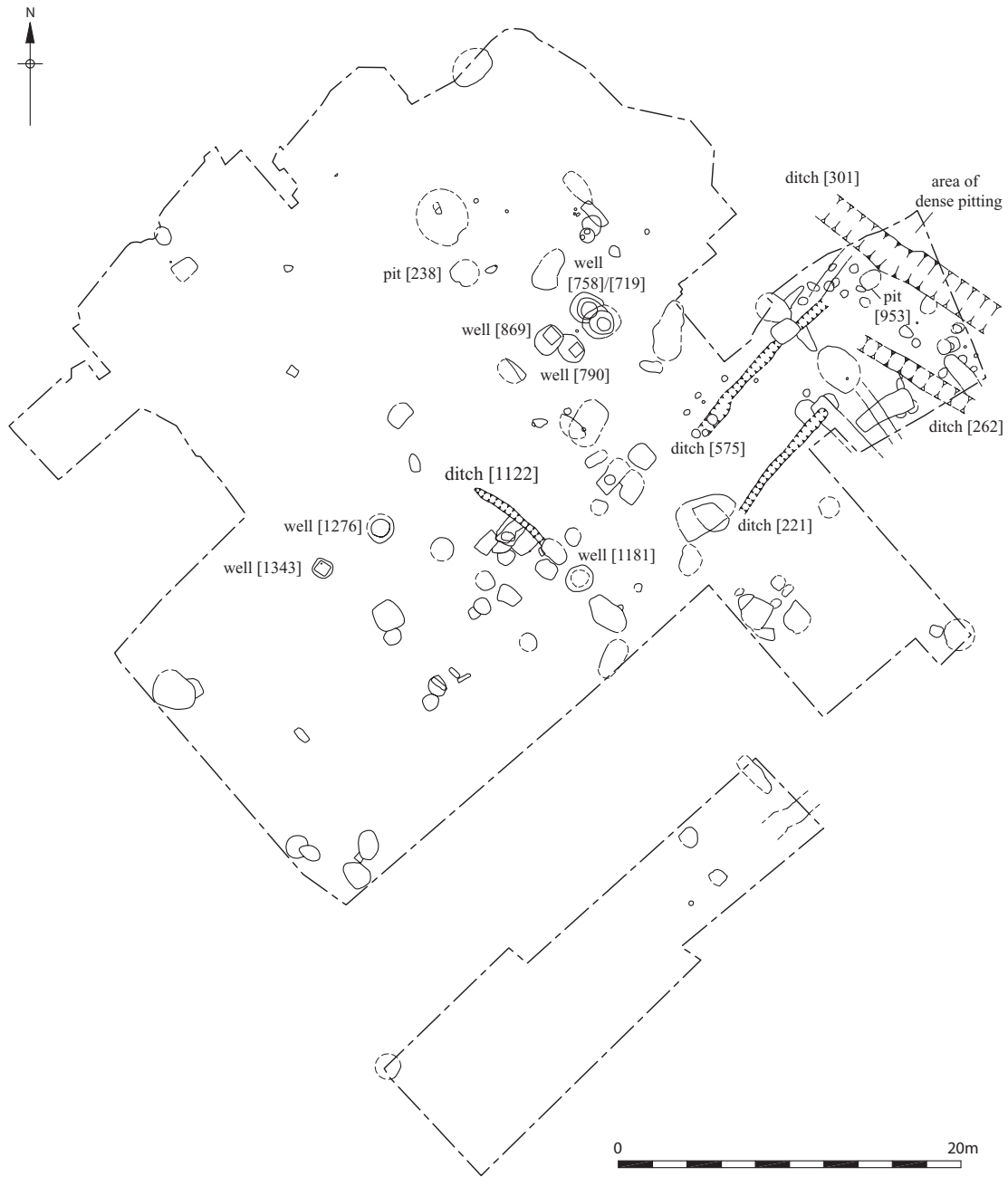


Fig 13. Phase 3b features

glass bead of blue-green glass, unusual in that it is made of uncoloured natural glass (SF 56, Fig 9.3), was also recovered.

Well [1276] consisted of a circular shaft in a sub-circular construction cut. No sign of timber shoring was observed but the presence of the

shaft within suggests that it must have been lined. A single sherd, from a ring-and-dot beaker in RDBK fabric (c.AD 70–100), was recovered from its fills.

To the north of these wells, feature [758/719] consisted of a circular lined shaft with vertical

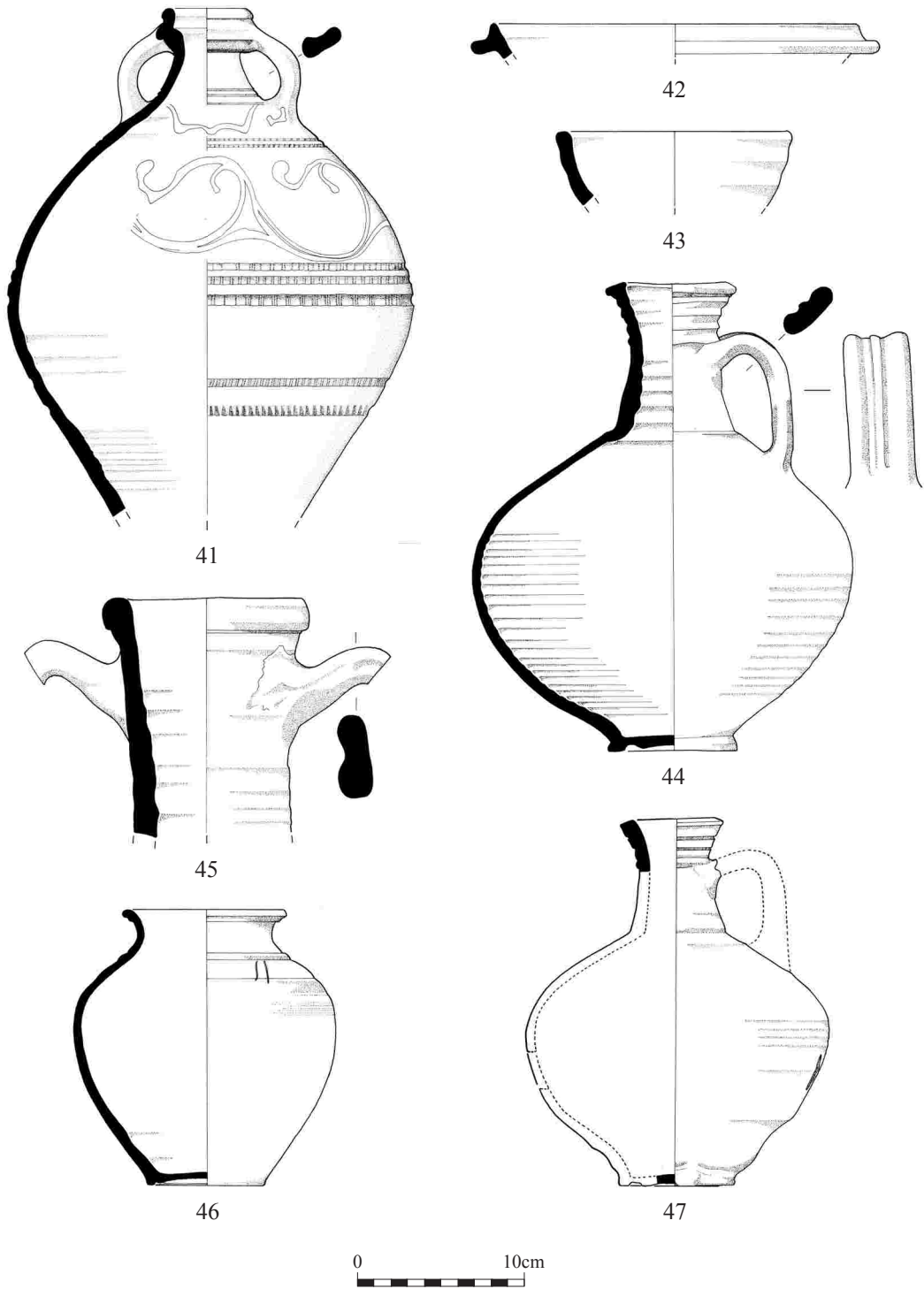


Fig 14. Pottery Nos 41-47

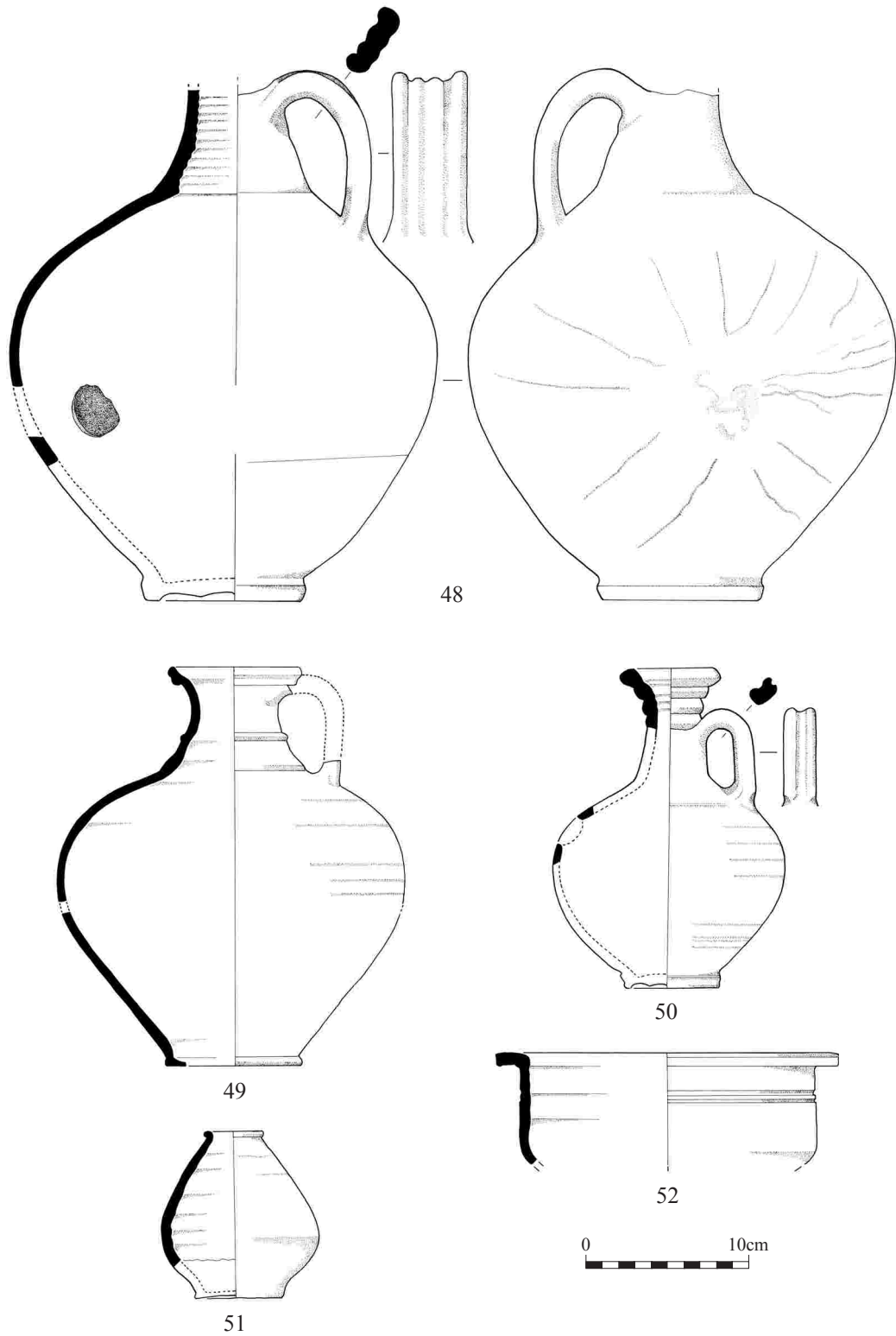


Fig 15. Pottery Nos 48-52

timbers in a sub-circular construction cut. The little pottery from its fills can be dated *c.*AD 70–100. This well was cut by well [761/317], which consisted of a circular shaft of vertical timbers in a sub-circular construction cut. The finds from its fill include the lower half of a Verulamium Region Whiteware flagon with a hole pierced in the side (*c.*AD 80–130).

To the south-west, was a second pair of wells. The first, [869], consisted of a square timber-lined shaft built in a sub-circular construction cut. The finds from the construction cut indicate that it was dug in the last two decades of the 1st century (Lyne 2000, Assemblage 20a). This cut a second square shaft with a sub-circular construction cut, [790]. A near-complete Verulamium Region Whiteware screw-neck flagon (*c.*AD 85–105), with the handle removed and a small cut made in the side (Fig 14.47), and the lower half of another flagon in the same fabric came from the lowest fill. The remaining pottery appears to be residual domestic rubbish dating to the end of the 1st century (Lyne 2000, Assemblage 15).

The earlier wells appear to have been superseded quickly by similar types of shafts in roughly the same locations, suggesting that the first of the group were backfilled deliberately. The presence of apparently ritually deposited vessels at the bottom, as well as the paucity of other finds, suggests that they were backfilled following the deposition, and are therefore purely ritual as opposed to being wells for water extraction with incidental ritual activity as a secondary role.

The fact that the earlier shafts contained votive pots at the base and the later wells did not also raises questions as to the nature and function of the later shafts. Their placement in roughly the same position suggests a continued ritual function, and implies a significance of their location in relationship to the boundary features recorded on the site. All these features appear to constitute the back edge of the settlement in relation to the roads and channel. In a wider context within the contemporary landscape their location approximately halfway between the temple precinct at Tabard Square (LLS02, Killock & Brown 2004), some 180m to the east, and the Lant Street cemetery (LTU03, Sayer 2006), *c.*170m to the west, would not seem coincidental. The morphology of the wells, with circular and square shafts being replaced by similar forms, suggests a continuity of function and construction.

A further square well [1343] was recorded to the south-west. This consisted of a square timber shaft in a sub-circular construction cut. A Verulamium Region Whiteware flagon (*c.*AD 70–150) with a red-painted radiate head on its side was recovered from the lower fill. The rim had been deliberately removed and a small hole drilled through the side (Fig 15.48) (Lyne 2000, Assemblage 16). From the upper excavated fill of the shaft was recovered the greater part of an Alice Holt/Surrey greyware flagon (Fig 15.49), dating to *c.*AD 70–120.

The square timber shafts of the wells in this group were all roughly aligned north-east to south-west, indicating a relationship with Stane Street to the north-west and to the alignment of ditch [575], running north-east to south-west at the north end of the site. This constitutes a recut of [768] in the preceding phase, with a parallel ditch [221] to the south-east.

To the south-west of these two features a small ditch [1122] ran at right-angles to the line of features, possibly defining the edge of a track running through the earlier boundary; these ditches may therefore form a continuation of the pattern established by the earlier land use in Phase 3a. This may support the idea that a thoroughfare was established in the previous phase which had continued in use. The existence of a possible track into the agricultural hinterland would explain the north-east to south-west alignment of the pits to either side in this and the preceding phases.

Two parallel short truncated sections of ditch, [262] and [301], were recorded to the north-east of the line of ditch [714]/[658] (Phase 3a). These turned slightly (*c.*8 degrees) more to the east than [714], and assuming that these features respected boundaries, this may indicate a change in building lines to the north-east. Between these ditches two possible alignments of shallow postholes may represent a fence. Heavy pitting in this area suggests the proximity of buildings, or alternatively this could be a reflection of the post-medieval grading of the rest of the site. The fills of ditch [301] yielded a large amount of pottery (Lyne 2000, Assemblage 8), including a shattered but reconstructable screw-neck flagon of Frere type 1417 in Verulamium Region Whiteware (Frere 1983, *c.*AD 130–140) (Fig 11.32), a tazza of Frere type 1449 in similar fabric (Fig 11.33), a cavetto-rim BB1 cooking pot similar to Gillam form 123 (Gillam 1970, *c.*AD 120–160) (Fig 12.34), a two-

handled amphora in cream Verulamium Region Whiteware (Fig 12.35), a double-handled Type 1E flagon of Frere type 577 (c.AD 130–150, Fig 12.36), the greater part of a necked and cordoned jar in fine sanded, brittle grey ware (Fig 12.37), and a carinated bowl in Grey North Kent Fineware, of Marsh's type 44.3 (1978, c.AD 70–130) (Fig 12.38).

The remaining features in the phase consist of pitting across the eastern side of the site, continuing the pattern established in the preceding two phases. Many of the features were aligned north-east to south-west along the line of the possible track to the south, and may represent rubbish disposal in open ground close to the settlement, with fewer pits respecting the north-south activity to the west. This could be indicative of a change in the focus of land use during the late 1st/early 2nd centuries.

From one these pits, [238], a shattered, near-complete grey micaceous London Ware bottle was recovered (Lyne 2000, Assemblage 9, c.AD 100–120) (Fig 12.39) and the greater part of a beaker in Fine Micaceous fabric (FMIC-1659) came from another [953] (Assemblage 10, c.AD 70–120) (Fig 12.40).

The pottery from many of these features suggests a mid-1st-century date, but is stratigraphically residual in late 1st-century or early 2nd-century features. Painted wall plaster, stone and ceramic building material are also present, indicative of demolition rubble. Coupled with the evidence of the southward expansion of the settlement during this phase, is renewed building/re-building during the latter part of the 1st century, possibly following the sacking of *Londinium* in the Boudiccan revolt of AD 61 (see below).

The excavations at 223–237 Borough High Street (Thompson *et al* 1998, 185), 1–5 Swan Street (Graham 1978), and Silvester Street (K Wooldridge pers comm) all reported a depth of agricultural soil overlying the natural. It is likely that this soil extended over the Old Sorting Office site also, but that it was truncated by the basements of the Old Sorting Office. Thin layers of similar material at the north end of the site may represent vestigial traces of this soil.

The small finds (Swift 2000) include a furniture drop-handle with a square-sectioned loop (SF 22, Fig 9.4), a fragmentary set of tweezers similar to a complete example from Colchester (SF 34), a stout tool with a pointed end and a shallow conical head (SF 8, Fig 9.6), and a broken bone

needle with a figure-of-eight drilled hole (SF 80, Fig 9.8). An incomplete Colchester two-piece brooch (SF 77) and a copper-alloy bow brooch spring (SF 79) were also found (Wardle 2000).

The mid-2nd to mid-3rd centuries (c.AD 140–250): Phase 3c

Phase 3c marks a dramatic decline in the activity on the site after the mid-2nd century AD. The features consist of four wells, a short section of ditch, and twelve pits (Fig 16). The number of features is reduced and the major ones are the three wells or ritual shafts.

Well [1306] was square and timber-lined in a sub-circular construction cut. The finds from its construction cut indicate a date of c.AD 70–100 (Lyne 2000, Assemblage 22a). The finds from the fill, following the termination of its use (Assemblage 22b), include the greater part of an unusual screw top beaker in ?Colchester Colour-coat fabric of c.AD 175–210 date (Fig 17.59), a complete Cologne roughcast beaker of c.AD 130–200+ date (Fig 17.60), the complete top of a Verulamium Region Coarse White-slipped ware flagon, and a complete small lid or platter in similar fabric that may be a kiln waster (Fig 18.61). These finds suggest a late 2nd- or early 3rd-century date for the backfilling. The presence of quantities of residual material of late 1st- to early 2nd-century date also suggests that it was backfilled with domestic rubbish. At the bottom of the feature the remains of a mineralised wooden bucket were found. This, along with the length of time it was open and the degree of residuality of the pottery, contrasts with the finds from the earlier shafts and would suggest that this was a well and possibly not primarily a ritual shaft, although buckets have been recorded elsewhere in ritual shafts of Roman date (Ross 1968).

The second well [1180] consisted of a square timber shaft in a sub-square cut. The fills of the construction cut (Assemblage 21a) contained a shattered but reconstructable flagon of Frere type 405 (c.AD 105–115) with a small hole made in the side (Fig 17.55), and a barrel-shaped flagon with red-painted 'solar rays' on the side (Fig 17.56) reminiscent of the decoration on a flagon in well [1343] (see below). Also present were the complete necks and rims of three more Verulamium Region Whiteware flagons dating from between AD 60 and 180.

The fills of the shaft contained the recon-

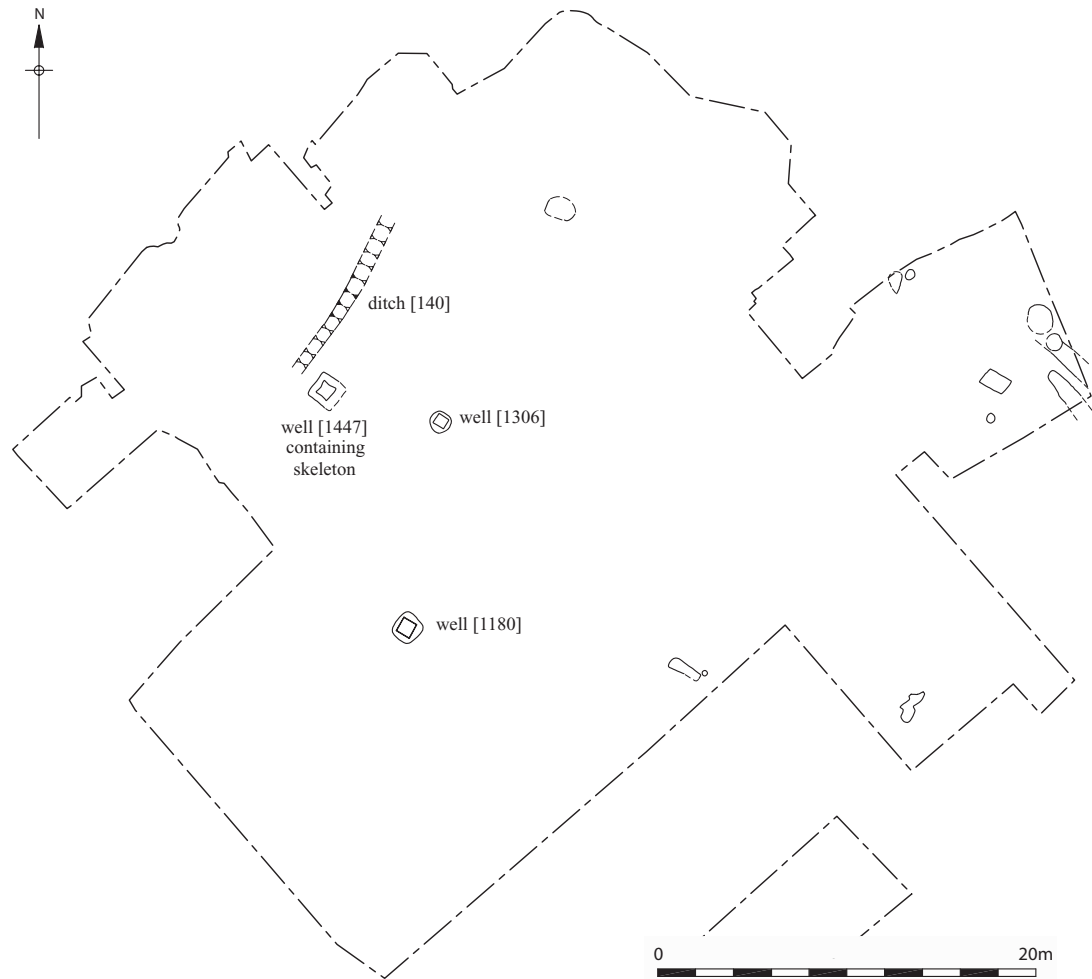


Fig 16. Phase 3c features

structable remains of a (near) complete carinated bowl in Verulamium Region Whiteware (*c.*AD 135–185, Fig 17.57), a large Highgate Wood C beaker (*c.*AD 70–160, Fig 17.58), and the lower portion of a flagon in Verulamium Region Whiteware fabric. The pottery dates (Assemblage 21b) suggest this shaft was dug in the third decade of the 2nd century and remained open until *c.*AD 160. These assemblages are of note as they appear to represent ritual deposition in both the backfilling of the construction cut and the shaft of the well itself.

The third well [1447] consisted of a square timber shaft in a sub-square cut. The top half of a human skeleton was found head down in the upper fills, the legs and lower torso

were truncated, probably by the 20th-century basemending (Fig 19). The remains were of an adult male of between 26 and 45 years of age and standing around 1.70m tall (*c.*5' 7"). This individual had been deposited head-down in the well, with the back tight against the northern side of the shaft, and the head to the west. The left arm, shoulder, and ribs appear to have been removed but the detached left hand was found in place. There were no signs of later truncation from the remains lower in the shaft and no cut marks were identified on the surviving skeleton. This points to *post-mortem* manipulation of the body, probably after the flesh had gone but while the body was still articulated. There was no pathology indicating the cause of death of this

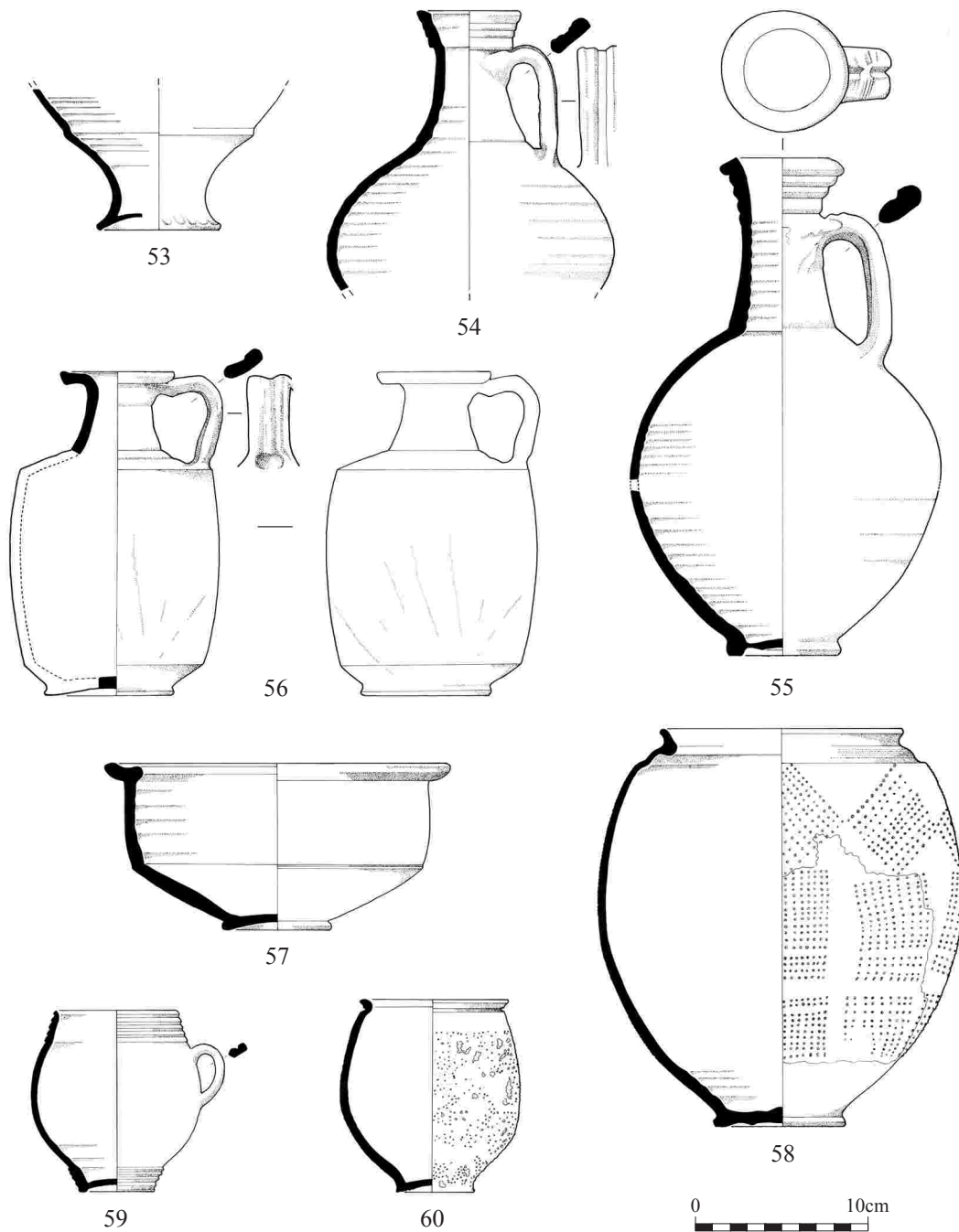


Fig 17. Pottery Nos 53–60

individual, although he did appear to have been subject to a degenerative joint disease of the upper spine, probably the result of increasing age (Dodwell 1999). The skeleton was associated

with the lower part of a BB2 cooking pot, four iron nails (SFs 63–66), and the skeletons of three adult male dogs, apparently thrown into the well as complete but disarticulated carcasses; these

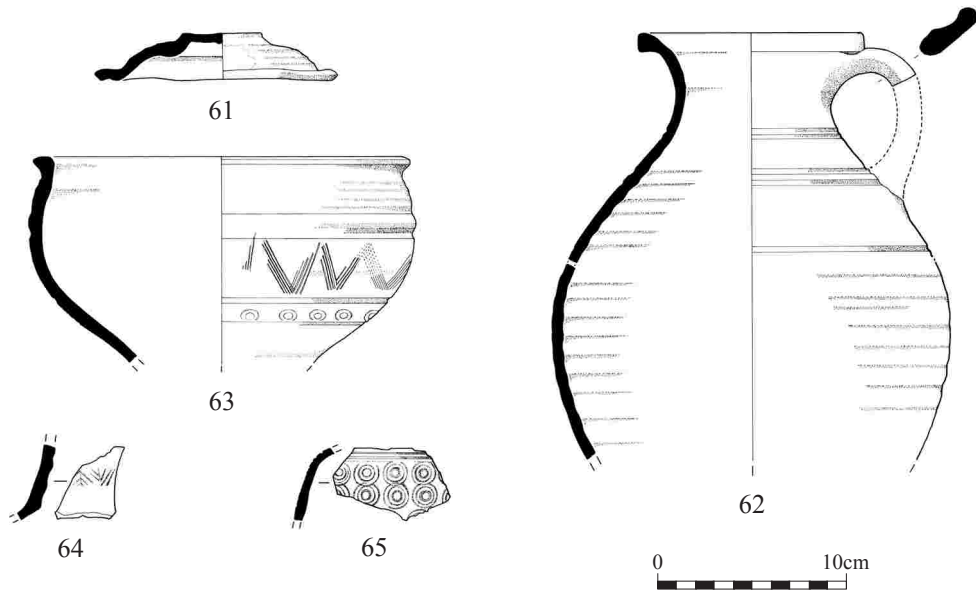


Fig 18. Pottery Nos 61–65



would, therefore, also have been defleshed at the time of deposition.

The pottery from the fills of the construction cut indicates a date of *c.*AD 120–160 for the cutting and includes fragments of the lower half of a Verulamium Region Whiteware flagon (Assemblage 23a). The pottery from the shaft (Assemblage 23b) includes the lower part of a Verulamium Coarse White-Slipped ware flagon and a Verulamium Region Whiteware jug (Fig 18.62). The dates of these and the rest of the pottery indicate that the feature remained open into the early 3rd century. The fact that it was open for a period of time, possibly in use as a well, may be indicated by the presence of the remains of two common frogs. The find of a flagon top in the construction cut may well represent ritual deposition at the shaft opening.

The orientations of the timber linings of these three wells all appear to correspond to the line of ditch [140], a short truncated section of U-sectioned ditch to the west of the site, and form a part of the north to south alignment observed in the previous phases. This alignment appears to have shifted to the east and was now closer to the current Borough High Street. This may be an indication of the boundary of the settlement to the west changing. It may indicate a change

Fig 19. Human skeleton in shaft (reconstruction)

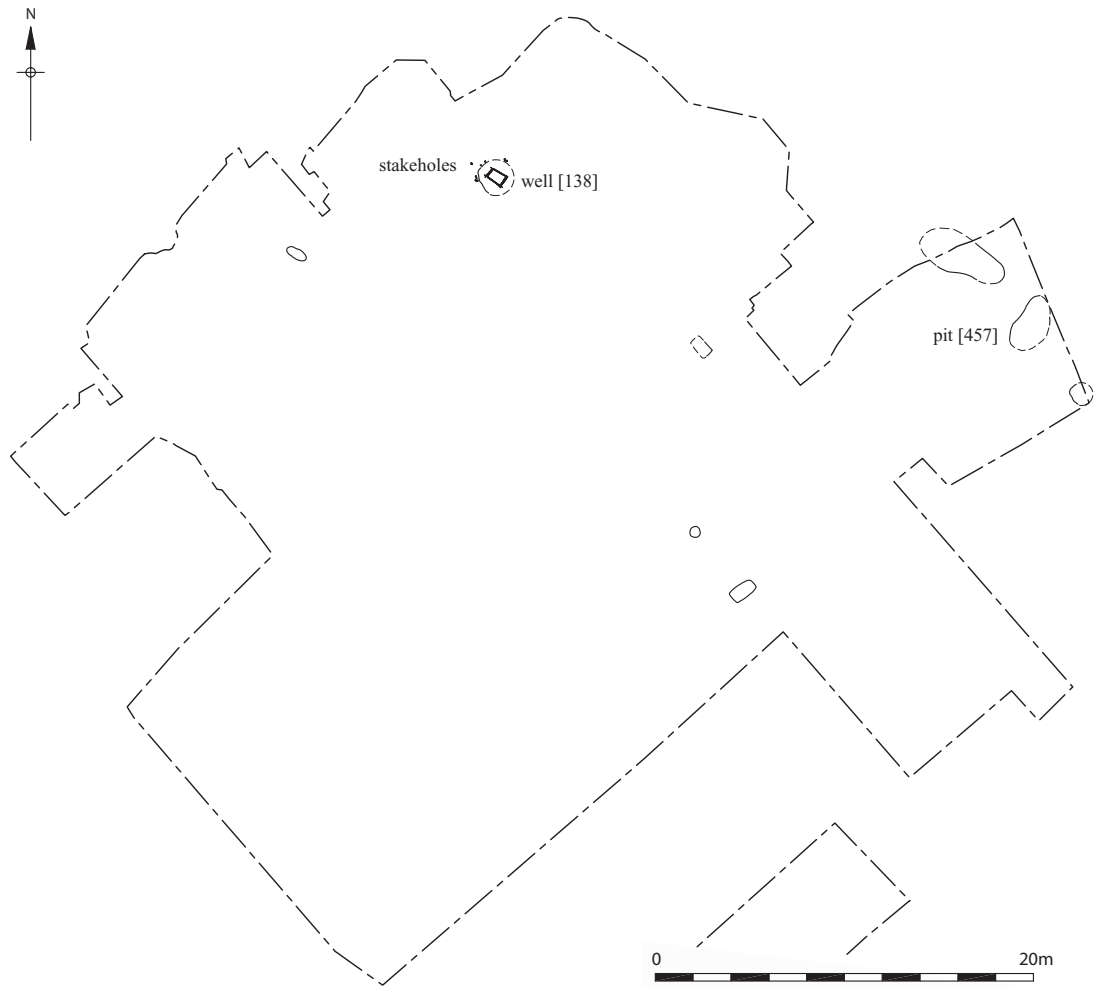


Fig 20. Phase 3d features

of settlement focus from the north-east to the west during the 2nd/3rd centuries. It is not clear, however, what the limits to the west would have been.

The fourth well in the phase, [1385], was a sub-circular cut with a timber-lined shaft, although the timber was too decayed to tell its type of construction. The pottery from the shaft fills is heavily broken-up and appears to be domestic rubbish. It suggests a date of *c.*AD 140–170 for the backfilling of the shaft. A Julio-Claudian copper-alloy coin (SF 59) of uncertain date with the letters [...] AVG PM TP [...] on the obverse was also recovered (Stabler 2000).

The remaining features of this phase consisted of pitting to the north-east and east, indicating

much reduced activity, supporting the notion of a contraction of the Southwark settlement during this period.

The Late Roman (c. AD 250–400): Phase 3d

The final Roman phase represents a marked reduction in activity during the late 3rd and 4th centuries, with features being recorded mostly to the north. These include a timber-lined well and seven pits (Fig 20).

The well [138] comprised a rectangular shaft in a sub-rectangular cut. This was associated with a scatter of stakeholes around the north and west sides. The pottery from the fills dates from the 1st to 4th centuries. There is nothing to

suggest any ritual deposition, indicating that the rituals associated with shafts may have ceased by the late 3rd century.

The remaining features consist of four small pits in the main area of the site and a small cut and two large pits to the north-east. From one of these, [457], were recovered a shattered but near-complete, two-handled Cologne Whiteware flagon (*c.*AD 300–350, Fig 14.41) and a handmade facet-burnished, beaded and flanged bowl in late West Kent Grog-tempered ware (Fig 14.42). The latter is closely paralleled in a grave assemblage at the Keston Warbank mausoleum and probably dates to *c.*AD 370–400+. Fragments from a deep handmade, convex-sided dish in facet-burnished grey fabric (*c.*AD 370–400+, Fig 14.43) also came from this feature (Assemblage 11). A broken bone needle (SF 8, Fig 9.6) was found in one of the pits from this phase.

Miscellaneous sherds of intrinsic interest in less significant Roman and post-Roman assemblages include those from a bowl in high-fired blue-grey LOMI-1247 fabric (*c.*AD 70–160, Fig 18.63), a flask in tournetted, very fine sanded grey ware with roller-stamping (Fig 18.64), and a bowl in pale brown stamped London ware (*c.*AD 80–100, Fig 18.65).

The early medieval and medieval: Phase 4

The post-Roman and medieval remains on the site were concentrated to the north, and the majority range in date from the 12th to the 14th centuries. The complete post-Roman sequence was only seen in section at the north-eastern end, adjacent to the Dover Castle/Kitson House, with the result that only the bases of major intrusive features were found. Phase 4 is represented by two wells, two ditches, two large pits, eleven smaller pits, and a posthole.

Two ditches were found at the north-eastern end of the site. The pottery was exclusively Roman but the wide date range (AD 55–400) suggests that it is residual. These ditches were later recut and the fills, whilst containing much residual Roman material, also included Early Medieval Sandy Ware (EMS) and Early Medieval Shelly Ware (EMSH) dating between AD 900 and 1150. This feature cut a U-profile gully, butt-ending to the north-west and passing into the section to the south-east. A single sherd of Sandy Ware (SAND) from its fill indicates a date of AD 550–700. A small posthole was recorded to the north-east, but a single sherd of pottery

dating to AD 1050–1150 suggests that either these features were not related or that this cut is early medieval in date and the Saxon pottery is residual as well. These features provide scant evidence of Saxon to early medieval occupation superseding the Roman abandonment of the area, given the quantities of Roman material recovered from these contexts.

Two wells were present, the first, dating to 1270–1500, consisted of a circular timber shaft in a sub-rectangular construction cut. After initial silting, a timber barrel was placed in the shaft, possibly to shore it up and keep it open. The second well consisted of a circular shaft in a sub-rectangular cut. There was no indication of the form of shoring used in the latter. A large rubbish pit [963] was recorded to the south-west, which was dated to 1350–1500. The remaining features consisted of 11 pits dating from between 1080 and 1600.

The spread of these features suggests that the occupation during this period was concentrated to the north of the site along the current lines of Borough High Street and Great Dover Street, with an open area behind, to the south, being used for rubbish disposal and domestic wells, although the extensive truncation may have distorted the picture presented.

The post-medieval development: Phase 5

Phase 5 is separated into four sub-phases according to the date of the features, reflecting the growth of Southwark from the 16th to the 19th century.

The 16th century: Phase 5a

The 16th-century features comprise two wells and three cuts confined to the north-east of the site. The first of the wells, [69], was a circular stone and brick shaft in a sub-circular cut. The fill of the construction cut dates from 1400–1550, while the pottery from the shaft is dated from 1690–1710, indicating a life span of over a hundred years.

To the south-west of this, the second well, [535], had a circular shaft in a sub-circular construction cut. The cut was packed with chalk blocks. The pottery indicates a prolonged period of use, with dates ranging from 1500–1600 from the lower fills to 1700–1900 in the upper fills.

The 17th century: Phase 5b

Phase 5b reflects the growth of Southwark during the 17th century. The features consist of five, possibly six, wells, a beam slot, rubbish pits, a possible tanning pit, and probable quarry pits, which were distributed across the whole site.

The first well, [113] to the north-west, was a barrel type in a sub-ovoid construction cut. The second, [121] to the west, consisted of an octagonal shaft within a circular cut. To the south-east of these features a single beam slot, [62], represents the only structural feature associated with this phase. This had a line of 13 stakeholes cut into the bottom, possibly part of a wattle and daub wall which continued into section to the south-east.

A third well, [335], was recorded to the west. This had an ovoid shaft within an ovoid cut. The fourth one, [1272], was located to the south and consisted of a barrel in a large sub-circular construction cut. The fifth, [1279], was to the west and consisted of a circular wattle-lined shaft in a sub-circular cut. The base of a possible sixth well, [1151], was recorded to the north, and comprised a possible circular shaft in a sub-square cut.

In the centre of the site, a sub-square stone-lined pit, [1060], was found. It was lined with elaborately moulded, re-used stone, which may have come from the remains of Bermondsey Abbey. There is no positive interpretation for this feature, but it may represent the bottom of a stone-lined cess or tanning pit. A second possible tanning pit was recorded to the east. Cut [493] consisted of a rectangular timber-lined pit.

A series of large sub-rectangular pits to the west of the site has been interpreted as quarry pits. This would suggest that the area was open land at the time they were dug, with the gravels being quarried to provide ballast for local building. Further possible quarry pits were recorded to the south. The remaining features consist of a series of smaller cuts, probably representing the bottoms of rubbish pits.

The concentration of these features along the east and west sides of the site suggests that they represent activity at the back of development along both Borough High Street and Great Dover Street. The Brett-Jones 1927 derivative of Stow's 1598 and 1603 maps shows the site to be in an open area behind properties fronting onto Blackman Street and Church Street (now Borough High Street and Great Dover Street

respectively). The Newcourt map of 1658 shows a similar arrangement of buildings, but by 1720 the Parker map shows development and a new alley called Swan Yard running south through the area. By 1747 this is called the White Swan coach yard, and continues as such until the current road system was built between 1812 and 1824. The only evidence of structures in this phase was a single beam slot at the north-east of the site. The basements of later buildings have almost certainly removed other structures over the rest of the site.

The 18th century: Phase 5c

Phase 5c represents the 18th century. There was a total of eight small features. This is a reflection of the depth of material removed during the basementing. At the far north-east a series of dump layers and pits was recorded in section, including two pits filled with broken sugar loaf moulds.

The late 18th and 19th centuries: Phase 5d

The Phase 5d deposits are limited to a well and two pits, which is a reflection of the depth of the 20th-century truncation. Well [424] consisted of a circular central shaft inside an ovoid construction cut. The finds from the construction cut fills date the opening of the feature to 1580–1700, while the finds from the fills related to its use date to between 1745 and 1900, again indicating a fairly prolonged period of operation.

ROMAN SOUTHWARK AND THE OLD SORTING OFFICE EXCAVATIONS

The southern boundary

The Old Sorting Office lies close to the northern edge of the terrace gravels, some 70m from the edge of a channel, a fact reflected in the slope in the natural gravels down to the north-west. It lies close to the projected junction of Watling Street with Stane Street. The evidence from 1–5 Swan Street (Graham 1978) and Arcadia Buildings (Dean 1980) suggests that smaller side roads, metalled at Arcadia Buildings, ran from the major roads. Evidence from both Arcadia Buildings and 38–57 Silvester Street (K Woolridge pers comm), and the building directly to the north at 222–237 Borough High

Street (Thompson *et al* 1998, 185) suggests that this junction formed the focus of settlement, with buildings extending along both the roads and the line of the southern edge of the channel to the north. The Lant Street Roman cemetery site (Sayer 2006) is located just 170m to the west and the Tabard Square temple precinct (Killock & Brown 2004) only 180m to the east. A major road junction on the dry ground in front of the Southwark islands and the river crossing would form a natural focus for settlement and a focal point in the ritual Roman landscape. A date of *c.*AD 50 has been suggested for the founding of the settlement at Southwark (Sheldon 1978, 27), and the Old Sorting Office excavations tend to fit this early dating.

The recut ditches in the early phases of the Old Sorting Office excavations appear to follow the line of the main channel to the north and also the line of Watling Street to the east of Arcadia Buildings. This suggests that the road-side ditch adjacent to Watling Street extended along the banks of the channel to form the boundary ditch, whilst Watling Street turned north towards the bridge. The boundary ditch was dug at approximately the same time as Watling Street was constructed in the early pre-Flavian period.

There was no suggestion of a bank associated with these ditches. This may be the result of post-medieval truncation. However, the distribution of the features on either side of the ditches does not suggest the presence of a bank of any size, with contemporary and later features extending up to the edge of the ditches. At 1–5 Swan Street it is noted that there was no sign of a bank at the edge of a 3rd-century ditch. The pre-Flavian quarry/boundary ditch associated with Watling Street excavated at Arcadia Buildings also showed no sign of upcast or a bank. The presence of four small stakeholes to the south of the ditch line in Phase 3a is unlikely to represent fencing.

Excavations on the other side of Swan Street, at 1–5 Great Dover Street (Graham 1978), lie to the south of the extended line of this ditch, and the work here revealed no traces of occupation. Graham suggests that the area was under cultivation during the Roman period, and other excavations have suggested that much of the land was arable, with fields separated by ditches (Dean & Hammerson 1980, 21). A large ditch found at 1–5 Great Dover Street, dated to the 3rd century AD, ran roughly at right angles to the line of Watling Street, and along the

projected line of Stane Street, and is therefore likely to represent a road rather than a field boundary. Two 4th-century inhumations were cut into the top fills of this ditch. The evidence from these two sites suggests that the recut ditches on the Old Sorting Office site formed the southern boundary line of the settlement along the channel at this time, with settlement to the north and marginal or agricultural land to the south of the projected junction.

A small road or track with ditches to one side has been postulated crossing this boundary line during the mid-1st century AD; this was then maintained in an apparent expansion of the settlement southwards during the later 1st century. The road ran parallel to the projected line of Stane Street to the south-east. Heavy pitting along the drainage ditches defining this presumed road would suggest that activity had moved southwards over the previous boundary lines. No sign of the late 1st-century boundary was recorded. It must be borne in mind, however, that the ground reduction over the majority of the site may have distorted this evidence. A similar arrangement of ditches was recorded at 165 Great Dover Street associated with a post-built building (Mackinder 2000).

Two distinct alignments were observed in the excavated features. The first of these aligned with the boundary ditches, side road, and consequently Stane Street, suggesting a focus of activity to the north and along Stane Street. The second alignment of features evident on the site is more problematic. This north to south alignment does not appear to conform to either the bank of the channel, or the lines of either Stane Street to the south-east or Watling Street to the north-east, although it may well relate to developments at the Tabard Square temple precinct immediately to the east.

The alignment of the early Roman field system does not present a problem of interpretation as the field boundaries and drainage gullies pre-date the road. The continuation of this alignment, however, through to the end of the Roman presence in the 4th century, suggests that whatever boundary was being respected existed throughout this period. For such a boundary to continue over such a time, it is reasonable to assume that it was permanent and significant.

The site slopes down to the north and west, which may indicate a possible stream-channel along the line of Borough High Street, although given the amount of archaeological work in

the area the existence of such a channel seems unlikely. A southward projection (Fig 4) of the edges of Road 1 from the last excavated section at 106–114 Borough High Street (Graham & Hinton 1988) would bring its line west of both 201–211 Borough High Street and Arcadia Buildings, and across the channel more or less at right angles. This would lead to a shorter and more practical crossing of the channel, rather than the more oblique angle suggested by the evidence of the two later sites (Dean 1980, 368).

This line would pass through the current post office on Borough High Street and through the basemented southern half of the Swan Street site at an angle corresponding with the north–south line suggested by the features at Swan Street. This would put the line parallel to ditch [132] in Phase 3a, and $\approx 10\text{m}$ to the west. This ditch, therefore, may represent the back boundary of ribbon development along an extended Road 1. This would appear to have been maintained throughout the Roman period, with development respecting this line when the activity along the line of Stane Street and the channel had been much reduced in the 3rd and 4th centuries.

Alternatively, the possibility has to be considered that the proposed line of Stane Street and the junction with Watling Street to the east of the site may be incorrect. The exact line of Stane Street is not clear and it is possible that Stane Street passes to the west of the site to meet Road 1 and Watling Street on South Island, to the north of the current projected junction. This is one explanation of the unexplained second alignment of the features recorded but, as no evidence of either a southward extension of Road 1 or another channel has been recorded in excavation, this interpretation must remain supposition.

Land use

Much of the nature of the settlement in the vicinity of the Old Sorting Office site must be inferred from other excavations in the vicinity, given that the excavations at the Old Sorting Office appear to represent activity at the southern margin of the Southwark settlement, and that the remains over the majority of the site were limited to the bases of deeper features.

The nature of the agricultural land to the south of the boundary ditch can be inferred

from indirect evidence. The presence of drainage gullies in the earliest phase suggests that the area was low lying and wet. In the excavations at Arcadia Buildings, the pre-Roman ground surface was recorded at +1.6m OD, and soil analysis of this horizon indicated periodic waterlogging (Dean 1980, 367).

The maximum tidal amplitude, -0.5m to +1.5m OD, during the 1st century AD (Brigham 1990, 143–5; Yule 1988) suggested for Roman Southwark would certainly indicate that the area was low lying enough for flooding to have been a problem, and the presence of the possible field boundaries and drainage grips suggests that the land was under management during the first half of the 1st century.

The nature of the activity in the landscape may be indicated by the faunal remains. The presence of unusually high numbers of horse bones and the high incidence of cattle and sheep/goat remains may indicate the ranching of cattle and the presence of pasture for sheep/goats in the vicinity (Armitage 2000a, 6). The cattle appear to have been used as draught animals and as milk producers. The horses may have been disposed of at the edge of the settlement at the end of their working lives. This is consistent with both the general trend of meat consumption in Roman Southwark and with the findings from 165 Great Dover Street (Mackinder 2000), where the large numbers of horse remains have been interpreted as roadside dumping of carcasses (Sidell 2000). It should be noted that fragmentary horse remains associated with disarticulated human longbones and skull fragments are often found in Iron Age placed deposits. This is a tradition which appears to continue in the Roman period, and the location of the Swan Street site in a wider Roman ritual landscape appears to conform to this pattern.

The horse remains (Armitage 2000a) consist of fully adult animals, with no foetal or neo-nate individuals represented. There were no crania, jaw bones or pelvises from the excavation, so gender and, in the absence of dentition, precise age determination is not possible. Epiphyseal fusion of the long bones, however, indicates that all were fully adult at the time of death. They are similar in stature to the Iron Age horses recorded elsewhere in Britain, with three taller individuals corresponding more to the size ranges of Roman horses. These had withers heights of 131.4–148.7cm, and thus fall within the size range both of horses from military sites

throughout the Roman North-Western provinces and from villa and farmstead sites, where it is postulated that they were used for herding cattle and sheep (Luff 1982).

The cattle remains are also predominantly adult, and comprise castrates and females. The mean withers height of these individuals was 107.4cm, with the exception of a single individual from Phase 3b, which had a withers height of 124.3cm. The horn cores were predominantly from short-horned cattle, apart from two medium-horned cattle, suggesting that the local stocks were unimproved short-horned cattle of Iron Age type. The cattle represent the bulk of the bone from the site generally (Fig 21), becoming increasingly dominant through the 2nd and 3rd centuries (Table 2). This fits the general trend of Roman consumption both nationally, where cattle bones constitute between 30 and 45% of bone during the late Iron Age and early Roman periods, rising to up to 90% on military sites and in highly Romanised areas (King 1991), and locally (Locker 1988), reflecting the growing importance of cattle as a food source during the Roman period.

The only evidence for juveniles on the site consists of a broken horn core, a femur, and a calf jawbone from boundary ditch [714], and a tibia and a metacarpus from features in Phase 3b. The preponderance of adults in the assemblage probably reflects a primary role as plough or draught animals, or as milk producers, and that the value of their hides, horns, and meat was a secondary consideration. This fits with the pattern from other Iron Age/early Roman sites in Britain, with cattle only being slaughtered when their usefulness as either milkers or plough/draught animals was over (Grant 1989).

The ovicaprid remains consist of sheep and goat. The domestic goat remains consist of horn cores of a female and a female/castrate, jaw bones, and the articulated remains of a mature goat and a kid. The mature goat, recovered from boundary ditch [714], had a shoulder height of 60.9cm and the dental wear in the lower cheekteeth indicates an age of 3–4 years at death. The kid, aged between 2 and 3 months, bore defleshing marks on several of the long bones, indicating it had been killed at an early age as a suckling-kid; this may be an indication of high status cuisine, but is at variance with the assemblage as a whole which suggests a diet of poor quality cuts and little variety. The adult female goat may have been kept for breeding or

milk as well as providing a source of skin, horns, and meat.

There is a high proportion of sheep (63.5%) during the early 1st century (Phase 3a), declining to 19.1% by the 3rd/4th centuries, fitting with a general trend of declining consumption of sheep observed nationwide. The sheep appear to be of Iron Age strains throughout the Roman period, with no evidence of improved larger Roman strains. They consist of both horned and polled (naturally hornless) types, with withers heights ranging from 52.7–66.7cm through all four Roman phases as opposed to the range of 69–72cm for the Roman varieties. The age-at-death data, based on mandibular cheekteeth, show a preponderance of animals killed at 6–24 months during the early Roman phase (Table 1).

Table 1. Ages at death in the SWN98 Roman sheep as determined from dental wear in mandibular cheekteeth (using the criteria of Payne 1973 quoted in Armitage 2000a)

| wear stage | age range | Sub-phases | 3a | 3b | 3c | 3d |
|------------|-------------|------------|----|----|----|----|
| A | 0-2 months | | | | | |
| B | 2-6 months | | | 2 | | |
| C | 6-12 months | | 5 | 1 | 1 | |
| D | 1-2 years | | 9 | | 2 | |
| E | 2-3 years | | | 1 | | |
| F | 3-4 years | | | 4 | 1 | 2 |
| G | 4-6 years | | 2 | | | |
| H | 6-8 years | | 2 | 1 | | |
| I | 8-10 years | | 1 | | | |

This is thought to represent fat-lamb production, with culling of castrates (wethers) at one or two years of age, and further slaughter of surplus and/or barren breeding ewes in the fourth to sixth years. A similar pattern was documented at Vindolanda (Hodgson 1977), where the evidence was interpreted as flock maintenance for meat rather than wool or milk, with a few older wethers being allowed to live longer as flock leaders. This agrees with general trends for the Iron Age/early Roman period observed throughout the country (King 1991, 16). It should be noted that some of the immature bone elements could belong to kids due to the difficulties of distinguishing between

the two. A second possible interpretation for the preponderance of lambs/kids in the bone assemblage, and for the presence of a suckling-kid, is that these animals represent ritual offerings. This is explored more fully below.

The pig elements recorded from the site constitute between 9.4% and 11.9% of the total animal bone. This figure remains fairly constant during the whole of the Roman period, and does not show the increase in popularity during the later Roman period common to other Roman sites. Eight males/castrates and a single female were identified, with the majority coming from Phases 3b and 3c. The majority of these (66.7%) were aged 1–2 years at death, with only one individual aged more than 3 years. No neonates or sucking pigs were identified.

The faunal data for cattle and sheep/goat fit the overall dietary patterns of Roman Britain, where sheep/goat forms the bulk of the meat consumption on civilian sites during the Iron Age and 1st century, with an increase in beef and pork and a decline in mutton consumption during the later Roman period (King 1978). The exception to this conformity is the quantity of pig bone recovered in comparison to other sites in Southwark. At the Old Sorting Office site, while a change from sheep/goat to cattle is evident, there is no apparent increase in pork consumption (Table 2). This may be explained in two ways. Firstly, pork was considered a high status commodity during the Romano-British and early Roman periods and consequently restricted to the upper, Romanised, echelons of society (King 1991); thus the lack of pig bones may reflect the relatively low status or poverty of the southern settlement. Secondly, as suggested above, the area may have been used for the pasturing or herding of sheep and cattle during the early Roman period, and the dietary pattern may reflect this local activity.

The absence from these assemblages of the meatier cuts of the cattle and sheep/goats suggests that the animals were butchered on site and the meat products exported elsewhere. A site at Long Lane (Douglas 2000; Armitage 2000b), close to the northern edge of the channel to the north-east, shows an apparent reliance on market-bought food supplies, and this appears to be supported by the evidence of the Borough High Street Ticket Hall site (Sidell 2000), where the presence of dumps of skull and lower limb parts and heavily butchered upper limb fragments associated with a Roman

building have been interpreted as a butcher's shop.

Some deposits included fragmented and spiral-fractured pieces of long bone shaft indicative of tertiary butchery of marrow bones, while the ends of cattle long bones with evidence of multiple chopping suggest that butchering debris was being cut and boiled to extract bone grease and/or marrow fat. Similar evidence was noted at both 199 Borough High Street (Locker 1988) and at Hunts House (Bendrey 1998).

Whilst the bone count (NISP) reflects the relative frequency of the principal animal types, the weight of the bones gives a better overall impression of the dietary habits in terms of meat consumption. This comparison is presented in Table 2 below:

Table 2. SWN98 Phase 3, Roman animal bone assemblages. Relative proportional frequencies of the four main domesticates, by NISP and bone weight (% of the total) (Armitage 2000a)

| | Cattle | Sheep/Goat | Pig |
|--|--------|------------|-------|
| 1. Based on NISP | | | |
| Phase 3a | 25.1% | 63.5% | 11.4% |
| Phase 3b | 63.2% | 25.1% | 11.7% |
| Phase 3c | 68.2% | 22.7% | 9.1% |
| Phase 3d | 69.0% | 19.1% | 11.9% |
| (NISP: 3a = 394; 3b = 804; 3c = 132; 3d = 126) | | | |
| 2. Based on bone weight | | | |
| Phase 3a | 50.3% | 38.9% | 10.8% |
| Phase 3b | 79.6% | 10.1% | 10.3% |
| Phase 3c | 80.9% | 14.4% | 4.7% |
| Phase 3d | 83.6% | 9.3% | 7.1% |

(WT(g): 3a=6848; 3b=23196; 3c=4010; 3d=4101)

These four main groups of domesticates constitute the bulk of the diet, and seem to reflect what Armitage terms 'a diet of solid sufficiency'. This diet was apparently supplemented by few other food resources. The remains of domestic fowl, goose and duck, both domesticated (Mallard) and wild species, are represented in only small quantities (only 1.4% of the total bone assemblage). Fish made up 0.38%, and wild game 0.17% of the total bone (Fig 21).

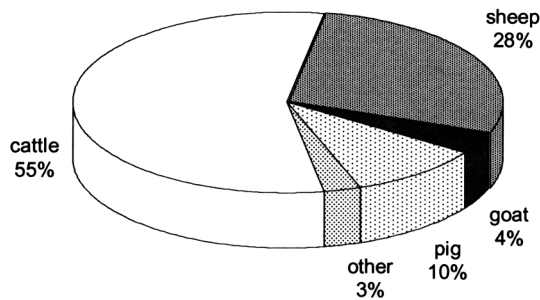


Fig 21. Ratio of animal food groups based on NISP (Phases 3a, b, c, d)

Domestic fowl made up the bulk of the bird bones. These birds were of a similar size to modern laying fowl, and included at least one individual of similar size to a modern bantam. The assemblage exclusively comprises male and female adults, with no immature birds being recognised. All but one of the bones were recovered from shaft fills. Wild or domestic duck and geese are represented by only ten duck and two goose bone elements. It is interesting to note that all the domesticated duck bones were from Phase 3b, while the wild duck and goose remains were found in Phases 3a–c. Of the two wild duck elements, one has been tentatively identified as Tufted Duck (*Aythya fuligula*). This contrasts with the assemblage at Long Lane where a higher incidence of domestic fowl bones was interpreted as relating to backyard poultry production (Armitage 2000b)

The wild species represented on the site are limited to two mandibles and a metatarsal shaft of a roe deer, and a single adult hare femur. The deer remains are likely to have been imported with hides rather than deriving from food waste. A similar lack of wild species has been observed at the Roman sites at Long Lane and 199 Borough High Street. The lack of wild species is a common feature of Iron Age and indeed Roman sites (King 1991, 16; Hill 1995, 104).

The remaining bone consists of a single broken tibiotarsus from a corvid, probably a rook, a single cat vertebra, and five bones representing two frogs.

The lack of species diversity exhibited by the animal bone from the Old Sorting Office contrasts with the more sophisticated diet shown in faunal assemblages from other Southwark sites. At 199 Borough High Street (Locker 1988) bones from the 1st-century deposits show the

same overall sheep/cattle/pig (34%/24%/8%) bias as at the Old Sorting Office site, although the relative proportion of sheep is higher at the Old Sorting Office. Roe deer, hare and domestic fowl are all present in similar quantities, while fish appear to have made a more significant contribution to the diet. From the late 1st century AD to the late Roman period both cattle and pig become increasingly important, and in the 3rd century the ratio is 71% cattle, 4% sheep/goats, 4% pig, with red deer, roe deer, rabbit, hare and domestic fowl representing increasing proportions of the assemblage. Four species of fish, both fresh- and salt-water, are present. The greater species range suggests a far more varied diet than that indicated at the Old Sorting Office.

The same pattern of dietary change is reflected at Long Lane (Armitage 2000b), where mutton consumption declined from as early as the 2nd century, with beef constituting 60% of the total and pig making up a third of the remainder in the 3rd century. The same predominance of cattle and pig bone is shown at the Hunts House site (Bendry 1998). The fact that the Old Sorting Office assemblage is at variance with this general pattern may indicate that the animals represented served a purpose other than primarily as food sources, perhaps representing instead a lamb/kid stock for ritual offering (Armitage 2000a).

Comparison with other sites to the north suggests that the activities to the north of the nearest channel, that is, at and behind the southern boundary, differed significantly from those closer to the river. At 199 Borough High Street the excavation produced cattle skulls, mandibles and pelvises in quantity. At the Old Sorting Office the same parts of horses were conspicuous by their absence. Ditch F32 at 199 Borough High Street, dating to AD 150+, yielded few skull fragments, metapodials and phalanges of cattle, interpreted as representing the removal of feet for glue-making (Locker 1988).

There is little evidence of cereal or crop production or processing on site, although cereal grains, including spelt and barley, were identified. Several large culm nodes (probably straw nodes), chaff fragments, and occasional weed seeds were recovered (Carruthers 1999). Given the evidence from the animal bone of cattle and sheep husbandry, the straw and chaff fragments probably derived from fodder or bedding rather than crop processing.

There is no direct evidence of the nature of the buildings on the site. To the west, at 223–237 Borough High Street (Bird *et al* 1983, 193–4), a clay and timber building was excavated with an associated gravel yard surface, which was demolished in the 2nd century, while at Arcadia Buildings two buildings were recorded composed of posts set into ground beams with an internal gravel surface. It is assumed that any structures of a similar nature either lie to the north of the site or have been removed by the extensive 20th-century truncation. There does not appear to be any evidence to the south of the river channel of the larger stone-built buildings that replaced the clay and timber buildings during the late 2nd–3rd century in the rest of Southwark.

The building material (Sabel 1999) recovered from the four Roman phases was all fragmentary and included *tegula*, *imbrex* and brick, 15 of which showed knife-cut or finger-scored manufacturers signatures or tally marks. There were seven fragments of keyed wall and box-flue tile and/or hollow voussoirs, showing toothed comb-scores, and nine probable tesserae. A small amount of wall plaster was recovered showing six colour variations and one element of a linear pattern (Meddens 1999). The building material is consistent with demolition material from Southwark being deposited at the back of the settlement.

All this material is consistent with other Southwark excavations, and probably represents demolition debris from a range of buildings, mostly of 1st- and 2nd-century date, many of which were heated by hypocausts. The roof tile is more dominant in the later fabrics, reflecting the re-use of bricks during the later Roman period, while roofing was undertaken with complete roof tiles, creating a continued demand for roof tiles into the later period.

While there is no historical evidence of the Boudiccan revolt affecting the southern settlement of London, archaeological evidence is starting to emerge that the sacking of *Londinium* may have included Southwark. Recent excavations on the Jubilee Line extension in Borough High Street (Hutchinson 1998, 58) revealed a series of probable workshops, shops, and houses destroyed by a major fire before AD 70. These buildings were then replaced by further clay and timber and masonry buildings during the later 1st century. The demolition of Roman buildings at the Winchester Palace site is placed at around the same time (Westman 1998, 65), suggesting

major disruption during this period. Further south, the timber and clay building at Arcadia Buildings appears to have been replaced by AD 70, suggesting the possibility that the disruption may have spread as far as the southern boundary and was not just confined to the higher status and more densely populated areas along the Southwark waterfront.

The evidence from building materials and the large redeposited ceramic assemblages from Phase 3b, dated post-AD 80, may be related to rebuilding work following the Boudiccan revolt of AD 60.

Ritual practices

The ritual practices of everyday life in Roman London have not received as much attention as other subject areas. Much of the research into religion being concerned with funerary ritual, for example at the East London Cemetery (Sidell & Rielly 1998). Very little published evidence exists for the more prosaic, non-funerary, ritual (Haynes 2000).

The ritual–secular dichotomy in an archaeological context has been the subject of much debate. Various authors, notably Wait (1985), Hill (1995) and Brück (1995; 1999), have written extensively on the subject of identifying, defining, and interpreting ritual activity on archaeological sites. A definition of ritual as equating to a non-functional rationality is simplistic and ignores the ethnographic and archaeological parallels for the ritual and ritualised aspects of human endeavour. Hill (1995) argues that any activity associated with settlement arrangement and space, domestic activity and rubbish disposal is inherently ‘structured through deep-rooted cultural norms’, and the distinction between rubbish and ritual, sacred and profane, is not necessarily clear-cut.

Where proven ritual/funerary practice exists, for example in the setting of a cemetery or a temple, the interpretation of other aspects of ritual is less problematic than on a site with no obvious ritual/religious focus. What may be attributed to industrial or domestic activity on a non-religious site may be interpreted as ritual on a site with obvious ritual significance (for example, the deposition of animal remains may be interpreted as food waste in a domestic context, and as ritual feasting in a cemetery). Yet the archaeological evidence is identical in both cases. The evidence of ritual use in a secular

setting may also be distorted by the additional deposition of genuine food waste and domestic debris in the same location (Hill 1995).

Evidence of systematic and prolonged ritual activity is apparent from the excavations at the Old Sorting Office, as demonstrated by comparison with assemblages of proven ritual provenance. The presence of 'killed' or ritually damaged pots in the assemblages from most of the shafts and from one boundary ditch provides the clearest indicator of ritual practice on the site, and as such raises questions about some of the faunal remains from the site. What follows is an attempt to define the nature of the ritual evidence and place it into its regional and historic context.

Activity on the Old Sorting Office site seems to reflect low intensity ritual, possibly the domestic religious and ritual life of the inhabitants of Southwark, as opposed to larger scale public ceremonials. The form of the ritual shafts, as well as the nature of the votive offerings within them and in other locations on the site, is consistent with local, small scale ritual activity (Ross 1968; Philpott 1991; Hill 1995). This activity does, however, show both continuity and change from the mid-1st century to the late 2nd to 3rd centuries, with a demonstrable development in the form of ritual.

The interpretation of these shaft features rests on the deposition of the ritually 'killed' pots, near-complete but broken vessels, painted face pots, a human skeleton that appears to have been manipulated *post-mortem*, and disarticulated dog skeletons. All these items have been documented elsewhere as being indicative of ritual expression (Niblett 1999; Stead & Rigby 1986; Philpott 1991; Wait 1985 amongst others). The remaining evidence is interpreted in the light of these deposits.

A significant proportion of the complete ceramic vessels recovered from Uley Romano-British temple complex had post-firing modifications in the form of holes drilled in the side or base, echoing the ritual damage of the pots at the Old Sorting Office. Similarly, the right forearm and lower left leg of the Hercules figurine are missing, suggesting ritual 'killing' of the object. Deliberate breaking of weapons and twisting and bending of miniature weapons was also observed at Uley (Henig 1993). The ritual 'killing' of objects was a relatively common practice in early Roman society. The object of destroying or spoiling the votive offering being to remove it from the physical world, in the same way that

animals are slaughtered, and consequently made accessible to ancestors and deities in the other world (Philpott 1991, 239; Wait 1985, 240). The burning of objects on cremation pyres in Roman cremation is considered to achieve the same function as this killing of sacrificial objects. The difference between the two practices is that in the case of funerary activity, as observed on the East London cemetery (Sidell & Rielly 1998), it is the deceased that receive the offerings rather than the gods.

The 'killed' pots consist of both complete and partial vessels deposited in the shafts, which have all been damaged in some way to make them unusable, either by removal of key elements, piercing the sides, shattering the vessel or a combination of more than one of these methods. Nine vessels fall into this category:

1. A complete but shattered screw-neck Verulamium Region Whiteware flagon of Frere type 102 (Shaft [1121]) (Fig 14.44).
2. A complete Verulamium Region Whiteware flagon neck of Frere type 112 with a patch of red paint on the neck (Shaft [1235]).
3. A near-complete screw-neck Verulamium Region Whiteware flagon of Frere type 241. The handle is missing and a small cut has been made through the wall of the vessel (Shaft [790]).
4. A near-complete Verulamium Region Whiteware flagon with red-painted radiate head on the side. The rim is missing and a small hole has been drilled through the wall of the vessel (Shaft [1343]).
5. A complete screw-neck Verulamium Region Whiteware flagon of Frere type 241 with a small hole cut through the wall of the vessel (Shaft [1181]).
6. The lower half of a Verulamium Region Whiteware flagon with a hole cut in its side (Shaft [317/761]).
7. A complete but shattered Verulamium Region Whiteware flagon of Frere type 405 with a small hole made in the side (Shaft [1180]).
8. An unusual barrel-shaped flagon in similar fabric with carinated shoulder and base and radiating red-painted solar rays on the side (Shaft [1180]).
9. A near-complete but shattered Verulamium Region Whiteware flagon similar to Frere type 107, with a small hole made in its side (ditch [768]).

In addition, 13 other flagons had been divided into their top and bottom halves, and only one

half deposited. Six lower and seven upper halves of VRW flagons had been buried in this way. Other deliberately deposited pots and part pots were recovered including:

1. A near-complete but shattered Verulamium Region Whiteware lid-seated carinated bowl Frere type 683 and a near-complete but shattered Highgate Wood C type III beaker with diamond-shaped dot-barbotine panels above rectangular ones in Shaft [1180].
2. The upper part of a KOAN3786 Dressel 2-4 amphora, a near-complete Lezoux samian Dr.18 platter with a cursive inscription on the underside, and the larger part of an aberrant necked and cordoned Alice Holt/Surrey greyware jar with sooting over its lower half and an ownership mark of two parallel lines scored across its shoulder, from Shaft [1121].
3. The lower part of a flagon from Shaft [790].
4. The greater part of an Alice Holt/Surrey greyware flagon of Lyne and Jefferies type 8.6 (1979) (Shaft [1343]).
5. A near-complete Verulamium Region Whiteware unguentarium of Frere type 477 and the lower part of a flagon in similar fabric from Shaft [1181].
6. The top part of a Verulamium Region Whiteware screw-neck flagon Frere type 239 (Shaft [869]) (Fig 17.54).
7. The greater part of a very unusual barrel-shaped screw-top beaker with bilobate handle in Colchester fabric with patchy orange-brown colour-coat, a complete roughcast bag-beaker in white Cologne fabric with brown colour-coat, a complete warped small lid or platter, in similar fabric to Verulamium Region Coarse White-slipped ware (but with no slip so this may be a kiln waster), and the complete top of a badly made Verulamium Coarse White-slipped flagon of Frere type 1943 from the fills of Shaft [1306].
8. The shattered lower half of a Verulamium Region Whiteware flagon from the construction cut of Shaft [1447], the lower part of a BB2 cooking pot associated with the human remains, the lower part of a flagon in Verulamium Coarse White-slipped fabric, and the upper half of a Type IH jug of Frere type 1958 in Verulamium Region Whiteware.

There appears to be a progression of shaft forms on the site throughout the Roman period. During the mid to late 1st century they tended to be circular, both shored and unshored, with a relatively short life-span — the pottery from

the construction cut of the only shored well in the phase, [1121], having the same date as the material from the shaft itself. These seem to be replaced during the period AD 80–140 by circular shored types with a longer period of use. These were then superseded by square shored shafts aligned north-east to south-west, and later still by square shored shafts aligned north to south during the period AD 140–250. At 165 Great Dover Street wells were associated with three phases of the cemetery and showed this same progression of shaft form (Mackinder 2000).

There also appears to have been a progression in the ritual offerings. In the earlier wells (AD 50–140) the ritual deposition was confined to the well shafts themselves. During the period AD 140–250 the deposition is in both the shafts and in the construction cuts, implying both opening and closing rites, while the practice of ritual deposition appears to have been discontinued by the 3rd century. The ceramic assemblages also show signs of temporal change. Whilst the presence of pot sherd assemblages and complete but shattered pots remained a common theme through all four Roman phases, the deposition of near-complete, ‘killed’ pots only occurred during the period AD 80–140.

During the period of AD 140–250, the deposition of skeletal remains in the shafts occurs, suggesting a further variation in ritual practice. The presence in the fills of one of the three shafts of articulated human remains and dog bone (Table 3), including the remains of three complete though disarticulated dog skeletons, appears to be a phenomenon of the later phases of the Roman activity here. The fact that, though complete, these dogs were disarticulated echoes the manipulation of the human corpse, and argues that the dog bones were defleshed or dismembered and curated for later use (Hill 1995, 109; Black 1983, 20), rather than being accidental remains. Dogs may have been sacrificed due to the special status accorded by their social proximity to man (Hill 1995). At Danebury (Iron Age) Ritual Pit A contained the remains of three disarticulated dogs, while at Ewell, Surrey, a decapitated dog skeleton was recorded (Black 1983, 20) and dog skeletons and skulls are frequently listed in Ross’s inventory of ritual shafts (1968). A 3rd-century well excavated at 107–115 Borough High Street (Yule 1982) was found to contain four dog skeletons as well as quantities of cattle and other bone; these were associated with a large number of greyware

bowls identified as lids or covers for an industrial process, or alternatively as covers for cremation urns. The dating of this well to the AD 270s or 280s would make it roughly contemporary with the later Old Sorting Office shafts. Similarities to the Old Sorting Office finds suggest that it too may have had a similar role. Two dogs were also found together with a human skull at the Cannon Street site (Richardson 1983, 277).

It is more likely that these features were dug as ritual shafts than as wells for the extraction of water; the recutting of shafts of the same type and in the same place would tend to argue for ritual shafts, as discussed above. The digging of shafts with no shoring into loose sand would have resulted in fairly rapid collapse, as shown by well [513], and would tend to render their interpretation as wells unlikely. The distinction between ritual shafts and secular wells is problematic, not least because wells may function as the focus of ritual activity both during and after their active use as wells. Given the pre-Roman associations of water and ritual, Iron Age shrines are often situated near rivers or springs, and wells and springs are regarded in Celtic mythology as being portals to the Otherworld (Wait 1985, 54–5; Ross 1968, 255). The function of the Swan Street shafts as purely ritual is unlikely, given their depth in comparison to earlier exclusively ritual shafts of the Iron Age and the depth of the water table in the area. This may mean that the distinction between the two is not a useful one to make, and that some or all of these features may be regarded as wells with a ritual function (Wait 1985, 255).

The channel at 201–211 Borough High Street appears to have been choked by the mid-1st century AD, possibly as the result of tidal regression, suggesting that no clean running water would be obtainable from it (Ferretti & Graham 1978). This may explain the large number of wells in the area. The number of shafts in Phase 3b is greater than in Phases 3a, c and d, indicating that the concentration of features in 3b, taken as an indication of the growth and southward expansion of Southwark during the latter part of the 1st century, required a greater volume of water to meet population needs.

Given that the number of wells may reflect the size of the local population, the number of shafts may correlate to the population density or needs in any specific phase. The short life span of the shafts in the mid to late 1st century may relate to changes in water levels, pollution

problems, or the uncertainty of the times. The latter in particular may have had an effect on ritual usage of the shafts. Shafts with a longer life span appear to have been dug during the mid-2nd to mid-3rd centuries, although the phase is also longer in absolute time which may have influenced the number of shafts. The find of a bucket in one of the shafts may be interpreted in a purely secular way, although Wait (1985) specifically mentions the presence of a bucket in a ritual context in a Roman shaft at Caerwent, and Ross (1968) records the deposition of buckets and baskets in several shafts. The shafts which may have been dug specifically as ritual features in the form of short-use shafts in the period AD 80–140 may reflect a change in ritual practice, and may coincide with an apparent reduction in the population during this period.

This does not, however, explain why most of the shafts appear to have been quickly infilled. The construction cuts contain, as would be expected, apparent domestic debris, while the fills of the well shafts themselves in the main do not. It should be noted that the bone assemblage from these 15 features (4% of the features recorded) constitutes 29% of the total bone recovered from the site; an obvious anomaly. Also, no horse bone came from any of the shafts, which is unusual, given the high proportion of horse bone from the rest of the site and the high incidence of horse bone in comparable shafts elsewhere (Wait 1985). If the bone in these shafts was derived from domestic waste, it follows that similar proportions of bone would have been deposited as in other features. Certainly the volume of excavated fill from the shafts was less than that from the other features, so the differences in quantities of bone recovered from the shafts versus other features appear significant. The fact that horse bone is absent from these shafts would suggest that the deposition of bone of other species, or the exclusion of horse bone is deliberate. This suggests that horses were not considered fitting subjects for the rituals conducted at the site. Alternatively their association with disarticulated human remains and ditch type features is linked to their ritual deposition being distinct from that in wells and shafts. Horse bone and disarticulated human remains have been found in specific ditch type features at the Tabard Square site (L Yeomans pers comm); this type of assemblage is also a notable component of deposits at the Lant Street Roman cemetery

(Sayer 2006) and in ditches at 165 Great Dover Street (Reilly 2000). Secondary iron smithing waste, found in many other contexts is also absent from the shaft deposits, again implying that, as this type of waste was usually dumped in any open feature available, the function of these shafts specifically excluded the disposal of, or the secondary use of, smithing waste (Keys 1999).

In his comparative study of ritual shafts, Wait (1985) defined 27 key deposit criteria categorising the Iron Age and Roman ritual shafts used in his study. These covered the deliberate layering of deposits, the inclusion of animal bone of various species, human bone, ceramic assemblages, the deposition of organic matter, and votive objects of various kinds. These criteria are examined in relationship to the Old Sorting Office shafts in Table 3 below. Wait recognised that none of these criteria is sufficient in isolation to denote the use of a shaft for ritual purposes,

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Table 3. Deposits from the Old Sorting Office shafts following Wait 1985 criteria

| | 3a | | 3b | | | | | 3c | | | | 3d | | | |
|--------------------------|-----|------|------|--------|--------|-----|-----|------|------|------|------|---------|----------------|----------------|-----|
| | 513 | 1121 | 1235 | 317761 | 719758 | 790 | 869 | 1181 | 1276 | 1343 | 1180 | 1385 | 1306 | 1447 | 138 |
| Excavated depth m | 1.1 | 0.9 | 0.5 | 1.3 | 1.0 | 1.9 | 1.6 | 1.3 | 1.0 | 1.5 | 0.9 | Post-ex | 0.9 | 1.2 | 1.2 |
| Adjusted depth m | 1.6 | 1.4 | 1.0 | 1.8 | 1.5 | 2.4 | 2.1 | 1.8 | 1.5 | 2.0 | 1.4 | Post-ex | 1.4 | 1.7 | 1.7 |
| Deliberate layers | | X | | | | | | X | | X | | X | X | X | |
| Lining | | X | | X | X | X | X | | | X | X | X | X | X | X |
| Cattle bones | X | X | X | X | X | X | | X | | X | X | X | X | X | X |
| Dog bones | | | | | | | | X | | X | | | X | X ² | |
| Pig bones | X | X | X | | X | X | | X | | | | | X | X | |
| Horse bones | | | | | | | | | | | | | | | |
| Sheep bones | X | X | X | X | X | X | | X | | X | X | X | X | X | X |
| Deer bones | | | | | | | | | | | | | | | |
| Bird bones | | X | | | | X | | | | | | X | X | X | |
| Misc animal bones | | X | X | X | X | | | X | | X | X | X | X | | |
| Oyster shell | X | X | X | X | | | | X | | | | X | X | X | X |
| Human bones | | | | | | | | | | | | | | X ³ | |
| Weapons | | | | | | | | | | | | | | | |
| Body armour | | | | | | | | | | | | | | | |
| Complete pots | | | X | | | X | | X | | X | X | | | | |
| Complete but broken pots | | X | X | | | X | X | X | | X | X | | X | X | |
| Pot groups | | X | | | | X | X | X | | X | X | | X | X | |
| Votive objects | | | | | | | | | | | | | | | |
| Iron tools | | | | | | | | | | | | | | | |
| Quern stones | | | | | | | | | | | | | | | |
| Ashes | X | X | | | | | | | X | | X | X | X | X | X |
| Jewellery | | | | | | | | X | | | | | | | |
| Coins | | | | | | | | | | | | X | | | |
| Other objects | | | | | | | | | | X | | | X ¹ | | |

x¹ = bucket, x² = 3 complete disarticulated dogs, x³ = partial skeleton

and that attribution best rests on a combination of them.

In the case of the Old Sorting Office shafts, the inclusion of organic material (leather objects, leaves and grasses, trees or logs, and nuts and twigs) could not be verified as the deposits were not waterlogged, and so these elements have not survived in the archaeological record. Sufficient wood remained of the linings of some of the shafts to be able to define the construction of the linings, but smaller and more fragile items such as grass, nuts and twigs did not survive (Carruthers 1999).

Another factor likely to bias the results of the Old Sorting Office shafts is the truncation of the tops of the features by 20th-century basements. This is likely to have distorted both the evidence for layered deposits and the depth analysis. The depths of the Old Sorting Office features in the comparative table (Table 3) are therefore given both as excavated depths and as calibrated depths based on the depth of truncation from the top of the Roman levels as observed along the untruncated north side of the site, +0.5m.

The Roman pottery assemblage from the Old Sorting Office site comprised 8,698 sherds (226,203g) of Roman pottery from 1,465 contexts. Of which 658 (26,014g) derived from the shafts constituting 7.6% of the total number and 11.5% of the weight from 93 contexts.

From this approach Wait developed eight principal criteria for shafts on Iron Age and twelve for Roman civilian and military sites, and also drew comparison between the twelve Iron Age shafts in the study in Kent and Surrey and the nine elsewhere in Southern Lowland England (Table 4).

It can be seen from comparison (Tables 3 and 4) that the Old Sorting Office shafts conform most to the Kent/Surrey Group, with all of the eight key criteria being represented in the group. The most obvious differences between the Lowland England criteria and the Old Sorting Office shafts is the lack of horse bones.

Comparison with Wait's table for both Roman civilian and military sites (Table 5) immediately shows a lack of non-ceramic votive items for the Swan Street shafts; objects such as miniature

Table 4. Iron Age (after Wait 1985)

| <i>Kent/Surrey Group</i> | | <i>Lowland England</i> | |
|--------------------------|---------------------------|------------------------|---------------------------|
| 1 | Linings | 1 | Layers |
| 2 | Cattle bones | 2 | Lining |
| 3 | Dog bones | 3 | Cattle bones |
| 4 | Bird bones | 4 | Horse bones |
| 5 | Human bones | 5 | Human bones |
| 6 | Pots, complete | 6 | Pots, complete |
| 7 | Pots, complete but broken | 7 | Pots, complete but broken |
| 8 | Ash deposits | 8 | Ash deposits |

Table 5. Roman (after Wait 1985)

| <i>Civilian</i> | | <i>Military</i> | |
|-----------------|----------------|-----------------|--------------|
| 1 | Layers | 1 | Cattle bones |
| 2 | Lining | 2 | Dog bones |
| 3 | Cattle bones | 3 | Horse bones |
| 4 | Dog bones | 4 | Pots, broken |
| 5 | Human bones | 5 | Tools |
| 6 | Pots, complete | 6 | Votives |
| 7 | Ash deposits | 7 | Deer bones |
| 8 | Tools | 8 | Oysters |
| 9 | Votives | 9 | Coins |
| 10 | Pig bones | 10 | Querns |
| 11 | Oysters | 11 | Weapons |
| 12 | Coins | 12 | Armour |

weapons, statuary or figurines, jewellery, and coins are largely absent. The divergence in the criteria between the Old Sorting Office shafts and Wait's Roman tables is far greater than for the Iron Age, with nine correlations with the civilian group and four for the military group. The major convergence with the Roman groups is in the depth of the shafts. Wait shows a concentration of shafts in the 2–4m depth range, slightly deeper than the range into which the Old Sorting Office shaft group falls, but this may be the result of the truncation of the site. The underlying geology suggests that the site sloped upwards to the south and the adjustment of the depth may not reflect this slope.

The use of deliberate layering in the Old Sorting Office shafts may be more extensive than is apparent, as post-medieval truncation removed the top fills of the features and may have destroyed evidence of structured deposition in the remaining shafts. The shafts identified as displaying structured deposition show marked concentrations of finds within layers interspaced with sterile or relatively clean fills. Of these shafts [1181] and [1343] showed the separation of ritual groups with a fill of clean sand, and shaft [1447] showed a distinct zoning of types of deposit, with the human and dog elements deposited in different fills. Those shafts with ritual pots also contain the highest numbers of broken sherds and animal bone.

The absence of non-ceramic votive offerings from the Old Sorting Office shafts may be an indication of a continuing pre-Roman tradition at this site. The votives from shafts found elsewhere have been identified as a Roman phenomenon, with personal objects being excluded from the more impersonal offerings of pre-Roman society. This shift in emphasis probably reflects a move away from group offering towards a ritual practice based more on private concerns, and a substitution of the more durable Romanised personal offerings for the organic offerings common to Iron Age shafts. A similar change has been noted in burials of the Roman period, and, as Philpott suggests (1991, 220), may reflect a substitution of an archaeologically durable item for a perishable organic one. The type of object deposited may be a signifier of the social status or wealth of the individual or group making that offering, and the lack of quality items in the offerings may be a reflection of the relative poverty or low social status of the population presenting the offerings.

The presence of votive offerings in boundary ditches, in the form of brooches and the Hercules figurine, may suggest that at the Old Sorting Office site the use of these offerings was inappropriate for the rituals associated with the shafts. This suggests that Iron Age ritual traditions and practices were prevalent in native society during the first hundred years of Roman occupation, with some Romanised influences, in the shaft forms and the occasional more Romanised offering, being introduced as the years progressed.

At the cemetery site at 165 Great Dover Street (Mackinder 2000), about 300m south-east of the Old Sorting Office, wells were associated with the shrine-mausoleum structures, as well as the earlier post-built structure, although no potentially ritual finds were identified from these. This post-built structure, consisting of a rectangular building (Building 1) dating to the 1st century, was defined by parallel lines of postholes and was associated with ditches reminiscent of those in Phase 3a at the Old Sorting Office. It was interpreted as a field system or garden. The structure was dismantled and the ditches backfilled to accommodate the early 2nd-century cemetery and temple-mausoleum. It may be that rather than representing field or garden structures, these features represent an earlier phase in the development of the cemetery, with a timber-built shrine being replaced by masonry structures. Similarly, as stated above, the Tabard Square temple precinct is located c.180m to the east. Numerous ditch features, including a large temenos ditch with significant accumulations of placed deposits, formed part of this complex.

At Folly Lane, St Albans (Niblett 1999) at least 28 shafts were recorded associated with a possible subterranean mortuary structure, burials, cremations, and a later temple. These ranged in depth from 2–6m and were cut into the underlying drift geology. They exhibited deliberate structuring of the fills, and included human and animal bone, broken sherds and near-complete vessels, including face pots. The fills of shaft AET contained a defleshed human skull on its floor, the partial remains of a puppy with part of a possible face pot, and large quantities of butchery waste. The majority of these shafts appeared to have been backfilled from the mid-2nd to the late 3rd century. The preponderance of flagon and jar forms in the ritual assemblages is noted as a particular characteristic of the shaft fills on this site (*ibid*).

At Baldock (Stead & Rigby 1986) eight wells and numerous deep pits or shafts, dating from the late Iron Age to late Roman times, were recorded. These ranged in depth from 2.5–15m, and human skeletons were found in the top fills of two. These burials are described as being muddled together and disturbed so that the bones were articulated but displaced, ascribed to subsidence of the fills. Additional disarticulated bone, consisting in the main of cranial fragments, was discovered in the wells, ditches, and pits. Two of the wells contained the carcasses of seven and six horses respectively, along with dumps of other animal bone, and in one were the semi-complete skeletons of two recently weaned red deer calves together with two hares, a fox, and the bones of pig, horse, cattle and sheep. Most showed signs of deliberate layering. A number of the deep pits or shafts contained near-complete pot assemblages resembling burial groups. At Baldock Site D, cremation burial 6, dated to the mid-1st century, contained samian jugs, a Verulamium region flagon, the hind leg of a pig, some domestic fowl bones and the shoulder and fore-leg of a sheep. The bones had apparently been laid in the grave on a wooden tray. Burial 7 (pre-Flavian) contained a broken flagon, apparently ritually killed, among the pot group with domestic fowl, cattle and sheep bones. Burial 50 at Site F, dating to the 3rd century, contained 31 lamps and 15 pedestal cups or candlesticks. The cups/candlesticks appear to have been ritually smashed elsewhere and only part of the debris deposited.

These two sites demonstrate the use of wells or shafts in a known ritual context, both being ceremonial complexes, and serve to illustrate similar elements of ritual to that identified at the Old Sorting Office site, albeit in a more complex and obvious form.

Flagons were the most common vessel type from the Old Sorting Office shafts, with 20 complete or part-complete examples being recovered from them and their construction cuts, in addition to a ritually 'killed' example from a ditch. The predominance of flagons in the ritual assemblages (67%) is not repeated at Folly Lane (Lyne 1999; 2000); here flagons made up only 18% of the 11 vessels in shaft AIJ/AIK (AD 155–200), 17% of the 12 pots from shaft AIL, and were absent in the others. Flagons and bottles only make up 9.5% of the 116 vessels from 13 shafts at Baldock (Lyne 1999).

At the Old Sorting Office, all but one of the

flagons are from the Verulamium kilns c.35km to the north-west. There are considerably more VRW flagons from the Old Sorting Office site than from the ritual shafts found at Verulamium itself, where most of the examples were wasters from the local kilns. This may be a reflection of trade patterns, with the flagons being exported to London, and their subsequent use or re-use as votive vessels. The painted decoration on three of these vessels may support the idea of re-used vessels in the votive assemblages. Alternatively this may suggest a perceived suitability of these pottery forms for specific ritual (Lyne 1999). It has, however, recently been found that Verulamium Region Whiteware fabric vessels were also made at London in the Walbrook valley during the 2nd century (Seeley & Drummond-Murray 2006) and that these are indistinguishable from those made in the Verulamium area.

The presence of an inscribed name 'Urbicus' on a platter (Tomlin & Hassall 2000, 442) and the scored parallel ownership marks on a jar from one of the shafts may offer a clue to the rituals behind their deposition. The personalisation of these objects may point to one of two things: that the objects were deposited by the individuals themselves as a dedication by the named individuals, possibly as a plea for intercession by a deity or as objects offered by others to the (memory of) named individuals.

Further evidence of ritual use of features comes from the association of human remains with articulated animal bone in the fills of the 1st-century boundary ditch and the deposition of a 'killed' pot in the side ditch of the possible track running through the entrance in this boundary. There is the possibility of offerings of jewellery being made, with six out of the nine brooches found on the site (the only jewellery items found) and the Hercules figurine deposited in these same ditches. The presence of shattered but near-complete pots in three pits close by these boundary ditches may also be ritual in nature. This fits the general pattern of ritual deposits reinforcing boundary lines during the prehistoric and early historic periods (Brück 1995).

As with the interpretation of shafts as having a ritual use resting on the conjunction of a number of diagnostic factors (Wait 1985), the evidence for ritual deposition in the settlement boundaries does not rest on a single element but on their association with a number of related or associated deposits, or their disassociation from other deposits or finds (Hill 1995).

The manipulation of human remains

The presence of two disarticulated femurs in the boundary ditch [714] is echoed in the recovery of a right femur, the anterior of the left half of a mandible, and fragments of a frontal bone from the major ditch at 1–5 Swan Street (Graham 1978). Graham postulates that these remains derived from known cemeteries further south, and does not assign them a ritual function. However, the evidence of the disarticulated human skeletal elements from the Old Sorting Office site, and, for example, the single human femur found in a pit containing otherwise exclusively votive artefacts at Uley Roman temple, suggests that this type of deposition may be deliberate (Levitan 1993, 266). At Folly Lane 18 human adult long bones were found in the fills of ritual shafts and the ceremonial enclosure ditch. These remains were interpreted as being indicative of a tradition of exposure and display of the dead (Niblett 1999, 404). Examples of this type of deposition are also clear from the 165 Great Dover Street site and the Tabard Square excavations to the east. Disarticulated human remains associated with animal bone in ritual, placed deposits are known from other sites in London, elsewhere in England, and on the Continent (Derks 1998; Fulford 2001; Graham & Millett 1980; Matthews & Hutchings 1972; Matthews 1981; Merrifield 1987; Stjernquist 1964; 1970).

The absence from the archaeological record (Wait 1985, 89; Hill 1995, 105) of the remains of a considerable proportion of the human population between the Middle Bronze Age and the late Iron Age might be explained by this practice of exposure and two-stage funeral practice — a mortuary practice involving not the disposal of the corpse as a whole (Brück 1995, 249), but rather the retention and separate deposition of token bone elements. This lack of human remains (between 90–95% of the population by Wait's calculations (1985, 90)) would support the idea that the few individuals that are represented in the archaeological record are the result of non-normative deliberate action.

The burial of token or single bone elements in pits and boundary or enclosure ditches is a widely documented pre-Roman practice (Wait 1985; Brück 1995), although it appears to decline during the late Iron Age. The majority of these elements consist of long and skull bones, mostly from the left side of the body,

implying selection of symbolically significant elements for deposition. The absence of evidence of dismemberment on these deposits argues for secondary manipulation of corpses after the flesh had decomposed, much as has been suggested in the case of the partial skeleton in the well at the Old Sorting Office. The deposition of partial skeletons is infrequent during the Iron Age and Roman periods but not unknown (*ibid*), and Wait argues that rather than being sacrificial victims, a practice banned by the Romans, they represent a continuation of widespread two-stage disposal or burial ritual.

It has been argued (Wait 1985) that this type of burial rite reflects beliefs regarding both the nature of the afterlife and the soul's progression towards it. The two-stage mortuary ritual is seen as a signifier of the transition from one state to another, from life into the afterlife, with retention of some remains and disposal of others (Wait 1985; Van Gennep 1960 [1909]) either after excarnation or exposure of the remains. The core of the belief is that death is a process rather than a single event, with death beginning with the cessation of breathing and heartbeat and only ending with the final dissolution of the body. This process is accompanied by rituals to celebrate and facilitate the progression of the soul from one stage to the other. This idea of transition, or liminality, may explain the deposition of the ritually manipulated skeleton in the shaft. Wells and springs are associated in Celtic myth with openings to the Otherworld — a liminal doorway to the afterlife. The practice of secondary funerary or mortuary rites, attested to in ethnographic studies (see Wait 1985, ch 9), provides the opportunity for manipulation of the corpse, the retention of selected body parts, and the disposal of the remainder in a final resting place during the second funeral.

The fact that two-stage burial ritual, with either exposure or excarnation of corpses, is implied by the human remains on site raises the interesting question of the source of these body parts. It seems unlikely that the exposure of human remains for long enough for the flesh to have decayed would have been tolerated even on the outskirts of London during the late 2nd or early 3rd century, given the Roman imperative of burial outside the bounds of the city. This suggests that the remains were either from bodies exposed outside the boundaries of the habitation area, or obtained from the excarnation of bodies.

Given the number of Roman burials and burial grounds excavated both north and south of the river, a practice such as excarnation/exhumation or indeed the burial of individuals with specific bones missing, if this practice was widespread, would have been noted in the archaeological record. Two examples of possible exhumation were recorded at the cemetery complex at 165 Great Dover Street. Burial 8 consisted of two corresponding cuts, the upper of which contained an individual whose head had been separated from the body *post-mortem* and placed on the chest (Mackinder 2000, 15, 38). This was attributed to the desirability of the burial location, but could equally be interpreted as the exhumation and reburial of the individual after secondary manipulation and a second funeral. The upper body bones of Burial 12 were disturbed and the lower leg bones had been moved and placed next to the upper legs, probably as the result of reburial. However the evidence from the bodies buried in the formal London Roman cemetery sites indicates that the individuals buried there on the whole do not qualify for being the source of the disarticulated human bone found in ditches, pits and shafts.

The deposition of remains in boundary ditches may serve to emphasise the exclusion of the individual, and at the same time reinforce the social and legal boundary as a warning against further deviant behaviour. In this sense the boundary serves as a signifier of social expectations and behaviour as well as a physical reminder of territory (Hill 1995, 108), as discussed above. This does not however explain the apparent *post-mortem* manipulation of the Old Sorting Office body, and while the disposition of the body in the shaft may appear to fit with the idea of a dishonourable burial, its disposal, in what by other criteria seems to be a votive shaft, does not. Wait (1985, 239) suggests that this secondary manipulation may be either derogatory in the case of a criminal or complimentary in the case of a chief or leader. In both particulars this would point to the body being ritual in nature rather than casual disposal in a convenient location. The location within a walled cemetery of Burial 8 at 165 Great Dover Street (Mackinder 2000), with the suggestions of exhumation, secondary manipulation and reburial, would suggest that the treatment is not derogatory. The presence of human remains in Roman wells is not uncommon (Marsh & West 1981, 99; Ross 1968; Richardson 1983, 277;

Stead & Rigby 1986, 390–1). This again would argue that this disposal is not the result of casual burial practice but of ritual deposition.

There is evidence from London and elsewhere of ritual deposition within boundary ditches. At the Baltic Exchange excavations (Sidell 2000, 95) a number of dog skeletons of various sizes, together with primary butchery waste, were recorded in a large boundary ditch, fitting the evidence for both the ritual use of dogs and the deposition of remains in boundary ditches. At Hunts House, Guys Hospital, a bead-rim jar containing the skull of a small dog and single fragments from a pig skull and a sheep-sized skull were found buried near the terminus of a 1st-century boundary ditch (Taylor-Wilson 2002), while at the Wolfson Wing site a near-complete vessel containing a dog skull was recovered from levelling fills over a silted-up channel (C Pickard pers comm). At 201–211 Borough High Street a high proportion of the animal bone from Ditch 2 was found to be from lambs, represented only by skull fragments (Ferretti & Graham 1978), while in Ditch 4 a human skull and two near-complete Neronian samian vessels were found in the lower fills. In Nash, Gwent, two adult human bodies were found buried parallel to field boundaries and a number of juvenile cattle had been interred in pits cut into the fills of ditches (Meddens & Beasley 2001). In Colchester limb bones and six crania were deposited in the legionary ditch by the west gate along with dog skeletons (Isserlin 1996, 94), while at Baldock a complete inhumation and cranial fragments were recorded in ditches (Stead & Rigby 1986, 392). Isolated human skulls in a ritual context from the Thames and its tributaries are widely documented (Bradley & Gordon 1988; Marsh & West 1981), again showing the tradition of token bone deposition in liminal contexts.

The majority of articulated animal remains came from ditches in Phases 3a and 3b, again suggesting the ritualisation of the boundary, or from wells. Armitage (2000a) places all but two examples of possible ritual remains in Phases 3a and b, apart from the dogs in shaft [1447] and cockerel bones in shaft [1306] (Phase 3c). This, along with the presence of complete but shattered pottery vessels in pits close by, may suggest ritual deposition in pits along the boundary as well as in the boundary itself. The only exceptions to this are two horse hooves, which may be the remains of leather working, and the articulated remains of an immature goat

from a pit to the north of the boundary ditch in an area of heavy rubbish pitting. The fact that this kid does not fit the characteristics of the rest of the animal bone assemblage may suggest that these remains are again special in some way, and may therefore show ritual deposition in pits

The non-butchered adult skeletons of a sheep and a goat in the boundary ditch [714] again may have alternative explanations for their deposition other than being the disposal of casualty animals considered to be unsafe for consumption and disposed of away from the settlement. The complete or partial fore and hind limbs of horses recovered from the same ditch may, because of their close association with disarticulated (token) human remains, also imply ritual deposition. The presence of an articulated hind limb of a cow in association with votive offerings and a human femur at Uley (Levitan 1993, 266), a foal leg and jaw from Nash in Wales (Meddens & Beasley 2001) and examples from elsewhere in England and on the Continent indicate that the practice was widespread.

The fact that only 0.3% of the bone assemblage showed any signs of gnawing by scavengers suggests that the remains were quickly buried or disposed of in such a way as to be unreachable by dogs and rats. This would tend to disprove the idea that the animal bone represents the casual disposal of domestic waste at a convenient location at the back of the settlement.

There are other indicators of the use of animal bones in ritual contexts. The cockerel bones from the site, as opposed to those from hens, only occur in wells and the boundary ditch [714], suggesting that cockerels were restricted to this use and are probably therefore purely ritual. A specific reference to the native Britons regarding the consumption of domestic fowl and geese as being taboo exists in contemporary Roman records (Caesar, *De Bello Gallico* 5.12). A chicken carcass was recovered from Burial 26 at 165 Great Dover Street, interpreted as a ritual offering; chickens were relatively common grave goods in inhumations at the East London cemetery (Mackinder 2000, 45) and are also known from Lant Street (Sayer 2006).

The Uley Romano-British temple in Gloucestershire has parallels for the ritual deposits at the Old Sorting Office, such as the deposition of brooches in votive deposits. Brooches are seen to occur in significant numbers on temple sites (Butcher 1993) and are probably personal

devotions at the temples. A number of beads were recovered from votive pits, again interpreted as individual offerings, suggesting that the deposition of a bead in shaft [1181] may have been intentional rather than accidental loss or rubbish.

The association of the site with the southern boundaries of Southwark may explain the presence of so many shafts in this area. The site appears to lie on the very edge of Roman Southwark at the junction of two, possibly three, roads leading from the bridgehead, through the settlement, to the coast, and in close proximity to the Lant Street cemetery and the Tabard Square temple precinct. Ritual deposition and activity to reinforce the boundaries of the settlement (Millett 1994) and the road lines, and therefore the transition between settlement (culture) and countryside (nature), may combine with a location for possible offerings to bless a journey as the road leaves the town (van Gennep [1909] 1960, 15). Similarly it is located in a ritual landscape between the dead and ancestors at Lant Street and the living and deities at the Tabard Square complex. On Bronze Age and Iron Age sites token bone elements are found in transitional deposits, for example in ditches or entranceways, sanctifying passage. Points of entrance and exit are often distinguished by human remains as a means of reinforcing the boundary at a point of routine encounter (Brück 1995; Wait 1985; van Gennep [1909] 1960). Bone elements at the Old Sorting Office may represent a continuity of this practice, in this case representing ritual reinforcement of the passage through the southern boundary of Southwark.

Ritual sacrifices in ethnological studies (Wait 1985, 244) are universal in the inclusion of food and ritual sacrifice. The ritual slaughter of animals, destruction of vegetable matter, and libations of blood or liquor associated with the food eaten during the ceremonials formed part of the animal sacrifice, with a greater or lesser part, possibly the inedible portions, being reserved for the gods and for deposition (Hill 1995, 103; Philpott 1991, 236). It has been suggested (Wait 1985, 244) that lower value offerings may represent the activities of family size groups, while slightly higher value devotions would represent communal activity and high value or large offerings are likely to represent a regional group. Similarly, Ross (1968) presents the idea that the largest and most impressive shafts were connected with the ritual of the

social and religious élite and that the smaller shafts and pits were the result of local worship. The low number of votive items found at the Old Sorting Office and the size of the shafts would, by these criteria, suggest that these shafts represent the ritual activity of a small group of people continuing a pre-Roman tradition.

The identification of the deities involved at the Old Sorting Office is unclear but the offerings may offer a clue. The only positive representation, a small figurine of Hercules recovered from the terminus of an early boundary ditch, is almost certainly a votive offering. Part of the right arm and left leg are missing, possibly to 'kill' the object, and it was found in association with two near-complete but shattered pots and the upper half of a flagon. Hercules was protected by Minerva and regarded as a bringer of victory and was particularly venerated by soldiers. He also appears in funerary contexts as symbolising the conquest of death, and was appealed to in domestic contexts to ward off evil spirits (Wardle 2000). Both these latter interpretations fit with the idea of offerings in the liminal setting of a boundary ditch.

The dog is associated with the Roman god Mithras, as well as Diana and other Greco-Roman deities and an unnamed British hunter god (Merrifield 1986). A canine figure is seen associated with Orpheus on mosaics in Britain of 4th-century date (Johnson 1995, 50), and dogs are also documented as guardians or guides in the Underworld. Nodens and the Celtic hammer god Sucellos have the dog as one of their attributes, paralleling the Irish custom of giving semi-divine heroes dog epithets (Ross 1968).

Both rams and cockerels are animal attributes of Mercury, perhaps indicating that the sheep, goat and cockerel remains in the boundary ditch at the Old Sorting Office are offerings to Mercury. This deity was associated with cures of diseases and sprains impeding movement, was the succourer of travellers and solver of disputes, and it was Mercury who guided the spirits of the dead to the Underworld. The fact that the form of the Old Sorting Office offerings corresponds in the main with pre-Roman traditions does not preclude their being used to worship a Roman god. The adoption of local ritual practices by the Romans is a widely accepted tenet, as is the adoption of Roman gods by the native population and the identification of local deities with a Roman gods.

A metal patera dedicated to Mars was found in a ritual shaft in St Erth, Cornwall, while at Carrawburgh, Northumberland, a well sacred to the Celtic goddess Coventina contained, amongst other things, bronze statuettes of a horse and a dog. At Great Chesterford, Essex, images of Hercules and an unidentified river god were recovered from a ritual shaft and at Sandwich, Kent, a pipeclay Venus figurine was found. From this it appears there was no set deity associated with shafts, and they probably served to facilitate offerings for a number of deities according to circumstance or local preference. The temple precinct to the east of the Swan Street site appears to have been dedicated to Mars Camulus as indicated by the dedicatory inscription found there (Millett 2005, 51).

CONCLUSIONS

The Old Sorting Office site is ideally located to examine the interface between the settlement of Roman Southwark and the immediate hinterland of that settlement, located as it is over the apparent southern boundary during the 1st and early 2nd centuries AD.

The expansion of the southern limits of Roman Southwark from the late 1st century onwards is indicated, but no evidence exists for the expanded southern boundary, and evidence of contraction thereafter may have been distorted by severe 20th-century truncation of the later deposits.

The association of token human bone deposits with articulated remains, 'killed' pots, and jewellery deposition in the ditches of the early phases of the site strongly suggests a ritual significance attached to these boundaries. The ritual reinforcement of boundaries in pre-Roman society is well documented, and the Iron Age and earlier ritual tradition appears, perhaps unsurprisingly, to have continued on at least into the 1st and 2nd centuries. The close resemblance of the shaft deposits at the Old Sorting Office to deposits in other known Iron Age ritual shafts contrasts with the correlation in size to known Roman shafts, suggesting a continued Iron Age ritual tradition into the Roman period. This would indicate that the local population remained essentially unRomanised in their ritual and spiritual life through the 1st and 2nd centuries. The decrease in the number of these shafts after the middle of the 2nd century may reflect the contracting size of the settlement, but

may also reflect the changing religious practices of the populace.

The evidence from the shafts and ditches has highlighted the difficulties in identifying ritual deposits. The nature of the evidence, coupled with the persisting disinclination of archaeologists to ascribe ritual functions to deposits (*cf* the assertion (Sidell 2000) that the articulated remains of a horse, a dog and a red deer laid nose-to-tail in a circle within a pit are only 'likely to have been associated with ritual'), especially during the Roman period, makes it difficult, even on sites with proven ritual activity, to separate ritual and secular deposits, for example evidence of ritual feasting and deposition. As Brück (1995, 254) argues:

... daily practices are informed not only by practical considerations but also by the same cosmological and symbolic principals that structure ritual. Furthermore, our ethnocentric division of the ritual and the secular is not supported by anthropological studies which suggest that ritual and non-ritual activities form part of a continuum of cultural practice and that it is difficult to sharply divide one from the other. It is therefore often difficult to distinguish archaeologically between ritual and non-ritual practice.

That ritual deposition is apparent in both the boundary ditches and the shafts on site possibly indicates two separate sets of devotion being carried out, and these two sets of ritual may be explained by the site's location. The first consists of ritual designed to enforce/demarcate the boundary lines of Southwark, and the transition from settlement to countryside, from order to chaos. Evidence from both the Old Sorting Office and nearby sites suggests that the population of the area was essentially unRomanised in their diet, their iron-working technology, and in the animal species they were rearing. That these rituals reflect a pre-Roman tradition, in the use of token bone and votives to define the southern boundary of Southwark is not surprising during the 1st century AD. The use of these forms of ritual are well-evidenced in the definition of liminal and territorial boundaries during the pre-Roman period, and may be expected to continue after the Roman occupation.

The second set of ritual activities comprises those associated with ritual shafts or the use of wells for votive deposition. The number of such shafts/wells in such a relatively small area

implies some significance to the location. The site is situated at the junction of two major roads to the south coast and just on the edge of the Southwark settlement. This would place the shafts outside the settlement at the point where the roads cross the boundary ditches. Mackinder (2000) suggests that the walled cemeteries and mausolea extended from the limits of the settlement. The similarity in the plans of the mid to late 1st-century development of both sites, as well as the presence of wells associated with the temple and mausoleum structures, the Tabard Square temple complex in between the two sites and the Lant Street cemetery a little further west indicates that the Old Sorting Office remains are part of the ritual landscape extending along the edges of Watling Street and the southern boundary of Roman Southwark.

An argument could be made that the shafts are in this location as part of a shrine used by travellers departing *Londinium* towards the south coast ports or arriving in the city. While there is no evidence of a shrine itself on the site, there clearly are the remains of two Romano-British temples to consider immediately to the east. The similarity in the patterns of ritual behaviour at the Old Sorting Office and those at other known temple sites, such as Uley, Baldock, and Folly Lane, provides evidence for a similar configuration here. This may also explain, certainly in the earlier shafts, why no large assemblages of bone were recovered. If travellers used the shafts for transitional devotions, then portable offerings, such as animal-portions or pots, are likely to be made in preference to larger items such as a complete sheep. This theory may explain the evidence that one of the deities honoured at the site was Mercury, the god of travellers, guide to the Underworld, and curer of ailments affecting mobility.

The strength of this local practice, tied to the local Kent and Surrey traditions by the deposits in the shafts, appears to be such that ritual activity of an Iron Age nature continued into the 3rd century. The deposition of a semi-articulated corpse and the nature of the deposits within the shafts implies the continuation of Iron Age practices well into the Roman period. This strongly suggests the presence of an only partially Romanised population. The possibility of the body being either a casual low-status burial, or that of an outcast excluded from the normative burial rights, both documented occurrences in Roman Britain, is discounted by

the apparent *post-mortem* manipulation of the corpse, implying secondary funeral rites, and its association with defleshed dog carcasses and 'killed' pot assemblages in a votive shaft/well.

If the suggestion of the site functioning as part of a travellers' shrine is correct then this continued tradition probably represents the belief system of the wider locality. The introduction of more Romanised votives and the use of shafts/wells more in keeping with Roman tradition argues for pre-Roman tradition in a Romanised setting, possibly explained by the passage of travellers to and from the city.

Re-evaluation of similar evidence in light of an awareness of ritual context and ritual behaviour in the rest of London, in the absence of specific ritual/ceremonial context, may clarify patterns of ritual behaviour as yet unidentified in the archaeological record. This applies especially to the use of human bone in non-funerary and non-mortuary contexts, where previously such remains as disarticulated bone have been attributed to redeposited bone from funerary/mortuary contexts locally, and of associated animal bone groups.

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BIBLIOGRAPHY

- ARMITAGE (2000a), P L Armitage *Report on the Mammal, Bird, Fish and Amphibian Bones from Phase 3 Roman Contexts (SWN98)* unpub report for PCA
- ARMITAGE (2000b), P L Armitage *Report on the Mammal, Bird, Fish and Amphibian Bones from Long Lane, Southwark. Site (LGK99)* unpub report for PCA
- ARTHUR & MARSH (1978), P Arthur & G Marsh (eds) *Early Fine Wares in Roman Britain* BAR Brit Ser 57
- BENDRY (1998), R Bendry *An Assessment of the Mammalian Remains from Hunts House, Guys Hospital, Great Maze Pond, London Borough of Southwark, SE 1* unpub report for PCA
- BIRD *et al* (1978), J Bird, A H Graham, H L Sheldon & P Townend (eds) *Southwark Excavations 1972–74* London Middlesex Archaeol Soc & Surrey Archaeol Soc Joint Pub 1
- BIRD *et al* (1983), D G Bird, G Crocker & J S McCracken 'Archaeology in Surrey 1981' *Surrey Archaeol Coll* 74, 185–94
- BISHOP (1999), B J Bishop *Excavations at Swan Street, London Borough of Southwark. Site Code SWN98. Lithic Assessment* unpub report for PCA
- BLACK (1983), E W Black 'Ritual dog burials from Roman sites' *Kent Archaeological Review* 71, 20–2
- BRADLEY & GORDON (1988), R Bradley & K Gordon 'Human skulls from the River Thames, their dating and significance' *Antiquity* vol 62 no. 236, 503–9
- BRIGHAM (1990), T Brigham 'The late Roman waterfront in London' *Britannia* 21, 99–183
- BRÜCK (1995), J Brück 'A place for the dead: the role of human remains in Late Bronze Age Britain' *Proceedings of the Prehistoric Society* 61, 245–77
- BRÜCK (1999), J Brück 'Ritual and rationality: some problems of interpretation in European archaeology' *European Journal of Archaeology* vol 2 no. 3, 313–44
- BUTCHER (1993), S Butcher 'Personal objects: jewellery and equipment. Brooches of copper alloy' in Woodward & Leach 1993, 149–59
- CARRUTHERS (1999), W J Carruthers *Swan Street, Southwark – SWN 98. Assessment of Plant Remains from 7 Samples* unpub report for PCA
- DEAN (1980), M Dean 'Excavations at Arcadia Buildings, Southwark' *London Archaeology* vol 3 no. 14 Spring, 367–73
- DEAN & HAMMERSON (1980), M Dean & M Hammerson 'Three inhumation burials from Southwark' *London Archaeologist* vol 4 no. 1, 17–22
- DERKS (1998), T Derks *Gods, Temples and Ritual Practices: The Transformation of Religious Ideas and Values in Roman Gaul*
- DODWELL (1999), N Dodwell *An Assessment of the Human Remains from Swan Street (SWN 98)* unpub report for PCA
- DOUGLAS (2000), A Douglas *Phased Summary and Assessment Document of Excavations at 5–27 Long Lane, London Borough of Southwark, SE 1* unpub report for PCA
- FERRETTI & GRAHAM (1978), E Ferretti & A H Graham '201–211 Borough High Street' in Bird *et al* 1978, 53–81
- FRERE (1972), S S Frere *Verulamium Excavations Vol 1* Rep Res Comm Soc Antiq London 28
- FRERE (1983), S S Frere *Verulamium Excavations Vol 2* Rep Res Comm Soc Antiq London 41
- FULFORD (2001), M Fulford 'Links with the past: pervasive "ritual" behaviour in Roman Britain' *Britannia* 22, 199–218
- GENNEP (1909), A van Gennep *The Rites of Passage* (trans M B Vizedom & G L Caffee (1960))

- GILLAM (1970), J P Gillam *Types of Roman Coarse Pottery Vessels in Northern Britain*
- GRAHAM (1978), A H Graham 'Swan St/Great Dover St' in Bird *et al* 1978, 473–97
- GRAHAM & HINTON (1988), A H Graham & P Hinton 'The Roman roads in Southwark' in Hinton & Swain 1988, 19–24
- GRAHAM & MILLETT (1980), D Graham & M Millett *Roman Neatham*
- GRANT (1989), A Grant 'Animals in Roman Britain' in M Todd (ed) *Research on Roman Britain 1960–1989* Britannia Monograph 11, 135–46
- HAYNES (2000), I Haynes 'Religion in Roman London' in I Haynes, H Sheldon & L Hannigan (eds) *London Underground, the Archaeology of a City*, 86–101
- HEARD *et al* (1990), K Heard, H Sheldon & P Thompson 'Mapping Roman Southwark' *Antiquity* vol 64 no. 244, 608–19
- HENIG (1993), M Henig 'Votive objects: images and inscriptions' in Woodward & Leach 1993, 89–112
- HILL (1995), J D Hill *Ritual and Rubbish in the Iron Age of Wessex* BAR Brit Ser 242
- HINTON & SWAIN (1988), P Hinton & H Swain (eds) *Excavations in Southwark 1973–76, Lambeth 1973–1979* London Middlesex Archaeol Soc & Surrey Archaeol Soc Joint Pub 3
- HODGSON (1977), G W Hodgson *The Animal Remains from Excavations at Vindolanda 1970–1975*
- HUTCHINSON (1998), M Hutchinson 'The Jubilee Line excavations: recent work on Roman Southwark' in B Watson (ed) *Roman London. Recent Archaeological Work* Journal of Roman Archaeology supp series 24, 58–60
- ISSERLIN (1996), R M J Isserlin 'Thinking the unthinkable: human sacrifice in Roman Britain?' in K Meadows, C Lemke & J Heron *TRAC 96 Proceedings of the Sixth Annual Theoretical Archaeology Conference, Sheffield 1996*, 91–100
- JOHNSON (1995), P Johnson *Romano-British Mosaics*
- KEYS (1999), L Keys *Iron Slag from Swan Street, Borough* (SWN98) unpub report for PCA
- KILLOCK & BROWN (2004), D Killock & G Brown 'Tabard Square' *Current Archaeology* 192, 540–7
- KING (1978), A King 'A comparative survey of bone assemblages from Roman sites in Britain' *Institute of Archaeology Bulletin* 15, 207–32
- KING (1991), A King 'Food production — meat' in R F J Jones (ed) *Roman Britain: Recent Trends*, 15–20
- LEVITAN (1993), B Levitan 'Vertebrate remains' in Woodward & Leach 1993, 257–301
- LOCKER (1988), A Locker 'The animal bone' in Hinton & Swain 1988, 427–42
- LUFF (1982), R-M Luff *A Zooarchaeological Study of the Roman North-Western Provinces* BAR Inter Ser 137
- LYNE (1999), M Lyne 'The evidence from assemblage quantifications for types of activity at Folly Lane' Niblett 1999, 299–306
- LYNE (2000), M Lyne *The Roman Pottery from Swan Street, Southwark* unpub report for PCA
- LYNE & JEFFERIES (1979), M A B Lyne & R S Jefferies *The Alice Holt/Farnham Roman Pottery Industry* CBA Research Rep 30
- MACKINDER (2000), A Mackinder *A Romano-British Cemetery on Watling Street. Excavations at 165 Great Dover Street, Southwark, London* MoLAS Archaeology Studies 4
- MARSH (1978), G Marsh 'Early second century fine wares in the London area' in Arthur & Marsh 1978, 119–223
- MARSH & WEST (1981), G Marsh & B West 'Skullduggery in Roman London' *Trans London Middlesex Archaeol Soc* 23, 86–102
- MATTHEWS (1981), C L Matthews 'A Romano-British inhumation cemetery at Dunstable, *Durocobriavae*' *Bedfordshire Archaeol Journ* 15, 1–73
- MATTHEWS & HUTCHINGS (1972), C L Matthews & B Hutchings 'A Roman well at Dunstable' *Bedfordshire Archaeol Journ* 7, 21–34
- MEDDENS (1999), F M Meddens *SWN 98 Painted Wall Plaster* unpub report for PCA
- MEDDENS & BEASLEY (2001), F M Meddens & M Beasley 'Roman seasonal wetland pasture exploitation near Nash, on the Gwent Levels, Wales' *Britannia* 32, 143–85
- MERRIFIELD (1986), R Merrifield 'The London hunter god' in M Henig & A King (eds) *Pagan Gods and Shrines of the Roman Empire* OUCA Monograph 8, 85–92
- MERRIFIELD (1987), R Merrifield *The Archaeology of Ritual and Magic*
- MILLETT (1994), M Millett 'Evaluating Roman London' *Archaeol Journ* 151, 427–35
- MILLETT (2005), M Millett *Roman Britain*
- NIBLETT (1999), R Niblett *The Excavation of a Ceremonial Site at Folly Lane, Verulamium* Britannia Monograph 14
- PHILPOTT (1991), R Philpott *Burial Practices in Roman Britain. A Survey of Grave Treatment and Furnishing AD 40–410* BAR Brit Ser 219
- RICHARDSON (1983), B Richardson 'Excavation round-up' *London Archaeologist* vol 4 no. 10, 274–9
- RIELLY (2000), K Rielly 'The animal bones' in Mackinder 2000, 64–5
- ROSS (1968), A Ross 'Shafts, pits, wells — sanctuaries of the Belgic Britons?' in J M Coles and D D A Simpson (eds) *Studies in Ancient Europe, Essays Presented to S. Piggott*, 255–86
- SAYER (2006), K Sayer *An Assessment of an Archaeological Excavation at 52–56 Lant Street, London Borough of Southwark, LTU 03* unpub report for PCA
- SABEL (1999), K Sabel *Assessment of the Building Materials at Swan Street, London Borough of Southwark* (SWN98) unpub report for PCA

- SEELEY & DRUMMOND-MURRAY (2006), F Seeley & J Drummond-Murray *Roman Pottery Production in the Wallbrook Valley: Excavations at 20–28 Moorgate, City of London, 1998–2000* MOLAS Monograph 25
- SHELDON (1978), H Sheldon 'The 1972–74 excavations: their contribution to Southwark's history' in Bird *et al* 1978, 11–49
- SIDELL & RIELLY (1998), E J Sidell & K Rielly 'New evidence for the ritual use of animals in Roman London' in Watson 1998, 95–9
- SIDELL (2000), J Sidell (ed) 'Environmental archaeology in London 1995–1998, part 2' *London Archaeologist* vol 9 no. 4, Spring, 95–101
- STABLER (2000), K Stabler *Swan Street Excavation [SWN 98] Coinage Assessment* unpub report for PCA
- STEAD & RIGBY (1986), I M Stead & V Rigby *Baldock. The Excavation of a Roman and Pre-Roman Settlement, 1968–72* Britannia Monograph 7
- STJERNQUIST (1964), B Stjernquist 'New light on spring — cults in Scandinavian prehistory' *Archaeology* 17/3, 180–4
- STJERNQUIST (1970), B Stjernquist 'Germanischen Quellen Opfer' in H. Jankuhn (ed) *Vorgeschichtlichen Heiligtümer und Opferplätze in Mittel- und Nordeuropa*, 78–99
- SWIFT (2000), E Swift *Swan Street (SWN 98) The Small Finds* unpub report for PCA
- TAYLOR-WILSON (2002), R Taylor-Wilson *Excavations at Hunts House, Guys Hospital. London Borough of Southwark* PCA Monograph 1
- THOMPSON *et al* (1998), A Thompson, A Westman & T Dyson *Archaeology in Greater London 1965–90: a Guide to Records of Excavations by the Museum of London*
- TOMLIN & HASSALL (2000), R S O Tomlin & M W C Hassall 'Roman Britain in 1999 II: Inscriptions' *Britannia* 31, 433–49
- WAIT (1985), G A Wait *Ritual and Religion in Iron Age Britain* BAR Brit Ser 149
- WARDLE (2000), A Wardle *Copper-alloy Objects from Swan Street, Southwark, SWN98* unpub report for PCA
- WATSON (1998), B Watson (ed) *Roman London. Recent Archaeological Work* Journal of Roman Archaeology supp ser 24
- WESTMAN (1998), A Westman 'Publishing Roman Southwark: new evidence from the archive' in Watson 1998, 61–6
- WOODWARD & LEACH (1993), A Woodward & P Leach (eds) *The Uley Shrines: Excavations of a Ritual Complex on West Hill, Uley, Gloucestershire, 1977–9*
- YULE (1982), B Yule 'A third century well group, and the later Roman settlement in Southwark' *London Archaeologist* vol 4 no. 9 winter, 243–9
- YULE (1988), B Yule 'Natural topography of north Southwark' in Hinton & Swain 1988, 13–17