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A Romano-British
Landscape at Brockley
Hill, Stanmore, Middlesex
Excavations at Brockley Hill
House and the former MoD site



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PUBLICATION REPORT FOR LAMAS

**A ROMANO-BRITISH LANDSCAPE AT BROCKLEY HILL,
STANMORE, MIDDLESEX.**

**EXCAVATIONS AT BROCKLEY HILL HOUSE AND THE
FORMER MoD SITE**

Alex Smith, Lisa Brown and Kate Brady

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EXCAVATIONS AT BROCKLEY HILL HOUSE AND THE FORMER MoD SITE

Alex Smith, Lisa Brown and Kate Brady

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SUMMARY

This report presents the results of two archaeological investigations undertaken by Oxford Archaeology (OA) in the vicinity of Brockley Hill, Stanmore. Excavations around the perimeter of Brockley Hill House in 2000 revealed a Roman pottery kiln and a number of pits, postholes and ditches, one of which may have been part of the Watling Street Roman road (TQ 1738 9403). Most dated features exhibited a fairly consistent chronology of c AD 50 - 160, although there was evidence for some later Roman residual activity. The site is part of a wider industrial landscape, with 14 other kilns being recorded within the vicinity, mostly within the boundaries of the Scheduled Ancient Monument (29396).

In 2003 was an excavation and evaluation at the former Ministry of Defence (MoD) site towards the base of Brockley Hill (TQ 1790 9310). The excavations revealed an area of Romano-British roadside activity on the western side of Watling Street, similar in nature to that encountered in previous archaeological work just to the south (Mckinley 1998). A number of ditches ran perpendicular to the main road, and seemed to form distinct rectangular enclosures belonging to a number of different phases. Within the enclosures was some evidence for surface metalling along with a number of waterholes and constructed wells which contained good waterlogged material including worked wood and leather. The site appears to have been in use throughout the Roman period, although the pottery evidence suggests more sustained activity in later 2nd and 3rd centuries AD.

LOCATION, GEOLOGY AND TOPOGRAPHY (Fig. 1)

The site at Brockley Hill House lies just to the west of the A5 Watling Street at c 140 metres OD near the crest of Brockley Hill (TQ 1738 9403), which rises progressively from the base at Canon's Corner about 1.5 km to the south, lying at 65 metres OD. The former MoD site lies on the same western side of the A5 along the lower part of the hill, occupying a moderate south-east facing slope. The underlying geology of Brockley Hill comprises London Clay, overlain by Claygate Beds and capped with a glacial pebble deposit.

ARCHAEOLOGICAL BACKGROUND

The excavations at Brockley Hill House and the former MoD site lie within an area of quite widespread archaeological investigation, mostly concentrated along the line of Roman Watling Street (Fig. 1c). The principal research objectives throughout most of these investigations have been to determine the exact course of the road (Bowsher 1995; Mckinley 1998; Smith 2001), and to locate for certain the Roman settlement of *Sulloniacae*, which according to the *Antonine Itinerary* lay 12 miles from London and 9 miles from Verulamium (Richardson 1951; Castle 1972a). The Roman remains on Brockley Hill have long been identified as being that of *Sulloniacae*, with Stukeley in his *Itinerarium Curiosum* of 1776, describing the site thus; "...a great quantity of Roman bricks and coins have been found in digging; many arched vaults with flint under the trees, the whole of the hill is covered with foundations." (Richardson 1951, 2).

Brockley Hill House lies on the edge of a Scheduled Ancient Monument incorporating a Romano-British settlement and associated pottery kilns (Fig. 2). This was an important 1st-2nd century AD pottery production centre - part of the wider Verulamium-region pottery industry - but there is as yet no definitive evidence for a Roman town in the vicinity. Approximately 14 kilns and numerous pits associated with workshops and settlement waste have been located, with the period of production ranging from c AD 50 to AD 160/170 (Seeley and Thorogood 1994, 223). As to the actual location of *Sulloniacae*, there is still no conclusive evidence. A settlement of some kind certainly existed upon Brockley Hill, and it was undoubtedly related - at least initially - to the pottery industry, but there are no indications of a major town. It has been postulated that *Sulloniacae* is more likely to have been a posting station with associated domestic dwellings and roadside shops, although no such structures have been found (Castle 1972a, 327). It is certainly possible that the town/posting station of *Sulloniacae* may not be situated here at all, as other possible candidates include the edge of the medieval site at Edgware and Red Hill (Sheldon 1996).

Part of the Watling Street Roman road itself was investigated along the lower slopes of Brockley Hill, confirming its location at this point to the west of the present road (Bowsher 1995; Fig. 1c, no. 1). However, it was also located further south at Canon's Corner on the eastern side of the A5 road, suggesting that its alignment had shifted slightly (Smith 2001; Fig. 1c, no. 3). Other Romano-British discoveries in the area include two late 1st - early 2nd century cremation burials north of Piper's Green Lane on the eastern side of Watling Street (Suggett 1958; Fig. 1c).

Excavations to the south-east of the former MoD site revealed a spread of seemingly non-domestic debris, ditches and ponds with material dating from the later 2nd to 4th centuries AD (Mckinley 1998; Fig. 1c, no. 2). This was quite similar in date and character to the former MoD site and to some extent to the Canon's corner site on the other side of the road. This all points to continued activity of some kind in the area after the apparent decline of the pottery industry further up the hill.

EXCAVATION OF A ROMAN POTTERY KILN AT BROCKLEY HILL HOUSE, STANMORE, MIDDLESEX

Alex Smith

INTRODUCTION

Oxford Archaeology (OA) was contracted to undertake an archaeological watching brief from September to October 2000 at Brockley Hill House, Stanmore, in the borough of Harrow (TQ 1738 9403). The house was to be demolished and the site redeveloped by Village Homes (South East) Ltd into five flats over basement parking. It lies 12 miles north of London and 9 miles south of St Albans, adjacent to the principal Roman Road of Watling Street (now the A5; Figs 1-2). The adjoining land is a Scheduled Ancient Monument (SAM no 29396), and so the landscaping methodology had to be devised carefully to minimise disruption to the archaeology. The area immediately surrounding the house was outside of the SAM, and the excavation of a basement for the new development necessitated close monitoring for any archaeology. The main excavated area was the narrow band of relatively undisturbed ground between the edge of the demolished old cellar walls and the sheet piling which formed the limits of the new basement area (Figs 2-3). The line of the main service run out towards the A5 road was also excavated.

EXCAVATION METHODOLOGY

The watching brief was undertaken on all areas of impact, specifically; the demolition of the existing building, the piling of shoring sheets around the extremity of the scheduled monument, deturfing, tree removal, the hand augering of fence posts and the repair of an existing garden retaining wall. In total, an area of around 150 m², located around the house perimeter, was subsequently excavated (see Fig. 3). All archaeological features and deposits exposed were recorded and visible artefacts collected in order to assist in the dating of features and deposits. Where trenches were excavated through cut features (pits, ditches, etc.) and vertical stratigraphy was not present, the features were recorded in section with the appropriate collection of finds. Where the ground disturbance exposed stratified remains or significant features (eg the kiln), they were hand excavated by the archaeologists. The on-site conditions were often quite poor, as adverse drainage ensured large volumes of standing water in some areas. This occasionally obscured some of the relationships between features and led to some (eg pit 194) not being fully excavated.

ARCHAEOLOGICAL DESCRIPTION

The excavated features lay around three sides of Brockley Hill house and for the most part comprised a series of isolated and inter-cutting pits and postholes, along with a

pottery kiln structure and part of an extensive ditch which may have been part of Watling Street. A fairly consistent date range of pottery was recovered, indicating that most of the features belonged to a period from *c* mid 1st century AD to the mid/late 2nd century AD, although there is evidence for some later residual activity. Excavations towards the service run on the eastern side indicated that the archaeology in this area had been heavily truncated by later landscaping.

The features will now be described, according to their location.

West side

Kiln pit (99) & structure (149) (Figs 3 and 4)

Along the northern half of the western excavated area lay part of a mortared brick pottery kiln (149), lying within a construction pit (99), 3.1 x 1 m across and 0.8 m in depth. The pit was heavily truncated to the west by demolition, to the east by the construction of the former cellar, and to the north by a modern sewage pipe. The truncation has ensured that the original dimensions of the kiln remain unknown. The firing chamber of the kiln lay at the northern end of the pit and consisted of 8 courses of regular mortared brick (202), with another 5 course brick wall (203) built against the pit side, possibly as consolidation before wall 202 was built. The original floor of the kiln (176) butted wall 203 and consisted of grey silty sand, rammed down to make a hard surface, with a charcoal-rich burning residue (201) lying on top and a more substantial accumulation deposit above this (175). At some point a second floor surface was laid (163), and the earliest datable context (151) was a burning residue lying *in situ* above this layer. This and all subsequent deposits had pottery with a broad date range from *c* AD 50 to 160, indicating the period of use of the kiln, although in actuality the main period of production probably lay at the end of the 1st century AD. Context 117 represented the collapse of the upper part of kiln structure into the chamber, and was cut by a modern pipe. Approximately 2 m north of the kiln was an isolated posthole with no finds (105).

Pits 141 and 64

The only other archaeological features on the western side were two substantial isolated pits (141 and 64). Pit 141 to the south was heavily truncated, about 1.5 m in diameter and reached 1.55 m depth before excavation ceased. Datable pottery (*c* AD 70 - 160) came from the upper fills (159, 152, 142), which indicated contemporaneity with the use of the kiln. Pit 141 contained the highest quantity (5) of stamped mortaria of any feature on site. Lying 1 m to the north was pit 64, with a diameter of 1.1 m and a depth of 1.8 m. The lower sides appear to have been undercut, although this is perhaps more likely to have been caused by their collapse while the pit was open. A large amount of pottery was recovered from this pit (714 sherds), much of it coming from the upper four fills and dating to the early - mid 2nd century AD, indicating that it was probably contemporary with the last phase of pottery production at the kiln. Pottery dating to AD 50 - 140 was found in a lower fill (109). The range of ceramic material, which included central Gaulish samian, is indicative of domestic activity in the locality, rather than just industrial activity associated with the pottery kiln.

Northern area

Midden/extraction pits (10 & 194) and dump layers (Figs 3 and 5)

The north-western part of the site contained two very large pits which were presumably used for the extraction of clay, and then subsequently in-filled with midden material in periodic episodes. Pit 194 was approximately 6-8 m in length, although its exact dimensions remain unknown, while directly to the east, pit 10 was *c* 4.1 m in length and *c* 0.85 m wide. Both were truncated by the earlier demolished building, the iron fence and machining. The initial fills of both pits contained no diagnostic pottery and look to have been part of the same sequence of spreads. The earliest datable horizon was a dump layer (158) slumping into both, dating *c* AD 50 - 160 (probably end of 1st century AD). One of the most extensive layers of midden material (46/86) lay above this, and contained the single largest group of pottery along with very high quantities of charcoal. The pottery was primarily dated *c* AD 70 to 140, although an Oxfordshire White Ware mortaria rim dating to AD 240-300 was also recovered from this layer. In broad terms, the layers of dumped material contained two broad date ranges - the lower levels from *c* AD 50/70 to *c* AD 120/40, and upper levels from *c* AD 140 - *c* AD 160/200. This is most probably representative of successive dumping episodes of mixed kiln and domestic refuse in a number of episodes throughout the use of the kiln site.

A circular pit (20) further to the east, 1.2 m diameter and 0.65 m in depth, was probably also used for the disposal of waste material. It contained pottery dating AD 50 - 160, with most probably deriving from AD 90 - 100, and cut the fills of two stratigraphically earlier but undated pits (24, 26). The upper fill of pit 26 was also cut by a shallow east-west gully (61) that contained no finds. A final shallow ovoid pit (32), 1.5 m across and 0.15 m deep, lay further to the east, and contained no diagnostic pottery.

Overall, despite the occasional sherd of later pottery, there is little evidence of much activity occurring after the end of the 2nd century AD, and activity associated with pottery production is likely to have ceased by AD 160 at the very latest. Although much of the pottery from the dump layers in this area is likely to have come from the local kilns, the mixed nature of the assemblage (including South Gaulish Samian and Baetican amphorae sherds) does indicate that some of it derived from domestic activity.

Rectangular pit (186/211) and road ditch (184/215) (Fig. 3)

A large rectangular pit (186/211), *c* 1.4 x 3.8 m in size and *c* 0.81 m depth, was uncovered on the north-eastern corner, sealed with a layer of cobbling (81/46), which was probably part of a larger cobbled area, another section of which may be represented further to the south (92). The fills of 186/211 contained no diagnostic pottery, although a probable mid 2nd century coin was recovered from the layer just below the cobbled surface. This surface itself was the largest single context to produce pottery, most of which dated to AD 150/160. Subsequent layers contained pottery of early to mid/late 2nd century date. The function of this pit is unclear, although it may have been contemporary with the last phase of the kiln, with the cobbled surface perhaps being laid around the time the kiln finished in use in the mid 2nd century AD. A gully (168) to the

west of the ditch was of uncertain function and contained no finds. Its relationship to the rectangular pit is uncertain.

To the south of the rectangular pit, part of a NW/SE ditch was revealed (120), with late 1st/early 2nd century pottery in its fill. It cut post hole 122 (broadly dated AD 50-400), and seems to have been cut by pit 84 which contained early-mid 2nd century pottery in its primary fill.

At the extreme eastern side of the site, two sections of a truncated flat-based ditch (215/184) were excavated, which may well have been part of the Watling Street western road ditch. In section, it lay 1.2 m across and c 0.82 m in depth, and contained no datable pottery.

South-east area

Pits (98, 136 and 139) and post-holes(123 and 146) (Fig. 3)

At the south-eastern corner lay a group of pits and post-holes that relate to Roman activity at the site, and were seemingly contemporary with the use of the kiln. Pits 98 and 136 and post-hole 146 all contained pottery of c AD 50 - 160, with 98 having the highest concentration of such material. It was the latest feature to be cut within this period, and was preceded by pits 136, 139 and post-hole 146. Pit/post-hole 123 contained no datable pottery.

Post-Roman features

Along the eastern side of the demolished house lay a 1.2 m wide ditch (235) traced for approximately 13 m, containing material of post-medieval date. No other archaeological features were recorded, although this side was heavily truncated by landscaping.

FINDS

Roman Pottery

Kayt Brown

A total of 10,265 sherds, weighing 163,637 g, was recovered during the watching brief and subsequent excavation at Brockley Hill House, with a further seven sherds of Verulamium white ware recovered from the previous evaluation of the site. The majority of the material spans the known period of production at Brockley Hill (c AD 50 - 160), although a smaller, residual, element of earlier material is also present. A small component of the assemblage can be dated to the 3rd and 4th centuries and may represent later domestic activity within the vicinity.

The material was recorded in accordance with the Museum of London Specialist Services guidelines for the recording of Roman pottery. Pottery from each context was identified to fabric type, and where possible vessel form. Quantification was by sherd count and weight by fabric for each context. Estimated vessel equivalents (EVEs) and estimated

number of vessels (ENV), based on rim count, were used to help determine vessel numbers. Decoration, sherd condition and evidence of use (such as the presence of sooting or limescale) were also recorded. Stamped mortaria were sent to Kay Hartley for further identification (see below).

Nature of the assemblage

The assemblage was generally in a good condition, although this varied within individual features. An overall average sherd size was recorded as 15.9 g. Pottery was recovered from the processing of fifteen samples taken to retrieve environmental material and accounted for 1465 sherds (6112 g). The average sherd size of 4.2 g is an indicator of the nature of this material. A total of 118 contexts produced pottery of which 22 contained more than 100 sherds, 24 contexts produced between 30 – 100 sherds, and 72 contexts produced less than 30 sherds. Deposit types to produce pottery comprised the kiln structure, a number of pit, posthole and ditch fills and surface layers. These are discussed in more detail below. A large number of vessels displayed a patchy surface finish, probably resulting from poor control of the kiln firing. A number were also poorly finished and some displayed overfiring and slight vitrification on exterior surfaces. No characteristic 'wasters' were identified, although the apparent rejection of vessels with the poor surface finish may suggest an element of quality control. A similar trend has been observed in other Brockley Hill assemblages, and vessels with such a finish are rare on consumer sites (F. Seeley pers. comm.). Evidence of use survived on a number of sherds in the form of carbonized residues on the interior.

Fabrics (Table 1)

Although 34 individual fabrics were identified within the assemblage, only 13 produced more than 20 sherds. Unsurprisingly the locally produced wares dominated the assemblage, comprising 88.3% of the whole assemblage by sherd count, 89% by weight and 83% by eves. These fabrics are discussed in further detail below.

Non-local wares, in the sense that they were not produced by the Brockley Hill kilns, are varied. Continental material comprised predominately south and central Gaulish samian with some possible east Gaulish products. Amphorae, where identifiable, were all Baetican Dr 20 types, and included one stamped handle (Fig. 9, 14). The British regional industries represented within the assemblage include the following coarsewares: Blackburnish wares, Highgate wood B, BR and C, and North Kent Greyware. Unsourced coarsewares also formed a sizeable component of the assemblage. Recent petrological studies of VCWS by Seeley and Drummond-Murray (forthcoming) have confirmed that the fabric was not produced in the Brockley Hill area. Five sherds were identified as VCWS and although they are not the classic VCWS (Davies *et al.* 1994, 54), in the absence of any other likely source it was felt they were sufficiently similar to be included in this ware type (F. Seeley pers. comm.). Finewares were represented by the Colchester and Nene Valley industries, and unsourced mica-dusted material. Non-local mortaria comprised a small amount of Oxfordshire white ware and a single sherd of Mancetter Hartshill mortaria. The main supplier of Samian to the site was La Graufesenque

manufactory; only small proportions originated from Les Martres de Veyre and other central Gaulish sources. A few East Gaulish sherds were present.

Within this report the term 'kiln products' is taken to refer to vessels likely to have been produced by the Brockley Hill kilns, and not necessarily the kiln currently under discussion. Given the severe truncation of the kiln and that no vessels were recovered *in situ*, for example as a failed firing, it was not considered possible to say for certain what was being fired in the kiln. Therefore fabrics identified as originating in the Brockley Hill area comprised VRW, VRG, VRR, BHWS, and a mica dusted fabric (MICA), similar to Verulamium region mica dusted ware (Davies *et al.* 1994, 52). As can be seen in Tables 1 and 2, Verulamium region white ware (VRW) dominated the assemblage and among the possible kiln products, comprised 93% by sherd count (94% by weight). This fabric showed a range of colours from the classic white through to red/orange. A small quantity of sherds were recorded as VRR and VRG. The grey ware was characterised by sherds displaying uniformly reduced surfaces with a white core, although it is recognised that there may well be some overlap with sherds recorded as VRW due to the subjective nature of this distinction. Verulamium region grey ware dates from the mid 1st to mid 2nd century AD. Although there are no quantifiable data from other kilns within the vicinity available for comparison, the proportions of Verulamium region fabrics would appear to be consistent with the material published. At the 1972 kiln the absence of BHWS is noted; this fabric is generally considered to be a 2nd century introduction, *c* AD 110-120 (Castle 1972b).

Forms

A total of 690 vessels were recorded by ENV. Of these the principal forms by far were flagons and within this class ring necked flagons predominated. Jars and bowls were also well represented as were mortaria. Other vessel classes represented comprised beakers, dishes, lids, amphora, tazze and the base of single triple vase.

Non-local

Vessel forms in non-local fabrics were largely confined to necked jars (2G and 2T) and plain or bead-rimmed bowls and dishes (4H and 5J), with a significant number of beakers and smaller quantities of lids and mortaria. This contrasts with the forms being produced by the kilns, where the emphasis was on flagons, mortaria and reed-rimmed bowls (Table 3). Jar forms were predominately early in date, including bead rimmed (2A) or neckless (2B) types, as well as high-shouldered types (2N and 2Q), all in grog-tempered fabrics (GROG and HWB). Necked jars in sandy fabrics were the only other sizeable group. Beakers occurred in 1st or 2nd century Roman finewares, such as HWC, NKGW and COLCC, with poppy-headed types (3F) well-represented. Later Roman beakers included an indented beaker, represented by body sherds, and a bag-shaped beaker, both in NVCC. Bowl forms comprised mainly 4H, in black-burnished wares and unsourced sandy fabrics, with single example of a reed-rimmed type (4A2) in VCWS.

Dishes included an early Roman type imitating a Gallo-Belgic platter (5A) in HWBR. Other dishes comprised later plain-rimmed and bead-rimmed forms in BBS and SAND. Very few non-local mortaria were represented within the assemblage, and mainly limited

to a few body sherds of Oxfordshire white ware (including a rim sherd from a Young (1977) type M17 mortarium, one of the latest pieces within the assemblage) and a body sherd from Mancetter/Hartshill. Flagons were very poorly represented with the rim of a disc-necked vessel in NVCC, and a ring-necked flagon and unidentified type in an oxidised ware. Lids (9A) were available in oxidised and reduced sandy wares. One of the more unusual forms was a triple vase (9E) in VCWS.

Imported amphora were not common. A number of Dressel 20 handles and body sherds from Southern Spain were recovered from within various pit fills and dumping layers. One Dressel 20 amphorae handle was stamped PORLFS, usually expanded to *Portus*, meaning a store or warehouse, with *LFS* recording a brand name (see below). Samian vessels comprised a range of forms. Cups were represented by Drag. 27 and, to a lesser extent, Drag. 33. A Drag. 67 beaker was also present. Bowls and dishes comprised Drag. 29, Drag. 37, Drag. 36, Drag. 18/31, Drag. 18/31R, Drag. 15/17, Drag. 18, and Drag. 18R. All these forms occurred in south Gaulish samian ware. A small number of mortaria (Drag. 45) were also available as central and East Gaulish products. Only one, partially-surviving stamp, was recorded on the base of a Drag. 18/31.

Kiln products

A range of forms occurred in local fabrics, which are tabulated in Table 3. Although all fabrics are represented, the dominant fabric was VRW. Flagons were the dominant form and accounted for 62% of the assemblage by EVE, followed by jars, bowls, mortaria and miscellaneous forms at 15%, 12%, 7%, 5% respectively.

Ring necked flagons were the principal form and within this class a number of types were represented. Flared trumpet mouthed types (1B2) (Fig. 6, 1-2) accounted for 82% by EVE among 1B types. Developing from this with a pronounced rounded upper rim was type 1B5, which was present in a small quantity. A further development, the expanding ring neck (1B7), was relatively well represented and is the only flagon class where BHWS outnumbers VRW. This form is later in the development sequence of ring necked flagons which corresponds with the view from London that BHWS is largely a 2nd century fabric (Davies *et al.* 1994, 55). Other flagon forms represented are a small number of the early Hofheim/collared flagons (1A) and 1st century disc-mouthed flagons (1D) which only occur in VRW and VRG (Fig. 6, 3). Wasters of this later form were recorded. Pinch-mouthed flagons (1C), small two handled flagons (1E), wide mouthed flagons (1H) and large double handled amphora (1J) (Fig. 6, 6) were all represented in small quantities. With the exception of a wide mouthed flagon in BHWS, all these latter flagon forms listed occurred only in VRW.

Within the jar vessel class, insufficient profile survived for the majority of vessels to be identified further than to broad categories. Of these, necked jars (2G and 2T) dominated. Unguent jars (2J) were relatively well represented and include examples of both small and middle sized vessels (Davies *et al.* 1994, 47); the largest variety appears to be absent (Fig. 6, 10-11). Somewhat unusual was a jar, the precise type not identified, which was present in the mica-dusted fabric (MICA). Bowls were similarly restricted in the range of forms represented, confined predominately to reed-rimmed bowls. Within this class all types were present (Marsh and Tyers 1978, fig. 81, IVA1-8), although 4A4 and to a lesser extent 4A8 formed the only sizeable groups. Where identifiable, Verulamium grey

ware was restricted to 4A3. Types 4A, 4A2, 4A4 and 4A8 occurred in BHWS. One mica dusted bowl rim was also encountered.

Both hooked-flange mortaria and those with a prominent high bead occurred in the assemblage at a ratio of approximately 2:1 respectively. There was only a single example of each mortaria type in BHWS, with the remainder occurring in VRW. Enough of the rim survived on two examples to identify with certainty that they were never stamped. Stamps were otherwise present on 14 examples and these are discussed in more detail in Hartley's report below.

A range of other vessel types including lids, tazze and possible crucibles also occurred within the assemblage. Lids (Fig. 7, 25) occur in VRW and VRG. Rim forms include undercut, squared and folded back examples. Evidence of use is present in the form of sooting on the underside and over the rim on a number of vessels. *Tazze* (Fig. 7, 26) are all decorated with fingernail frilling (rather than the earlier rouletting), characteristic of the main period of production (Davies *et al.* 1994, 51) and occur in VRW, with a single BHWS example. Sooting is again present on the interior of one vessel. A small number of possible crucibles were identified as shallow 'cupped' vessels in a very sandy VRW fabric.

Discussion by Edward Biddulph

The main phases of activity seem clear from the ceramic evidence. Activity began during the early Roman period, though probably not much earlier than AD 70. No deposit need date before this date, while some 25 deposits were dated by pottery from the late 1st century to the end of the century or beginning of the 2nd. Activity during this time is confirmed by the mortaria stamps of Brucius, Doinus and Secundus among others. In total, pottery assigned to early Roman deposits (that is, placed within a range of AD 43/50 to 120/30) accounts for *c* 25% of the assemblage by EVE. This represents a more intensive occupation compared with former MoD site nearby, which achieved a proportion of 13% (Biddulph, this report). Mortaria and flagons, while dominating this assemblage, were scarce there. Much of the early Roman pottery recorded by Wessex Archaeology was found to be residual in later deposits (Seager Smith 1998, 51). Early Roman material at Canon's Corner was almost absent (Biddulph 2001, 34).

Pottery attributed to middle Roman deposits (*c* AD 120/30 to 160) contributed *c* 74% by EVE to the entire assemblage. Much of this belonged to contexts dated to AD 140-160, pointing to a more intensive phase of pottery deposition during this time. However, the potters Iunius 1 and Saturninus 1, active at this site between AD 110-140, suggest that occupation continued without a break during the first half of the 2nd century AD. Smertucus, also attested at the site, cannot have been active before AD 120. Occupation after AD 140 is demonstrated by key indicators, such as flagon form 1B7, the reed-rimmed bowl 4A8, the 7BEF mortarium type, and the presence of BHWS. At the same time, activity was attested close by (Biddulph, this report), but poorly represented elsewhere (McKinley 1998; Smith 2001). However, when occupation at those sites intensified, activity at Brockley Hill House declined. Pottery dating after AD 150/60 accounts for just 1% of the entire assemblage by EVE. Material from the Nene Valley, Oxfordshire and Much Hadham, and forms including bead-and-flanged bowls (4M)

record pottery deposition in the 3rd and 4th centuries, but this was at a very small scale. In contrast, the assemblages from the former MoD site, the WA sites (Seager Smith 1998) and Canon's Corner (Biddulph 2001), show a much stronger 3rd and 4th century emphasis. The latest pottery from Brockley Hill House included a disc-necked flagon (1L) from the Nene Valley, which arrived after AD 250, although its use need not date much after AD 300. An Oxfordshire white ware mortarium (7M17) helps to confine pottery deposition to the 3rd century.

Material was recovered from a range of feature types, with the majority of material deriving from kiln structure 149 and associated pit 99. A number of other large pits produced substantial quantities of pottery, in particular pits 64, 98 and 141, with smaller quantities from pits 10 and 194. The largest single assemblage was from a dump layer above cobbled surface 46. The kiln-associated deposits also yielded large individual groups of pottery; each weighed on average 1244 g. Similar sized assemblages were recorded from pits and dumps. The mean sherd weights from these feature types were broadly similar, ranging from 14 to 16 g per sherd, suggesting that the pottery was in much the same condition when it was deposited. While the pottery from the kiln was not subjected to repeated episodes of disturbance, being recovered near to the point of original discard, it is unlikely to represent a firing load preserved *in situ*. The pottery from the WA sites and Canon's Corner record a different history. The pottery there was generally poorly preserved and sherds small, having been redeposited and subsequently incorporated into dumped layers (Smith 2001, 38). The former MoD site produced pottery of similar condition to that from Brockley Hill House, although the assemblage included a considerable amount of residual material. There is little obvious residual pottery from Brockley Hill House; such material is in any case difficult to detect in a site where many of the wares recorded had currency throughout its life. However, much of the grog-tempered pottery (specifically GROG) may well have been residual by AD 70.

Although no wasters were encountered, some of the pottery, particularly Verulamium region wares, was overfired or vitrified. This material tended to survive as larger pieces, having a mean sherd weight of 82 g. Examples included a flagon (1D), a jar, and two hooked-flanged mortaria (7HOF), one of which was stamped 'Secundus' (Fig. 9, 11). This pottery had not been subject to the same degree of disturbance and redeposition as the bulk of the assemblage, perhaps never entering domestic use. Instead, the potters, including Secundus, may have rejected the vessels during a process of quality control.

A comparison between the forms produced locally and those arriving from other sources confirms the general range of products that the Verulamium region potters manufactured (Davies *et al.* 1994, 40-61; see Table 4). Flagons were well-represented in the local industries, but scarce elsewhere. Consumers at Brockley Hill depended on manufacturers of reduced ware sand-tempered wares (SAND) for jars, since the form was relatively minor within the Verulamium region industry. Despite this, jars never dominated here as they usually did on most Romano-British sites. Beakers formed little part of the repertoire of Verulamium region potters. Vessels were more likely to arrive from the Highgate Wood industries. Bowls and dishes derived both from local and non-local sources; the shapes were peculiar to specific industries, however, and could relate to functional difference. For example, the reed-rimmed bowl (4A) was particularly associated with Brockley Hill potters. These were invariably wide and deep and may have had a different

use - perhaps taking the place of jars - compared with the shallower plain- or bead-rimmed dishes typically produced by black-burnished ware manufacturers in Kent and Essex (Tomber and Dore 1998) and London (F. Seeley, pers. comm.). Cups were found exclusively in samian fabrics. Amphorae were usually imported from Southern Spain, but a few body sherds can tentatively be assigned a Verulamium region source on fabric grounds. Mortaria derived mainly from Brockley Hill.

Clearly the assemblage has been shaped by the products of very local potters. However, this comprised not only vessels removed through quality control, but also included pottery used and discarded by the inhabitants living at the site. The statement relies on mean sherd weights, but other evidence includes sooting and wear. Jar sherds in VRW from contexts 13 and 17 were worn and burnt, perhaps having been used in the kitchen. A burnt food residue was observed inside a bowl, also in VRW, from context 86. A number of mortaria produced at Brockley Hill and elsewhere were worn internally. A Drag. 45 mortarium in east Gaulish samian ware demonstrated the use of mortaria well, since the internal surface was particularly worn compared with the outside of the vessel. A number of more specialised forms were evident at the site. Filled rimmed *tazze* with pedestals (9A) were chief among these. Their suspected use as incense burners or other device requiring heat is supported by the signs of burning observed below the rims of many examples. The location of the burning is consistent from other examples from London and elsewhere (Davies *et al.* 1994, 51), confirming that the burning on those from Brockley Hill was no accident of kiln firing. The base ring of a triple vase (9E), in VCWS, was also encountered, as were crucibles (9T).

Willis (1998, 105) has observed that the proportion of decorated compared with plain samian increased in higher status sites. Some 9% of the samian by rim count was decorated. This was lower than the 36% seen at the former MoD site, but still much higher than figures obtained for the WA sites and Canon's Corner. The pottery from those sites generally pointed to lower status occupation, although chronological differences also contributed to the paucity of samian. Amphorae were poorly represented at Brockley Hill House, accounting for 0.3% of the entire assemblage by sherd count: This compared with 4% at the former MoD site and 2% at the WA sites. Evans (2001) has noted that higher proportions of jars, to the detriment of dishes, bowls and drinking vessels, accompany lower-status sites. Interestingly, then, jars were by no means dominant at Brockley Hill House. The somewhat mixed picture of status drawn from the various indicators appears to be a consequence of a kiln site, where local products dominated supply and pottery use. We can compare the assemblage at Brockley Hill House with those from other kiln sites, for example Caerleon (Webster *et al.* 2004) and Rossington Bridge (Buckland *et al.* 2001), where samian and amphorae proportions were generally low. Although the pottery from Brockley Hill House was used and discarded, the site may still lie outside the core areas of settlement, where samian and amphora use was more strongly represented.

Catalogue of illustrated pottery

The following ceramic group illustrates the typological range of the pottery from the site's main periods of activity. Pieces of intrinsic interest are also shown. Stamped mortaria are illustrated separately.

Figure 6

Pit 99

1. Ring-necked flagon 1B2 (VRW). Context 135.
 2. Ring-necked flagon 1B2 (VRW). Context 135.
 3. Disc-mouthed flagon 1D (VRW). Context 135.
 4. Shallow dish (VRW). Handmade. Context 155.
 5. Hook-flanged mortarium 7HOF (VRW). Context 150.
- Date: AD 70-120

Pit 141, context 152

6. Amphora-type flagon 1J (VRW)
7. Flask or bottle 1N (VRW)
8. Jar (VRW).
9. Necked jar with cordon below neck 2G (SAND). White painted decoration over shoulder, neck and rim.
10. Neckless unguent jar 2J (VRW)
11. Neckless unguent jar 2J (VRW)
12. Honey-pot type jar 2K (VRW)
13. Indented beaker, possibly roughcast (COLC)
14. Poppy-headed beaker 3F (HWC)
15. Reed-rimmed bowl 4A (VRW)

Figure 7

Pit 141, context 152 (cont.)

16. Reed-rimmed bowl 4A2 (BHWS). Notched at carination.
 17. Reed-rimmed bowl 4A2 (BHWS)
 18. Reed-rimmed bowl 4A4 (BHWS)
 19. Reed-rimmed bowl 4A4 (VRW)
 20. Reed-rimmed bowl 4A8 (BHWS)
 21. Reed-rimmed bowl 4A2 (VRW)
 22. Bead-rimmed bowl 4H (SAND). Burnished lattice decoration, white paint on rim.
 23. Bead and flanged mortarium 7BEF (VRW)
 24. Hook-flanged mortarium 7HOF (BHWS)
 25. Lid 9A (OXID). Burning on interior and exterior of rim.
 26. Tazza 9C (BHWS)
 27. Triple vase ring 9E (VCWS)
 28. ?Beaker base (SAND). Post-fired graffito on exterior base: IIII - ? 'four'.
- Date of group: AD 140-160

Pit 64, context 70

29. Jar (HWB). Handmade, incised decoration on shoulder.
- Date: AD 43-100.

Layer 86

30. Body sherd (VRW). Applied clay strip, possibly from face pot, cf. Davies *et al* 1994, fig. 37.182-3.
- Date: AD 50-160

Stamped Mortaria

Kay Hartley

A total of nine different potters have stamps evident upon mortaria from Brockley Hill House, with a small number of other unidentifiable examples (Figs 8-9). These are all discussed below. 'Right facing' and 'left facing' when applied to stamps indicates the relation of the stamp to the spout looking at the mortarium from the outside.

Arentus or *Arentius*

(context 152; prn: 1137, Fig. 8, 1)

The two virtually complete retrograde stamps impressed close together on the left-facing side of the spout can be read ARENT.X retrograde, with vertical dash in the A and I for E. The names Arentius, Arenus and Arentiacus are all known (Holder 1896, s.v.); this stamp is an abbreviation with X used as a space-filler. The borders do not always show on impressions, but on this occasion the die has been impressed carefully enough for the two stamps to appear almost as if they were a single two-line stamp. Eight stamps of this potter have been recorded previously from Brockley Hill (Castle 1973, 82, 4exx; 1976, 211, 4exx) and a single example from Radlett (Castle 1974-76, 150). Thirty-five of his mortaria have been recorded from occupation sites, all in south-eastern England and mostly at Verulamium (Frere 1972, 379, no. 41) and London. His rim-profiles are second-century and must fall within the first half of the century since all evidence indicates that the practice of stamping had ceased in these potteries by c AD 150. His optimum date is c AD 110-140.

Bruc(c)ius

(context 72; prn: 832, Fig. 8, 2)

An incompletely impressed stamp, [.]RVCCIVS, of Bruccius, with S barely visible. Thirteen stamps from the same die have been recorded, from Brockley Hill (Applebaum 1951, 211, fig 6, nos. 9-10, 218; Suggett 1954, fig 4, M1, 183; Suggett 1958, fig. 3, M11, 71 (6 exx); Castle 1972b, 157, fig. 4, MS4; Castle and Warbis 1973, 102 and fig. 7, M1; Castle 1976, 213 and fig. 8, MS5-6). These stamps are from the most commonly used die of Bruc(c)ius.

(context 67; prn 755, Fig. 8, 3)

A flange fragment with broken stamp reading BRVC[IF] retrograde for Brucius with one C. This is the first stamp with this reading to be recorded from Brockley Hill. Doubling consonants is not uncommon.

Forty-seven mortaria of Bruc(c)ius have been recorded from sites throughout England and Wales, excluding those from Brockley Hill. The rim-profiles and spout-types used by this potter point to activity within the period AD 80-120. The use of the two dies probably overlapped, but the mortaria associated with the BRVCIF (ret) stamps suggest that the second of the two dies concerned is marginally later, perhaps AD 90-120.

Doccas

(context 15; prn:211, Fig. 8, 4)

A flange fragment with broken stamp, [.]OCCA[.], with dotted A and reversed S. The letters are poorly formed but stamps from at least four other dies attributable to the same potter suggest that the name should be Doccas rather than Dollas. Ten stamps from the same die as this example have been found at Brockley Hill (Suggett 1958, fig. 3, M7, 71, 3 exx mentioned, there was one extra; Castle 1972c, fig. 6, M1-2, 82; 1976, fig. 8, MS9-12, 213), and three from the die represented in Hartley 1979. The present example is from the most commonly used of his many dies and the mortaria stamped with it are consistent with a date in the late Flavian to early Trajanic periods, probably within the date range of AD 80-110.

There is no indication that the die in question was ever used outside the Verulamium region, but Doccas was one of the two Verulamium region potters (the other, G. Attius Marinus of Radlett), known to have moved to set up workshops in the midlands, probably at Mancetter/Hartshill, in the last years of the first century or the earliest years of the second century AD, (for examples of his midland stamps see Ellis 2000, 303, fig. 4.99, nos. 19-20 and Kenyon 1948, fig.58, no. 6). Although the evidence is uncertain, there is also a distinct possibility that, like G. Attius Marinus, he had come to the Verulamium region from Colchester, where two recorded stamps reading DOCAS (Symonds and Wade 1999, 206, fig. 4.25, nos. 35-36) are notably close in style to this stamp.

His work at Brockley Hill was probably within the period AD 80-110, his work in the midlands within the period AD 100-130; any at Colchester would probably be earlier than AD 80, but not as early as suggested in Symonds and Wade, 1999. For further details of his work see Castle 1972c, 82 and Hartley 1979.

Doinus

(Context 70; prn:797, Fig. 8, 5)

A flange fragment with eroded and broken stamp of Doinus.

(Context 166; prn: 1313, Fig. 8, 6)

A fragmentary, left-facing stamp, D[.....] with part of the upper border, from the same die. Some burning.

When complete, stamps from the same die (Castle 1972c, 77, fig. 5, die D) read DOINVS, N reversed. Stamps from his other dies (ibid., A-C) leave no doubt that his name was Doinus (Suggett interpreted this stamp correctly in 1958 (72, M16, 4exx) after his preliminary suggestion of Domitianus in 1954, (271, no.14)); reversed letters are not uncommon in mortarium stamps. Castle published thirty mortaria with stamps from the same die (1972c, 84) as well as two mortaria stamped with die A and four with stamps from his die B, all of which led to his assumption that the kiln excavated was one of Doinus; in fact, the finds are not proof of this, though they certainly indicate that his kiln was in the vicinity. Later (Castle 1976, 213 and 215) he found fourteen more mortaria of Doinus; one with stamp A (MS13), two with stamp C (MS14-15), and eleven with Stamp D (only 8 mentioned specifically, MS19-26). This gives a total of 55 mortaria, 3 Stamp A, 4 Stamp B, 2 Stamp C, and 46 Stamp D which are mentioned in publications. Slightly larger numbers have, however, been recorded from Brockley Hill, 5 Stamp A, 5 Stamp B, 3 Stamp C, and 53 Stamp Die D giving a grand total of up to 66 (plus 8 uncertain, (ibid., p.215)) mortaria of Doinus, the vast majority with Stamp D.

More than 180 mortaria of Doinus have been recorded from sites in Scotland, England and Wales, excluding those found at Brockley Hill and Die D was the most commonly used of his four dies. His rim-profiles fit a date within the period AD 70-110, but some with Stamp D, like context 166; prn: 1313, could not fit a Flavian date, but only one in the early second or very late first centuries; this suggests that stamp D is from his latest die. A date within the period AD85-110 might be suggested for its use. A mortarium with stamp D, found at Dalswinton was probably in use in the last stages of the first occupation of Scotland, (Richmond and St. Joseph 1957, 20-21); this would support this dating.

Iunius I

(Context 152; prn: 1136, Fig. 8, 7)

Two left-facing stamps placed close together; this sherd joins Context 152; prn: 1138 which has a broken right-facing stamp.

(Context 152; prn: 1139)

A fragmentary stamp with part of a single downstroke. The sherd differs in rim-profile from prn. 1136/1138 and may well be from a different vessel. However, the rim-profiles of mortaria can change around the circumference and it is just possible for sherd 1139 to be part of 1136/1138, the stamp being the second right-facing stamp to balance the two to the left side of the spout.

The most straightforward reading for this potter's stamps is IVNII retrograde, forming the genitive form of Iunius. There is no reason to connect him with the Mancetter-Hartshill potter of the same name. Three mortaria have already been recorded from Brockley Hill (Suggett 1954, XI, ns, 181, fig. 4, M4; 2 unpublished), and one from Radlett (probably found in 1898, but not published in Page 1898). Other mortaria have been recorded from Braughing; Fishbourne (forthcoming; misdated); London; Stonea (Jackson and Potter 1996, 429, no. 3 and fig. 145); Verulamium (Frere 1972, fig. 145, no.22 in a context dated to AD 135-145), and Ware. His mortaria from Brockley Hill suggest that his workshop was there, but the mortarium recorded from the pottery making area at Radlett may well indicate activity there also. His rim-profiles would best fit a date within the period AD 110-140.

Matugenus

(Context 83 prn: 872, Fig. 9, 8)

Two joining flange fragments with broken stamp showing parts of [...]TVG/[...]S from the two-line die of Matugenus (Frere 1984, fig.118, no. 85). The die moved while being impressed so that the upper border is angled in the middle. Suggett found three namestamps from this die (1954, fig.6, nos. 2, 3a and 5); there is no reason to suppose that they are from two dies as he suggested for 3a. He also found two examples of the 'fecit' counterstamp apparently made to be used with this namestamp ie. nos. 3b and 7a; in fact, few examples of this counterstamp are known which means that for some reason he usually used the namestamp twice in preference to using the appropriate counterstamp. Context 83 is only the fourth example of this namestamp to be recorded at Brockley Hill although stamps from the same die are common on occupation sites.

(Context 196; prn: 1424, Fig. 9, 9)

Incomplete rim-section with fragmentary left-facing stamp[....]EN[.]; when complete this stamp reads AMTVGEN with an uncertain stroke following the N, AM ligatured for MA. This is from the same die of Matugenus as Castle 1976, fig. 8, MS72-86 (14exx). Suggett records one example in 1954 (fig. 6, no. 1), and six in 1958 (70, fig. 3, under M1 and M2); there are two other fragmentary stamps probably found with M1 and M2, but not identified at the time. Stamps from this die are also common on occupation sites.

At least 54 stamps of Matugenus from four other name dies and two counterstamp dies have also been recorded from Brockley Hill by Suggett and Castle. More than 170 mortaria of his are recorded from occupation sites in England and Wales. Matugenus is of particular interest since two of his rarely used dies record that he was the son of Albinus, the most prolific of the Flavian potters making mortaria in the Verulamium region. Matugenus's mortaria best fit the period AD 80-125, but he cannot be dated more closely except that his one die giving retrograde stamps was probably his latest (Castle 1976, fig. 8, MS69-71). See Frère 1984, 286, 83-87 for further details of his activity.

Saturninus 1

(Context 152 prn: 1135, Fig. 9.10)

The right-facing stamp survives. The stamp is, as usual with Saturninus 1, incompletely impressed; complete stamps read SATVRNI/NVS followed by a leaf stamp, with TV ligatured, and RVN ligatured (see Castle 1976, fig. 8, MS94-125). Two of his mortaria were published by Suggett in 1954 (fig. 6, 12a and 12b), 12a was a complete vessel and had his characteristic counterstamp which reads FEC underneath a frond and followed by a leaf stamp. In fact few examples of the counterstamp have been recorded showing that for some reason he soon ceased to use it. There were two other stamps, one namestamp and one counterstamp, which were not published in 1954. Suggett published three more of his mortaria in 1958 (72, M17, stamps not illust). Castle has published three namestamps in 1972 (fig. 6, M64-M66), and in 1976, 32 namestamps (fig. 8, MS94-125) and two counterstamps (MS126-127); Castle found two extra namestamps (not published). This gives a total of up to 46 of his mortaria already recorded from Brockley Hill, now 47. A mortarium of his found at the Northgate kiln site in London has given rise to speculation that he could have been active there at some point in his activity, but the evidence is not conclusive although his work is of the right date (Seeley and Drummond-Murray forthcoming, 5.2.3.2.5).

Fifty-three of his mortaria have now been recorded from sites in England (excluding Brockley Hill and Northgate): Bayford, near Sittingbourne; Canterbury; Canvey Island (3); Cardunock; Dover; Egham; Gorhambury (2); Heronbridge, near Chester; High House Milecastle (50 TW); Higham, Kent; London (19); Papcastle; Piddington; Shenstone; Silchester (3); Staines (2); Steeple Bumpstead, Suffolk; Verulamium (9); Shakenoak villa, Wilcote; Woughton, Milton Keynes and one from an unknown provenance. His mortaria are found mostly in the south and south-east, but one from High House Milecastle (50 TW) on Hadrian's Wall provides the earliest firm dating for him *c* AD 125 (Richmond and Gillam 1953, fig. 7 no. 38, 36). A stamp at Verulamium was in a deposit dated AD 130-40 (Frère 1972, 378, no. 36, B II 28C). The rim-profiles and spouts used by Saturninus 1 all point to activity within the period AD 110-40.

Saturninus 1 is not to be confused with potters of the same name who worked at Colchester, in the Catterick area and at Corbridge.

Secundus

(Context 145; prn: 1107, Fig. 9, 11)

The almost complete left-facing stamp survives, reading SECVNDVS[F], V inside C and ND ligatured, for Secundus *fecit*; the stamp has ansate ends and neat upper and lower herringbone borders. The surface is discoloured to grey and the spout has fallen away revealing the finger depression keying which is typical of workshops in the Verulamium region. Three examples from Brockley Hill were published in 1951 (Richardson 1951, 19, no.1); Castle published one in 1973 (105, M11), and another in 1974 (258, fig. 6, MS4 and 262), making up to five mortaria, now six.

Forty-nine of his mortaria have been found at sites throughout England, Wales and Scotland, at least seventeen of these from sites in London and Southwark. His rim-profiles and spouts are typically Flavian in date, *c* AD 60-90.

Smertucus

(Context 46; prn: 454, Fig. 9, 12)

Two joining sherds giving the left- and right-facing stamps.

Context 46; prn:456 joins the right-facing stamp above, so that all three fragments are from a single mortarium. The two-line stamps of this potter are never fully impressed, but collation of his stamps permits the reading SMII/RTVC. retrograde, with II for E. The S is rarely impressed and as a result his name was for a long time thought to be Mertucus and even Mictvs; the stamp has occasionally been interpreted as Samertucus (O'Connell and Bird 1994, 138). Samertucus is a possible interpretation, but by analogy with a well-known Gallo-Belgic potter whose stamps are clear, it seems most likely that his name was actually Smertucus (Hawkes and Hull 1947, 212, 135 and elsewhere).

Suggett published one fragmentary stamp as ERTVO or ERTVI ret (1958, fig. 3, M12); Castle has published two stamps, (1976, fig. 8, MS92-93) and this present example raises the Brockley Hill total to four making it likely enough that he was active there. However, Castle has also published four of his mortaria from a pit of waste material in the pottery making area at Radlett (1974-1976, fig.III, M13-16) and a fifth example has also been recorded there (unpublished). It seems to be reasonably clear that he was active at both sites whether simultaneously or consecutively. All the stamps appear to be from one die, but it would have been possible to have produced two dies from his original matrix.

A total of up to 22 of his mortaria have been recorded from England, but the poor standard of his stamping may mean that some have failed to be identified. His optimum period of production must have been within the period AD 120-150; his spouts are undoubtedly second-century, many of his mortaria have a distal bead which must be later than *c* AD 120 and can be compared to the later mortaria of Castus. He cannot be later than AD 150, perhaps AD 145 because unstamped mortaria were being made in the forties and the practice of stamping probably ceased in the same decade.

Unidentified stamps

(Context 62; prn:620 Fig. 9, 13)

A partially impressed right-facing stamp survives. The reading is uncertain, but the stamp should be identifiable when better examples appear. The rim-profile with its distal bead is a typical product of the period *c* AD 120-145.

(Context 15; prn: 212)

The left-facing, two-line stamp survives, but the reading is obscure and it is not even possible to know which way up the stamp should be. However, there are features in it which will probably make it identifiable when further examples are found. Like Context 62 it may be from a hitherto unrecorded die. The rim-profile dates it within the period AD 110-145.

(Context 197)

Fragment with incomplete rim-section and a stamp which may be too fragmentary for identification. It has a passing similarity to the stamps of Iunius 1, but it is not possible to be certain.

Stamped amphora handle

(Context 154 prn:1242, Fig. 9, 14)

The stamp impressed along one handle from a Dressel 20 amphora can be identified as PORLFS, with the last three letters only partially impressed. Other stamps with this reading appear to have triangular stops after R, after L, and after F, but none survive on this example (Callender 1965, 305, fig. 13, nos. 28-29 and 212, 11; see also 156, no. 857). POR is believed to be an abbreviation for 'PORTVS', store or warehouse with LFS being the brand name associated with a particular farmstead. A stamp with the same reading is recorded from Colchester in Symonds and Wade 1999, (160, fig. 3.16, no. 37 and 158); where P P A Funari suggests that this stamp may have been in use for at least the period *c* AD 90-130. Dressel 20 was produced and used in *Baetica* for transporting olive oil.

Metalwork

Leigh Allen, Alex Smith and Paul Booth

Three certain coins were found in the excavations. A Sestertius of Marcus Aurelius (AD 161- 180) came from one of the upper layers (17) of dumped material tipping into pit 10, while a very worn probable sestertertius of the mid 2nd century (Faustina II?) came from the top fill (192) of rectangular pit 186. The third coin was fragmented, corroded and completely unidentifiable.

Eight other copper alloy finds were recovered, including a broken Colchester brooch and 2nd century hairpin from pit 64, two other pin fragments from pits 10 and 186, and a probable knob handle from pit 10. The remaining items comprised a bent strip and a very worn and damaged disc, possibly a coin.

THE ENVIRONMENTAL EVIDENCE

Charcoal

Rowena Gale

A small assemblage of charcoal was recovered from the Brockley Hill House excavations, with bulk samples obtained from the Roman pottery kiln and from nearby middens and pits. Analysis was undertaken on charcoal from in situ contexts within the pottery kiln to indicate the selection/ use of fuel for industrial pottery firing. For comparative purposes, charcoal from pits and middens located in other parts of the site were also examined. Bulk soil samples were processed by flotation and the flots caught on a 250 micron mesh. The resulting flots were scanned under low magnification and the charcoal separated from plant macrofossils.

The condition of the charcoal varied but was mostly rather friable. The taxa identified are presented in Table 5. Classification follows that of Flora Europaea (Tutin and Heywood *et al.* 1964-80). Group names are given when anatomical differences between related genera are too slight to allow secure identification to genus level. These include members of the Pomoideae (*Crataegus*, *Malus*, *Pyrus* and *Sorbus*) and Salicaceae (*Salix* and *Populus*). When a genus is represented by a single species in the British flora, it is named as the most likely origin of the wood, given the provenance and period, but it should be noted that it is rarely possible to name individual species from wood features, and exotic species of trees and shrubs were introduced to Britain from an early period (Godwin 1956; Mitchell 1974). The anatomical structure of the charcoal was consistent with the following taxa or groups of taxa:

Aceraceae. *Acer campestre* L., field maple

Betulaceae. *Alnus glutinosa* (L.) Gaertner, European alder; *Betula* sp., birch

Corylaceae. *Corylus avellana* L., hazel

Fagaceae. *Quercus* sp., oak

Oleaceae. *Fraxinus excelsior* L., ash

Rosaceae. Subfamilies:

Pomoideae, which includes *Crataegus* sp., hawthorn; *Malus* sp., apple; *Pyrus* sp., pear; *Sorbus* spp., rowan, service tree and whitebeam. These taxa are anatomically similar; one or more taxa may be represented in the charcoal.

Prunoideae. *Prunus spinosa* L., blackthorn, and *P. avium*, wild cherry or gean.

Salicaceae. *Salix* sp., willow, and/ or *Populus* sp., poplar. In most respects these taxa are anatomically similar.

Pottery kiln and kiln pit 99

Charcoal (sometimes abundant) and broken pottery formed numerous layers within the pit. Sample <13>, from the floor surface (175) inside the kiln structure 149, consisted mostly of oak (*Quercus* sp.) heartwood (probably from wide roundwood) but also included a small amount of cf. willow (*Salix* sp.) or poplar (*Populus* sp.). A burning residue in context (201) lay immediately on top of the kiln floor surface (176); associated charcoal, sample <17>, was sparse but contained small fragments of oak (*Quercus* sp.) heartwood. Overlying this deposit in context (151), a large quantity of charcoal remained

in situ from the last firing event. Sample <9> included numerous radial chunks of oak (*Quercus* sp.) heartwood. Some pieces were from fairly wide roundwood and measured up to 80 mm in length and 40 mm in (incomplete) radius. Most of this charcoal indicated slow growth and included such narrow incremental rings that it was impossible to calculate the age of the roundwood accurately. The largest piece (see above) probably included about 100 rings. Context (117) represented the collapse of the upper part of the kiln into the kiln structure. Associated charcoal, sample <8>, identified as oak (*Quercus* sp.) heartwood, was poorly preserved and less frequent than in the underlying contexts. Context (111) covered a large part of the kiln pit, including some of the collapsed kiln structure. A large quantity of charcoal (sample <5>) was recovered and although predominantly oak (*Quercus* sp.) heartwood, a number of other species were also present, including field maple (*Acer campestre*), alder (*Alnus glutinosa*), hazel (*Corylus avellana*), the hawthorn/ Sorbus group (*Pomoideae*), blackthorn (*Prunus spinosa*) and ash (*Fraxinus excelsior*) roundwood. The character of this charcoal differed considerably from that on the kiln floor.

Pit 98

The large pit 98 was sited east of kiln pit 99. The function of the pit is uncertain but may have been to provide potting clay. Charcoal sample <7> obtained from the primary fill (113) possibly represented several dumping episodes; it consisted mostly of oak (*Quercus* sp.) heartwood but also included hazel (*Corylus avellana*). In contrast, the overlying layer (97) appeared to have been dumped as a single deposit. Associated charcoal, sample <6>, was extremely sparse and friable and, although a small amount of oak (*Quercus* sp.) was recorded, the quantity was insufficient to provide meaningful data.

Pit 186/211

Charcoal <15> was also examined from a large rectangular pit 186/211 on the northern edge of the site. The taxa identified included oak (*Quercus* sp.), hazel (*Corylus avellana*), the hawthorn/ Sorbus group (*Pomoideae*) and willow (*Salix* sp.) or poplar (*Populus* sp.).

Midden deposits and pit 10

A large midden deposit overlay pits 194 and 10 at the northern end of the site. Charcoal sample <4> from context (12), the fill of pit 10, consisted predominantly of oak (*Quercus* sp.) heartwood from largewood but also included hazel field maple (*Acer campestre*), blackthorn (*Prunus spinosa*) and cf. willow (*Salix* sp.) or poplar (*Populus* sp.). Context (46) formed a very extensive layer of dumped material with a high charcoal and pottery content overlying pits 10 and 194. Sample <2> consisted mostly of oak (*Quercus* sp.) heartwood from largewood but also included field maple (*Acer campestre*), blackthorn (*Prunus spinosa*), cf. cherry (*P. avium*), the hawthorn/ Sorbus group (*Pomoideae*) and cf. hazel (*Corylus avellana*).

Dump deposit 43

Context 43, related to a deposit of material possibly dumped to make up uneven ground over the top of midden deposits above pit 194 (see Fig. 5). Sample <1> consisted mainly of oak (*Quercus* sp.) heartwood from largewood, but also included blackthorn (*Prunus spinosa*), cf. cherry (*P. avium*), field maple (*Acer campestre*), hazel (*Corylus avellana*), birch (*Betula* sp.) and ash (*Fraxinus excelsior*). The origin of this material is unknown

but with such a large number of species present, this material appears to differ from the fuel residues in the pottery kiln.

Discussion

The pottery kiln and associated features excavated at Brockley Hill House clearly formed part of the large-scale early Roman ceramics industry based alongside Watling Street, described by Castle (1976). In situ residues of charcoal from the final firing event of the kiln provide direct evidence of the type of fuel employed in the firing process. Charcoal was also frequent in many of the pits and postholes (sited roughly between 15 and 20 metres from the kiln) and, although probably resulting from some aspect of pottery production, the precise origin of these deposits was less certain. The results of the charcoal analysis are compared to deposits from the Roman roadside sites to the south-east (see Gale, this report; McKinley 1998).

Fuel residues were collected from the floor surface of the kiln, contexts (175) and (201); from the final firing event (151); and from the collapse of upper part of the kiln (117). Charcoal was particularly abundant in contexts (151) and (175) and demonstrated the consistent use of oak, using fairly wide roundwood. Estimated (charred) stem diameters of 80+ mm, based on radial measurements taken from some of the larger chunks of charcoal, implicated the use of billets of roundwood or cordwood exceeding 110 mm in diameters when cut from the living tree. A single piece of cf. willow/ poplar was also present in context (175) – perhaps from kindling. Interestingly, although oak was also the dominant taxon from context (111), which spread over most of the pit, including some of the structural collapse of the kiln (117), a wide range of other species was also identified including field maple, alder, hazel, ash, blackthorn and the hawthorn group. This charcoal was more comminuted and it was not possible to assess the dimensions of the firewood. However, it did appear to differ from the substantial pieces of roundwood associated with the firing process within the kiln and, perhaps, derived either from part of the superstructure of the kiln or was dumped here after the kiln was abandoned. The fuel debris from context (111) had more in common with charcoal from the dump deposit (43) and the midden context (46), overlying pits 10 and 194 (see Table 5).

The large pit 98, sited almost due east of the kiln/ pit 99, possibly resulted from clay extraction. In the early phases of infilling, layers of charcoal and other debris were dumped in the base of the pit. The charcoal was identified as almost exclusively oak (although hazel was minimally present, Table 5) and could therefore be considered similar in character to the fuel residues in kiln 99. Evidence from charcoal deposits at Romano-British pottery sites in other parts of the country suggests the use of multiple species, although oak frequently formed the dominant component. Examples include kilns at Two Mile Bottom, Heath Farm and Dairy Farm, Norfolk, (Gale, forthcoming(a)), Redcliffe, Dorset (Gale, forthcoming (b)) and Worthing Road, Sussex (Gale, forthcoming (c)). Firewood used at these sites usually consisted of roundwood (often coppiced) up to about 50 mm in diameter and oak heartwood, probably from more mature wood.

Successful firing at different stages of pottery production requires careful temperature control and in the Roman period this was mainly determined through the design of the kiln, the character of the fuel and the type of clay (Hodges 1964). In practice, the initial

drying phase was completed using a low heat, after which the temperature was steadily increased for the final firing. Firewood, as opposed to charcoal fuel, would have achieved the requisite temperatures, although the output of heat would have been influenced by the dimensions of the firewood (ie narrow roundwood or largewood) and the species used. For example, billets of oak largewood consistently generate high temperatures over a longer period than narrow roundwood. The latter, however, has the capacity to boost temperatures quickly but is relatively short-lived unless constantly replenished. Experimental work reproducing techniques used at Roman pottery kilns at Alice Holt Wood indicated that coppice rods, one inch thick and 2 foot long, produced the best result for the main firing, followed by fine brushwood to increase the temperature (Lyne and Jefferies 1979). Residues from the Roman pottery kilns at Alice Holt identified the use of oak, hazel and willow/ poplar. These findings stand in contrast to evidence from fuel residues collected from kiln 99 at Brockley Hill House, which identified the use of logs or billets of oak wood, some of which exceeded 100 mm in diameter. These were not obtained from coppiced poles but from extremely slow-growing trees, possibly a 100 years or so in age.

Despite the wide range of wood species identified from dumps of fuel debris at the kiln site at Brockley Hill House, evidence from kiln 99 verified that its final firing was undertaken using logs of mature oak wood. It is probable that the type of fuel used at the site varied according to function or to the process in hand (or possibly the supply at any given time). When compared to charcoal deposits in pits containing domestic fuel debris at the roadside sites towards the base of Brockley Hill, it is clear that a similarly high ratio of oak largewood to roundwood from other species applied.

A relatively wide range of species was included in the charcoal deposits (see above). The frequency of oak in the charcoal suggests that it formed the dominant component in local woodland. It could be anticipated that the demand for fuel to supply the seemingly intensive industrial enterprises of this region could only have been maintained through woodland management (coppicing). However, evidence from fuel deposits from kiln 99 illustrates the use of 100 year-old wood from extremely slow grown trees. Not only does this confirm the existence of long-established woodland (as opposed to short-cycle coppice woodland) but also that some trees, at least, were growing under considerable duress, perhaps in a very competitive environment. Had these trees been growing in optimum conditions their girths would probably have been at least four times as wide.

It is feasible that firewood was obtained from a number of sources, some of which may have been coppiced, although there was insufficient evidence from the charcoal assemblage to endorse this suggestion. If a regular supply of narrow roundwood was required for specific firing activities, coppiced stems or brushwood would probably have been the easiest means of supply for any long-term commitments. The taxa identified from the kiln site more or less correlate with those from the two southern roadside sites (Gale, this Vol, 1998). In common with the kiln site at Brockley Hill House, neither of these sites produced convincing evidence of woodland management, although the use of coppiced wood is implied at both.

Faunal remains

Bethan Charles

A total of seven fragments (24 g) of bone were recovered by hand during excavations, with an additional 57 fragments (40 g) recovered from environmental samples sieved through a mesh of >10 mm and 10-4 mm. The bone was in particularly poor condition indicative of acidic soil conditions.

Almost all of the Roman bone was from pits and dump layers. Only three fragments of bone could be identified to species. Two fragmented cattle teeth were recovered from contexts 57 (fill of pit 10) and 161 (fill of pit 141) and one sheep tooth from context 170 (fill of pit 194; sample number 12). The majority of the remaining material was burnt (53 fragments). At least three fragments of the hand recovered bone, from the upper layers of dumped material tipping into pit 10, may be human (context 13, 15 and 17). The remaining burnt material was animal bone. Two fragments recovered from context 113 (fill of pit 98) appeared to be bird bone but were not diagnostic elements.

Very little can be said about the remains from the site. It is clear that cattle and sheep were present, although it is not clear as to their importance. There were no large concentrations of burnt bone in any of the contexts. It is most likely that the animal bone derived from domestic refuse, and was dumped in with other waste material such as pottery.

DISCUSSION

"The general picture of Brockley Hill from the mid 1st to mid 2nd century is one of a hilltop clearing, with springs, and streams on the south-east and north-west sides, in which was a vast industrial complex consisting of pottery kilns, workshops, hovels, puddling holes and clay pits, straggling an important highway."

(Castle 1976, 224).

The above description of Brockley Hill by Castle emphasises the apparent specialised industrial nature of the landscape in the early Roman period, and the results of the recent excavations at Brockley Hill House are fully consistent with such an interpretation. The site lies at the heart of the primary pottery production area near to the crest of the hill, with at least 14 other kiln sites being excavated in the area, along with large numbers of pits (some undoubtedly dug for clay extraction before being used for refuse) and a few ditches and cobbled surfaces. This industrial landscape is part of the wider Verulamium-region pottery industry which was operative from c AD 50-170, with other production centres known as Verulam Hills Field, Radlett and Little Munden (Seeley and Thorogood 1994, 223). This industry was the most important supplier of coarseware pottery to London in the late 1st and early 2nd centuries AD, and its national importance also lay in the fact that it produced early highly Romanized forms, including 50% of all mortaria used in the province during this period (ibid.). The industry appears to have been in decline from c AD 120 - 130 and to almost certainly have ceased by the latter part of the 2nd century AD. After this time, it has been suggested that production moved to other

areas such as Oxfordshire where the local clays were probably more suitable for pottery manufacture (Castle 1976, 224). The kiln at Brockley Hill House was seemingly among the longest lasting, with production continuing until *c* AD 160, and this accords well with further kilns found just to the north which have a similar date range (Castle 1972a, 327).

The kilns at Brockley Hill produced mortaria, flagons, amphorae, jars, lids, bowls and beakers, although the first two forms by far outnumber the remaining products. It has been suggested that some kind of zoning was in operation whereupon different kilns were specialising in either mortaria or flagons, thereby implying that individual potters were not in direct competition but were working co-operatively (Seeley and Thorogood 1994, 227-8). Two production sites in particular, lying either side of Watling Street, were used to suggest this theory, as they showed very marked concentrations of either one or the other of these forms (*ibid.*). While not as pronounced, the Brockley Hill House kiln assemblage is also quite biased towards a single form - flagons - although it is quite likely that mortaria and possibly other products were also made here. Any detailed speculation as to the economic infrastructure of the industry in this area is very difficult to substantiate, although the pottery stamps do indicate that quite a few different potters may have had their workshops here at any one time. The growth of this industry in such a locality was undoubtedly influenced by such factors as the clay subsoil, good communications along Watling Street, and the ample supply of water and fuel in the form of brushwood. Certainly the industrial nature of the landscape implies either that fuel was plentiful around the site - or that the road offered easy access to supplies further afield.

The extent of domestic settlement at Brockley Hill remains largely unknown, although the pottery evidence certainly indicates that people were living in the area. However, it has been suggested that pottery production may only have occurred on a seasonal basis, as the local clays were unworkable in either frosty or dry conditions (Mckinley 1998, 33; Castle 1976, 224), and so there may well have also been a considerable fluctuation in resident population levels. Two Roman cremation burials near to Watling Street further down the hill (Suggett 1958) may well mark the southern limit of any settlement associated with the pottery industry and a scatter of 1st-2nd century artefacts just to the north may indicate the primary domestic area. However, no certain domestic buildings have yet been found in the Brockley Hill area, with the possible exception of a number of insubstantial 'huts' comprising sunken clay floor surfaces, which have been interpreted in the past as drying sheds (*ibid.*, 67). There is certainly no direct evidence for the settlement of *Sulloniacae*, although reasonable quantities of limestone building material were recovered from the roadside site at the base of Brockley Hill (Mckinley 1998, 57), suggesting the presence of buildings with some architectural pretensions in the vicinity. A further piece of sandstone masonry was recovered from a Roman gully further up the hill, near to a well containing finds dating to *c* AD 120-250 (Castle and Warbis 1973).

The decline and cessation of the pottery industry in the latter half of the 2nd century AD did not lead to the complete abandonment of Brockley Hill, although activity seems to have lessened quite considerably, at least on the upper slopes of the hill. Evidence for later Roman domestic occupation in this area comprises small spreads of 3rd and 4th century ceramic material, with waste dumps being levelled and cobbled surfaces apparently being laid down at this time (Castle 1976, 225). An insubstantial structure and tiled platform lying over one cobbled surface was loosely associated with late Roman

artefacts including a worn coin Valentinian I (AD 364-75), implying activity of some kind into the last quarter of the 4th century (*ibid.*). However, it does appear that by the late Roman period, most activity in this area was confined to the base of the hill, as shown by a number of excavations such as that at the former MoD site discussed below.

EXCAVATIONS OF ROMAN ROADSIDE ACTIVITY AT THE FORMER MoD SITE, BROCKLEY HILL, STANMORE, MIDDLESEX

Alex Smith, Lisa Brown and Kate Brady

INTRODUCTION

Oxford Archaeology was commissioned by CgMs on behalf of Laing Homes to undertake archaeological investigations at a former MoD site at Brockley Hill, Stanmore, between September and November 2003. The investigations were carried out in response to the redevelopment of the site to residential accommodation and took the form of an archaeological strip, map and sample evaluation and excavation. The development area, centred at NGR TQ 1790 9310, is situated to the west of the A5 Brockley Hill road on the northern edge of Stanmore, just to the north of excavations carried out by Wessex Archaeology in 1997 (Mckinley 1998; Fig. 1).

EXCAVATION METHODOLOGY

The 'Strip, Map and Sample' excavation examined two areas (Areas A and B, Figs 10-11), both situated on the eastern edge of the development area. Results of a previous evaluation by MoLAS had indicated good survival of below ground archaeological remains (MoLAS 2000). The excavation areas were stripped under archaeological supervision by a 360° mechanical excavator following the demolition of existing structures over the site. Following cleaning by hand, sections were cut through significant archaeological features. All excavated features and deposits were recorded and visible artefacts collected in order to assist in the dating of features and deposits. Further evaluation involved the excavation of a single small trench (c 42.5 m²) situated within a strip of rough ground between the eastern edge of the site and the A5, where it was anticipated on the basis of earlier geophysical survey results that surfaces and flanking ditches associated with the Roman road (Watling Street) might be well preserved. Stripping revealed that modern development had significantly impacted and truncated archaeological horizons. Recorded deposits in general survived only in fragmentary form with the exception of deeper features such as large pits, waterholes and a well, which produced well preserved stratified sequences.

ARCHAEOLOGICAL DESCRIPTION

The excavations within Areas A and B exposed a number of features, mostly ditches, waterholes and pits, belonging to the Romano-British period, many of which had been severely truncated by later activity. Although differential preservation almost certainly played a role, in Area A the focus of Romano-British activity appeared to have been along the eastern side of the trench and in Area B features were concentrated at the northern and southern ends. Limited evidence for post-medieval activity was also recorded. A number of different phases of activity are represented on the site, but it has not proven possible to establish an overall coherent system of phasing due to a lack of datable evidence and some ambiguities in stratigraphic relationships. Nevertheless, a broad developmental sequence was discerned within the Romano-British enclosure

system, which may be spatially related to some of the discrete features such as wells and pits.

The Romano-British enclosure systems

Elements of a changing pattern of enclosure systems were traced within both Areas A and B. Because few stratigraphic relationships were preserved and dateable finds from the truncated boundary ditches were sparse, the detailed sequence of the shifting enclosure patterns was difficult to determine.

Early enclosures

During the early Romano-British period an enclosure system represented by boundary ditches was laid out on a ENE-WSW and NNW-SSE alignment, apparently defining at least four areas. Ditch 391 extended south-westwards from the eastern edge of Area A for a length of 31 m, where a rounded terminus was identified. It was 0.50-0.80 m wide 0.14 m deep and had a flat base. A single sherd of 1st-2nd century pottery was recovered from lower fill 177. Another ditch, 392, ran approximately perpendicular to 391 but did not intersect it. It was only 0.29 m wide and had been heavily truncated, with only 0.06 m depth surviving. It contained no finds and may have been a later feature. A short length of ditch, 333, lay some 26 m to the south of ditch 391, on the same alignment. It was traced for 5.9 m from the eastern limit of Area A and had a rounded terminus. It was 0.55 m wide and 0.12 m deep. No pottery was recovered from the fill but it was regarded as early on the basis of alignment and stratigraphic position underneath the layer of cobbling (114).

Two ditches in Area B may also belong to this early arrangement of enclosures. Ditch 398 lay on the same alignment and extended for 33.12 m from the western limit of the trench, ending in a rounded terminus. Pottery dated to AD 50-70 was recovered from fill 33 of the terminal. The site records indicate that 389 cut a posthole, 103, that produced two sherds of pottery dated to the 3rd-4th century, but this area was badly disturbed by later activity and the balance of the evidence places this ditch early in the enclosure system sequence. At the southern end of Area B ditch 400 lay on a similar but slightly divergent alignment. It was 0.77 m wide and 0.34 m deep and, like ditch 391, had a flat base. The fills of two sections excavated through this ditch produced pottery dated to AD 40 - 400 and AD 50 - 70.

Later enclosures

Area A: Northern enclosures

Some time during the 2nd century the enclosure system was reorganised and ditches were dug on an ENE-WSW alignment. Shallow linear features, better described as gullies, appeared to form the corners of two enclosures within the northern part of Area A. The westernmost of these, 232 and 237, produced a few sherds dated to AD 100-200. The

gullies were *c* 0.25 m wide and only 0.07 m deep on average and as they were so insubstantial, they may have been reinforced by hedges or fences, but no evidence for these survived. To the north-east of 232/237 another enclosure corner was identified, 247/249. They were *c* 0.35 m wide and survived to a depth of only 0.10 m. Two additional shallow gullies, 244 and 125, lay on a ESE-WNW alignment at the northern end of Area A. They were only 0.06-0.07 m deep and their silty fills produced no dateable finds. There was no stratigraphic evidence to indicate where in the sequence they belonged and they may have been contemporary either with 232/237 and 247/249 or with the later enclosure represented by 390 (see below).

The limited ceramic evidence indicated that an L-shaped length of ditch in the north of Area A, 390, probably post-dated gullies 232 and 237. Ditch 390 ranged from 0.48 m to 0.8 m wide and 0.16 m to 0.26 m deep. Fragments of a jar dated to AD 200-250 were recovered from the single fill of the east-west stretch of the ditch. The corner of this enclosure re-cut the line of an earlier ditch, 202, which contained pottery dating to AD 50-200.

Area A: Central enclosure with metalled surface

The north-western corner of an enclosure lying to the south of 390 was represented by gullies 182 and 335. The gullies were *c* 0.4-0.5 m wide and only *c* 0.15 m deep. Evidence for the relationship between 182 and 335 had been removed by late Roman pit 160, but pottery dating to AD 50-200 was recovered from the fills of both, suggesting that they were at least broadly contemporary. The gullies appear to have enclosed an area close to the line of Watling Street that was, in places, metalled (114), and within which lay several small pits, postholes and gullies. The surface may represent a yard or pathway associated with roadside activity on the western side of Watling Street. Dating evidence was sparse for the metalled surface, which comprised a patchy compacted cobbled spread up to 0.17 m thick, but it was cut by a later pit, 186, and gully, 156. Pit 186 lay close to the northern boundary of this enclosure. It was 1.87 m across and 0.17 m deep and its charcoal flecked, gravelly fill, 187, produced 3rd-4th century pottery along with fragments of tile.

Two parallel gullies lying within this enclosure were on a different alignment to the enclosure ditches and probably post dated them. Gully 156 cut surface 114 but was probably not much later as pottery from its fill dated to AD 50-200. Gully 147 situated some 9.3 m to the south, contained pottery of broadly the same date. A hollow, 153, in the metalled surface had been backfilled with tile, possibly by way of resurfacing or repair. Pottery dated to AD 130-200 lay amongst the tiles. Maintenance of the surface into the later Romano-British period is also indicated by additional repairs, which contained pottery dated to AD 240-300.

Evidence for activity associated with the surfaced enclosure consisted of three pits and two postholes. All of these features had been heavily disturbed by modern activity, obscuring evidence of their function, and little dating evidence was available, although their location within the enclosed area suggests an association. Two very truncated pits, 324 and 322, were dug close to the western boundary ditch, 335. They were *c* 0.6 m in diameter and between 0.05 and 0.14 m deep. The similarity in size and fill suggests that they were of similar date and function. Pit 324 contained pottery dated to AD 170-200. A

small isolated posthole, 265; 0.40 m in diameter and 0.17 m deep, produced fragments of ceramic tile and pottery dated to AD 115-150.

A small gully arc, 242, just to the west of the surfaced enclosure, was severely truncated, being just 0.04 m in depth and contained no finds. The function of this feature remains uncertain.

Area A: Southern enclosure

Ditch 394 lay to the south of the metalled area and extended for 32.5 m on a ENE-WSW alignment before turning southwards for a further 4.9 m, where it was cut by pit 195 (see below). The fill of the ditch varied along its length. A primary fill of dark grey produced a few fragments of tile and pottery dated to AD 50-70. The upper fills were a paler clayey silt and contained pottery dated to AD 250 or later along with a piece of hearth slag. The western stretch of the ditch was heavily truncated by modern disturbance. A small length of gully, 139, extended northwards from the corner of ditch 394. Its stratigraphic relationship with ditch 394 was unclear but on the basis of pottery dating to AD 350-400, this was clearly the later of the two features. A large pit, 203/217, was situated in the north-east corner of the enclosure bounded by ditch 394 and was probably associated with this feature (see below).

Ditch 396 further west lay on approximately the same alignment as 394 and was probably a later recut of the same boundary line, which had shifted slightly to the south. Its fill contained occupation debris, including tile and two sherds of pottery dated to AD 250-400. The eastern terminal of this boundary was probably ditch 251, which contained 3 sherds of 3th-4th century pottery. A short section of ditch that may have been part of the same enclosure as 396 lay further east (395), truncating ditch 394 and pit 203. The ditch had a rounded western terminal that may have corresponded with terminal 251 in representing an entrance to the enclosure, c 11 m across. Its east end was destroyed by modern disturbance, and one of its two fills yielded four sherds of pottery dated AD 260-360.

The northern terminal of a NNW-SSE orientated gully, 258, lay just to the south of terminal 251. Although the feature was largely truncated by modern activity, it produced an assemblage of 112 sherds of pottery dated to AD 170-200. It was not clearly associated with other ditches but does appear to respect 251. Equally it appears to be aligned with ditch 202 to the north-west, and could have been a continuation of this feature.

In the southernmost part of Area A, ditch 167 was cut by waterhole 115, and could possibly have been a northern extension of ditch 401 in Area B to the south (see below). It was 2.6 m wide and 0.58 m deep and contained three fills. The primary fill was a light greyish clayey silt which produced no dating evidence. This was overlain by a similar fill, which had a high charcoal content and produced a few pottery sherds dated to AD 50-200. The upper fill was a dump of gravelly soil, perhaps levelling material, which contained fragments of tile and 22 sherds of pottery dated to AD 200-250, providing a *terminus post quem* for the digging of the waterhole. The backfilled ditch may have continued to function as a hedged or fenced boundary and the siting of the waterhole at this point may have been intended to provide access to water from the two adjacent

enclosures. Alternatively, the levelling of the ditch and the digging of the waterhole may have marked the decommissioning of the enclosure boundary.

Area B: northern enclosure

In Area B two truncated ditch segments, 401 and 399, may have formed the southern and western boundaries of a large enclosure. Ditch 401, the western boundary ditch of this enclosure, was 1.5 m wide and 0.35 m deep. It contained clayey silt and gravel fills exposed in two excavated sections. The upper fill produced a small group of pottery sherds that included material dated to AD 240-400 along with a dump of 39 tile fragments. A late Roman posthole, 80, cut the fill of ditch 401. It contained thirteen sherds of pottery dated to AD 240-400. Ditch 399, situated 41.7 m to the south-east was of similar proportions. The upper fill contained pottery, probably residual, dated to AD 50-200. The area between the surviving remnants of the ditches had been heavily disturbed and it was not possible to demonstrate that they had joined, but the similarities in shape and fill suggest that they were contemporary features. A number of pits and waterholes lay within this presumed enclosure, all of which are likely to be broadly contemporary (see below).

Pits, waterholes and wells

A number of pits, waterholes and wells were exposed within the enclosure systems. Due to their substantial depth, the environmental and artefactual assemblages recovered from the disuse phases of these features provided a wealth of evidence of a type that did not survive in the ditches. The waterholes and wells seem to have filled relatively slowly during the Romano-British occupation of the site, functioning as receptacles for waste and possibly votive deposits, accumulating material until at least the early 4th century. These features were situated within a gradually evolving enclosure system represented by boundary ditches but it was not possible to directly link their construction phases with specific phases of enclosure. This is due in part to the fact that the deepest of these features were not excavated to their full depth for safety reasons, but also because of the dearth of dating evidence from the ditches.

Area A

Early Roman pit 321

The earliest feature identified on the site, possibly pre-dating any of the boundary ditches, was a large pit or shallow waterhole, 321, exposed in the north-east corner of Area A (Fig. 10). The feature was sealed below a dark brown sandy silt, which produced a substantial assemblage of finds, including tile, iron nails, hearth slag and oak charcoal along with 135 sherds of pottery dated to AD 70-100. The pottery assemblage included examples of grog-tempered 'Belgic' ware and a Verulamium-region white-ware flagon fragment. This deposit represents a deliberate dump of domestic material, including hearth debris, within the subsidence hollow of a partly filled pit. The lower fill of the feature, 320, was a reddish silty clay that resembled the natural subsoil but was flecked

with charcoal and produced a single pottery sherd dated to AD 20-70. At only 0.44 m deep, the pit was probably too shallow to have functioned as a waterhole, but it may have been abandoned when only partly dug.

A feature tentatively identified as a ditch, 317, truncated pit 321. The feature was identified only in the section of a machine slot through the pit and details of its dimensions and orientation are, therefore, limited. The fill contained an assemblage of 53 pottery sherds dated to AD 250-400 along with charcoal and hearth slag attached to a hearth lining.

Well 266 (Fig. 12)

A large well, 266, lay at the northern edge of Area A. It was sub-circular in plan, measuring 7.6 m across the top with straight sides. It was excavated to a depth of 3.5 m. The well was probably in use during the 2nd and early 3rd century AD (although it could have originated earlier) and may well have been contemporary with both phases of the enclosure system in this part of the site (see above).

At the lowest part of the excavated sequence, deposits of greyish-brown clayey silts, 365 and 337, contained fragments of chopped logs and timbers that may once have belonged to a barrier or superstructure around the top of the well. It was not possible to obtain a dendrochronological reading from these timbers. A near complete jar with missing rim from 365 (Fig. 14, no. 16) was only broadly dateable to AD 40-400. The vessel had burnt residues adhering to it and it may have been discarded as useless but, bearing in mind other items recovered from surrounding deposits, it could have been a special deposit. Fill 337 contained pottery sherds of AD 125-200 date along with a small number of unidentifiable animal bone fragments. A significant object from this deposit was the lower half of a glass bottle, dateable to the mid 2nd-early 3rd century AD. The type is apparently unique within Britain and possibly the continent, and may have been deposited as an offering when the well was decommissioned. (see Cool below). Lying above these layers was fill 331, a brownish grey clay that sealed a number of wooden objects and contained several artefacts including remains of five leather shoes and a length of twisted hazel withy rope, a rare find from Roman Britain. These are reported in more detail below. The pottery from this deposit provides a date of AD 200-250. Three fragments of cattle horn core from this fill probably testify to horn-working on the site.

The environmental evidence from lower fills 365 and 331 is not entirely clear as to the conditions under which these deposits accumulated. Aquatics and plants of wet ground were relatively poorly represented within the waterlogged plants assemblage, but watercress and sedge were identified. The presence of *Daphnia ephippia*, the resting stage of an aquatic invertebrate, suggests that the well dried out seasonally. Approximately half of the beetles identified from fill 331 were aquatic varieties that favour stagnant water and water that forms above plants. The sample from fill 365 contained insects that favour wet mud and perhaps originated from the upper edge of the well.

Fill 331 was sealed by 364, a mixed blue-grey and brown clayey silt, probably formed by erosion. It contained seven residual sherds of pottery dated to AD 70-110 and a cow metapodial. Three small fragments of a Millstone Grit rotary quern and a lower stone of a disc type rotary quern made from burnt and weathered lava were also recovered from this

fill. Deposit 271 above, a soft blue gravelly clay, was 1.5 m thick and extended across the whole cut. Forty two sherds of pottery dating to AD 270-350 and a fragment of a badly corroded iron implement were recovered from this fill. These layers (364 and 271) appear to represent deposits dumped into the top of the disused waterhole, while on the basis of their high gravel content and lack of occupation material, the upper fills 270, 268, 269 and 373 appear to have formed quickly, either by a process of dumping or collapse or both.

The fills of this cut feature produced 20 worked wood items, including two areas of axe cross-cut and de-branched oak logs which seem to have been laid horizontal to make two rough steps. These may have been originally cut for firewood and used ad hoc. Clear axe marks were recorded on a number of the ends. The fills of the feature also yielded a small fragment of a possible carved oak artefact (357) which may have been part of a carved tub stave, and a small fragment of sawn oak board (343) with a planed edge.

Pit 256

A stratigraphically isolated posthole or small pit, 256, lay close to well 266. It was 0.55 m in diameter and 0.53 m deep. The single fill appeared to have accumulated largely through natural silting but it contained a relatively large assemblage of 54 pottery sherds dating to AD 120-200 along with a small fragment of a Millstone Grit rotary quern.

Well 283 (Fig. 12)

Well 283 lay some 30 m to the south of 266 within Trench A. The cut measured *c* 7.8 m across, 5.2 m wide and it was excavated to a depth of 3 m. The dating evidence for the construction of the well was poor as timbers from an internal framework were not suitable for dendrochronological analysis. Dating evidence for the fill sequence was equally poor. A single pottery sherd dated to AD 100-160 came from one of the lower fills, 290, and no other ceramic material was recovered from this feature.

The crudely made timber box structure was set within a construction cut, 283. Clay deposits 355 and 356 (not visible on section) had been deliberately placed around the timbers and clearly contributed to their preservation. The eight main timbers seen were examined in situ to find the corner jointing method used but it could not be discerned. It is puzzling that the timber elements did not touch each other edge wise, as they would have let much silt into the well water as a result, although this may have been partially due to the decay of sapwood. It is unlikely that the well lining was used for very long, due to its curious rather weak construction.

The earliest excavated fill was a deposit of dark bluish-grey clay silt with gravel inclusions, 350, (not visible in section), which post-dated the original construction. This was sealed by similar deposits, 290 and 291. Both probably represent natural silting, along with an extensive layer of clay silt above (292). Lying between 291 and 292 on the northern and southern edges were fills 302, 303 and 304, which probably represent episodes of slumping. Certainly by this time if not before it is unlikely that the well was in use.

Fill 294 was a mottled clayey silt containing lenses of cess material, probably dumped in the disused well sporadically during the process of natural infilling. Fills 296 and 297 (not visible in section) overlay 294 and represented natural silting and collapse. Fill 295,

a dark blueish grey clayey silt, lay in the central part of the shaft, filling the void created by the slumping in of 296 and 297. This fill had probably accumulated in a watery environment filled with organic material. Further episodes of natural erosion followed, represented by fills 301, 306 and 330. They were eventually sealed by a grey clayey silt, 299. This top fill was cut by a modern feature, 310.

Pit 203/217

A large pit, 203, was situated in the north-east corner of the enclosure bounded by ditch 394 and was probably associated with this feature (see above). It was over 2 m in diameter and 1.3 m deep with irregular sides and a flat base. The primary fill was a dump of dark grey clay with occupation material, including 10 sherds of pottery dated to AD 200-250. The layers above this represent natural collapse and the final fill was another deliberate dump of greyish clay with occupation material, including tile and 52 sherds of pottery dated to the period AD 260-400. The pit may have filled over a relatively long period during the 3rd century, before the top fill was recut in the later 3rd or 4th century (217): The lower fill of this recut was a dark grey compact clay containing a high charcoal content and other burnt material, including grain, bone and nutshells, suggesting that it derived from a domestic hearth. The charcoal was from several wood species (see below). This burnt deposit was sealed by a grey clay with gravel.

Waterhole 115 (Fig. 12)

Waterhole 115 was situated within the area enclosed by ditch 394 in the south-eastern part of Area A. It cut a short length of NW-SE aligned ditch, 167, which may have been the northern stretch of ditch 401 in Area B (see above). The upper fill of the ditch produced pottery dated to the first half of the 3rd century, so the construction of the waterhole must have dated from *c* AD 250+.

The construction cut of the waterhole was 8.92 m across the top with quite a gradual eastern slope. The feature was excavated to a depth of 1.68 m. Fills 150, 116 and 117 had accumulated against the sides of the cut and 116 and 117 had a high gravel content, representing collapse of the sides, probably soon after the cutting of the feature. They produced no finds. Fill 150, at the lowest excavated point, was a sticky grey clay which also produced no finds. A large fragment of pottery dated to AD 50-200 and a fragment of cow radius were recovered from the overlying fill, 149. These fills probably accumulated within standing water. A uniform fine charcoal-flecked blueish-grey clayey silt, 118, filled the main body of the waterhole. It was 1.56 m deep and darkened towards the base of the waterhole, indicating a low energy deposit formed in standing water. This is confirmed by the identification of insect species *Helophorous spp.* (water beetle) within samples taken from this fill. The deposit yielded part of a horse femur along with fragments of an upper rotary quern in felspathic sandstone, a lava rotary quern and a probable saddle quern. Seventeen pieces of worked wood were also recovered, including oak stakes, possibly originally used to fence off the top of the waterhole. Wood chips representing woodworking debris were also present, including off cuts from oak pole ends and the debris from notch and chop hewing of small oak logs to make beams. Some of the chips were burnt as if they were fuel left-overs, and others were clearly from joint cutting. Cereal grains and well preserved pollen spores of species indicative of open landscape with scattered oak woodland were identified within the environmental samples.

Pottery dating to AD 325-400 indicates that this fill accumulated for some time after the original construction of the waterhole.

Other pits in Area A

Heavily truncated pit 109 was situated on the projected southern alignment of gully 258, and the date range of pottery from these features overlapped. It measured 1.5 m in diameter but only 0.05 m of its depth remained due to severe disturbance. The single fill contained patches of burnt grey and black material, probably hearth debris, from which four sherds of pottery dated to AD 150-300 were recovered. Further west, pit 288 lay adjacent to ditch 396, although the relationship could not be determined. The pit measured 1.4 m across, was only 0.09 m deep and contained five fragments of Roman tile.

In the eastern part of Area A were two pits, 195 and 210. Pit 195, which cut through the southern arm of ditch 394, was 1.1 m in diameter, 0.16 m deep with a flat base and straight sides. It contained a largely eroded fill, which produced a few pottery sherds dated to AD 150-200 along with three fragments of tile. Just to the west lay sub-rectangular pit 210, which was 1 m by 2.3 m across and 0.46 m deep. Two sherds of mid 2nd century pottery came from the lower fill, with five fragments of tile from the upper fill.

In the north-eastern part of Area A, a large sub-rectangular pit, 160, truncated gully 182. The pit was 4.5 m long, 1.4 m wide and 0.82 m deep, with steep irregular sides and an irregular base. The first grey sticky silty clay fill contained four sherds of abraded pottery with a broad date of AD 40-400. Above this fill was a slightly darker but similar material containing a cow tooth, hearth slag and 17 sherds of pottery dated AD 350-400. The subsequent fill was a very compact whitish grey stony soil that contained slag, tile and pottery dated AD 240-400. The top fine silty fill produced no finds.

Area B

Well 120

Well 120 lay within the area enclosed by ditches 401 and 399. It was severely truncated by later pits, 60 and 61, obscuring its original shape and dimensions. The cut was at least 2 m across and was excavated to a depth of 1m but is likely to have been much deeper and, like well 283, had almost certainly had a timber infrastructure. The lowest excavated fill was a bluish-grey clayey silt visible along the sides of the well. This surrounded a rectangular space filled by silty clay, 121, suggesting that the well had originally contained a timber box structure packed around with clay. Timbers (158 and 159) recovered from fill 121 were probably remnants of this structure. A collection of 21 pottery sherds from the clay packing date to the later 3rd century, and 14 residual sherds from fill 121 dated to AD 170-230. It is likely that well dates to the 3rd century and was contemporary with the enclosure defined by ditches 401 and 399.

Waterhole 60 and re-cut 61 (Fig. 12)

The earliest cut of waterhole 60 cut the top fill of well 120. It was itself re-cut at a later date by 61 so the original diameter is uncertain, but a measurement or around 4 m is

likely and it was 2.5 m deep. This feature and re-cut 61 contained pottery of mixed date, almost certainly a result of the mixing of material during recutting. Although pottery dated to the period AD 120-200 was recovered from an upper fill, 69, the earliest fill, 65, was not disturbed by the re-cut and contained fragments of a cow mandible and scapula and pottery dating to AD 250-400, including sherds of a Central Gaulish samian ware dish. This fill was evenly distributed in the bottom of the cut and was probably formed in waterlogged conditions. Above this, fill 66 was similar in appearance, but with less gravel, and contained pottery of the same date in addition to a cow and a horse tooth. Two mid blueish grey silty clay deposits followed (70 and 67), formed in waterlogged conditions, which were overlain by deposit 68, a 0.6 m deep firm brownish grey clay silt with moderate amounts of gravel, formed by natural infilling and slumping action. Fill 71 represented an original water level in the pit. It was 0.1 m thick, orange coloured, with frequent patches of iron panning. Formed above this, deposit 69 was a firm grey sandy clay, mottled with orange patches and with no inclusions. It was 0.6 m deep and represents a long period of low energy silting of the main body of the pit. By the pottery found in the earliest fill of this pit (65), it can be dated to the late 3rd or 4th centuries, and the pottery from context 69 was, therefore, almost certainly residual.

Truncating pit 60 was pit 61, 4.2 m across and 1.8 m in depth. The earliest fill, 72, was a firm brownish grey silty clay, with frequent patches of dark mottling and moderate amounts of gravel. This fill represents a period of slow silting of the base of the feature with material from the feature sides (some originating from pit 60) and the surrounding ground surface. Fill 73, a dark blueish grey silty clay 0.25 m thick, contained a single sherd of residual 1st to 2nd century pottery. The next two fills in the sequence, 74 and 75, were blueish grey mottled clay silts, with small amounts of gravel inclusions, charcoal flecks, and charcoal lenses. Above this, fill 76 was a firm dark brownish grey silty clay, 0.36 m thick, with occasional inclusions of gravel, tile and charcoal. It is likely that this fill represented deliberate tipping of material into the feature. Finds from this fill also include eight sherds of pottery dated to the mid 3rd to mid 4th century. Fills 77 and 78 seem to be episodes of deliberate back filling, being fairly mixed silty clays with gravel and some building material. Deposit 78 contained 19 sherds of pottery loosely dated AD 50-250. The latest surviving fill of this pit was 79, a firm orangey brown silty clay, 0.21 m thick, containing seven sherds of pottery dated to the late 3rd to 4th centuries.

Pit 17

Pit 17, a large, sub-circular feature 3.37 m in diameter and 1.55 m deep, lay close to the southern boundary of enclosure defined by ditches 399 and 401 and dating evidence suggests that it was contemporary with it. The fills comprised mixed layers of gravel and silt, and a lower fill contained lenses of organic material, possibly cess derived, which incorporated a cow's tooth and fragments of tile. An assemblage of 163 pottery sherds produced a broad date range of between AD 200 to 400 for this initial fill, but the final levelling of rubble was deposited between AD 300 and 400. A piece of worked limestone (SF 3) from this fill was too fragmentary to confirm as a mould.

Pits 46, 50 and 52

In the north-eastern corner of Area B were three small pits, two of which (50, 52) were heavily truncated and contained no datable finds. Sub-rectangular pit, 46, was 1.15 x 0.7 m across and 0.25 m in depth, with regular sloped sides and a flat base. A total of 22 fragments of Roman tile and seven sherds of pottery, broadly dated 1st to 4th century AD, were recovered from the fill of this pit.

Other excavated features

A shallow irregular feature, 191, lying close to the south-eastern limit of Area A, had been heavily disturbed by later activity. A silty fill appears to have accumulated gradually, and the feature may have been a tree throw hole. A similar shallow oval pit, 197, lay close by. The primary fill of this feature produced a small group of pottery sherds dated to AD 150-200, and the upper fill contained sherds dated to AD 50-250. The function of this pit was unclear. To the west of these features was an isolated oval posthole, 179, 0.46 by 0.4 m across and 0.18 m deep. Many pieces of tile were found in the cut, some of them lain against the edges suggesting that they may have acted as packing material for the post. The posthole cannot be related to any other feature.

Feature 254, a possible tree throw situated in the northern part of Area A, was very irregular in shape with a single silty fill. This deposit contained two sherds of heavily abraded pottery and flecks of charcoal and tile. The pottery could only be broadly dated to AD 40-400. Similarly, a lozenge shaped shallow depression in surface 114 (154), recorded as a pit, but at a depth of 0.08 m, was more likely a wear hollow that had accumulated silts and artefacts, including two sherds of pottery dated to AD 270-400.

An assemblage of 25 pottery sherds was recovered from deposit 309 which filled a hollow in metalled surface 114, close to the eastern site boundary (not shown on plan). The sherds dated to AD 240-300, suggesting a repair to the surface was made at around this time utilising disused broken pottery. Close to the eastern edge of the site and also stratigraphically later than metalled surface 114 was feature 186. It was an irregular sub rectangular shape in plan with a concave profile. It measured 1.87 m in length, 1.07 m in width and 0.17 m in depth. It is not clear whether this was a feature cutting the surface or a hollow in it that has been filled with material as a repair as is the case with deposit 309 discussed above. Both these repairs demonstrate the maintenance and long usage of the metalled surface.

Lying just to the south-east of pit 120 in Area B were two truncated postholes (22 and 28), neither of which contained any finds. It is uncertain as what kind of structure they represent or if they were associated with the waterhole just to the north. In the south-eastern part of Area B was a shallow oval cut, 97, thought to be a natural feature. To the south of this was a possible hearth, 41, comprising a linear pit with signs of in situ burning, although the feature was heavily disturbed and contained no finds.

Post-Roman activity

Two features provided evidence for limited activity at the former MoD site during the post-medieval period. At the south-eastern end of Area A, a posthole, 230, contained post-medieval pottery and resembled a nearby posthole, 228. These may have been contemporary with a row of three heavily truncated postholes, 222, 224 and 226, just to the north that probably formed part of a fence line, although posthole 222 did contain fragments of Roman tile, and so their dating is quite uncertain.

In Area B a pit, 42, cut into the top of enclosure ditch 398 and contained two sherds of post-medieval pottery. In the south-eastern corner of Area B was an area of concreted pebble, 14, thought to represent the truncated remnants of a possible surface. Due to truncation on all sides, the overall shape and size of the deposit is unclear. No evidence of resurfacing or repairs were seen. A small amount of post-medieval pottery and a possible medieval peg tile suggest that the surface may not have been of Roman origin, although small quantities of Roman tile were also recovered.

FINDS

Pottery

Edward Biddulph

A total of 1382 sherds, weighing some 27.8 kg, was recovered from the site (Table 6). This belonged almost exclusively to the Roman period and was mainly of 2nd century or later date. Early Roman pottery was poorly represented. A small amount of medieval and post-medieval pottery was present. With an average sherd weight of 20 g, overall the pottery was in good condition. However, surfaces were often worn, and rims broken above the shoulder, making close identification of form difficult. In addition, the proportion of residual pottery was high. Consequently some uncertainty must be attached to the dating of small groups.

Fabrics were identified using the Museum Of London Specialist Services (MoLSS) series of common names and codes. Descriptions of these are provided by Symonds and Tomber (1991) and Davies *et al.* (1994). Most of the imported and Romano-British traded wares are described in detail by Tomber and Dore (1998), whose codes are presented below in parentheses after the MoLSS codes. Form typology, based on Marsh and Tyers (1978, 546-582), followed the standard system currently employed by MoLSS. Quantification was by sherd count, weight in grammes, minimum vessel count (MV), and estimated vessel equivalence (EVE), calculated from percentages of surviving rims (thus 100% of a vessel's rim equals 1 EVE, 50% equals 0.5 EVE, and so on).

Nature of the assemblage

Reduced wares are, as might be expected, predominant within the assemblage, taking a combined 31% share (Tables 6 and 7). Locally-produced grey wares form by far the

greatest part. Verulamium-region grey ware (VRG) account for almost half of reduced wares by EVE. The fabric, identical to the more widely traded white ware, was typically grey in colour throughout. However, a significant number of vessels had 'sooted' external surfaces, and pink or white internal surfaces. Such observations were made frequently of pottery from Verulamium (eg Wilson 1984). While the vessels, usually jars, were undoubtedly used in the kitchen, the distinctive blackened surfaces were perhaps more likely to have been a result of firing conditions in the kiln, rather than heat and flames from the stove. This cannot rule out the possibility, though, of casually burnt white ware sherds being assigned to the grey ware category. The grey ware was common at Gorhambury, where the fabric was arriving into the second half of the 3rd century (Parminter 1990, 185). This dating is at odds with that obtained for the City of London, where it was confined to the 1st and 2nd centuries (Davies *et al.* 1994, 52). A prolonged chronology should be expected in areas closer to source, although none of the forms encountered at Brockley Hill - necked jars (2T) and bead-rimmed bowls (4H) being commonest - necessarily extended beyond AD 200, despite the fabric frequently occurring, presumably residually, in contexts of later date. Much of the remaining reduced wares were also of local origin (SAND and FINE), though were not assigned specifically to source. While these formed an integral part of pottery supply throughout the Roman period, diagnostic pieces - overwhelmingly plain-rimmed dishes (5J) and flanged bowls (4M) - tend to be of later Roman date, suggesting that the pottery filled the gap left by Verulamium-region potters. A small number of grey ware vessels were arriving from further afield. The finely made Highgate Wood C ware (HWC) poppy-headed beakers and bead-rimmed bowls arrived in the late 1st and 2nd century AD. Grey wares (BHAD) from Much Hadham, east Hertfordshire, arrived probably from the 3rd century onwards. The Alice Holt industries in Surrey were responsible for grey ware (AHFA) storage jars, which were among the latest ceramics to reach the site after *c* AD 350. The three wares together account for just 2% of the entire assemblage by EVEs.

Handmade black-burnished ware flanged bowls (4M) and plain rimmed dishes (5J) from Dorset (BB1) were recovered from contexts dated from the mid 3rd century onwards. The low level of importation suggested here is consistent with the proportions of the fabric seen at other excavated parts of the immediate area (Seager Smith 1998, table 1). Wheel-thrown BB2 from Kent or Essex was similarly poorly represented, and again deposited from the 3rd century. The 'cooking pot' type jar (2F) was the only form recognised, although dishes and bowls were seen in a black-burnished style fabric (BBS) that could not be identified as BB2 with certainty. Grog-tempered wares (GROG, GROGSH) contributed 8% to the assemblage by EVE. The pottery was, however, residual in most deposits. Given its absence from the assemblage recovered by Wessex Archaeology, and paucity at Canon's Corner (Biddulph 2001, table 1), the pottery remains significant as an indicator of early or mid 1st century activity in the area. Forms included cordoned jars and platters. Some occurrences, for example from layer 327 (Fig. 13, nos 1-7), may more properly be identified as Highgate Wood B ware (HWB). The total amount of the fabric in this assemblage, however, remains unquantified. The use of grog-tempered pottery resumed in the 3rd and 4th century AD when pink grog-tempered ware (PKG) arrived in the form of storage jars from Buckinghamshire. The ware accounted for almost 3% of the Wessex Archaeology material by sherd count (Seager Smith 1998, 53), and a similar amount was recovered here. Shell-tempered pottery was limited to six sherds. Two were

identified as the late Roman fabric, CALC, which add to the relatively meagre tally of 'calcite-tempered' sherds recovered from the area that denote sparse activity in the late 4th century.

Oxidised wares, accounting for 6% of the entire assemblage, by EVE were dominated by unsourced fabrics (OXID, OXIDF); most were probably of local origin. Necked jars were common, though dishes and bowls were also represented. Like the unsourced grey ware (SAND), oxidised wares occurred mainly in 3rd and 4th century deposits. Probable Verulamium-region products included a granular red ware (VRR), which was otherwise identical to the white fabric (VRW). A fine buff fabric, typically dated to the later 1st and early 2nd century, and normally with distinctive applied ring-and-dot decoration, was also encountered (RDBK). None of the seven sherds was decorated, but several were certain to derive from a globular beaker, the usual form in this ware. The pottery is known in London, Verulamium and elsewhere, and a Verulamium source has been posited on fabric grounds (Davies *et al.* 1994, 142); the fabric has not, however, been recorded previously at recent excavations in the Brockley Hill region. Verulamium products inevitably took the largest share of white wares (VRW), accounting for 20% of the entire assemblage by EVE, but 86% of the ware category. Forms represented by rims were almost exclusively confined to necked jars (2T), neckless or unguent jars (2J), and reed-rimmed bowls (4A). Handles, body and base sherds suggest that as many as seven flagons were also present. The ware began to be deposited from the time that production commenced - *c* AD 50 (Davies *et al.* 1994, 40), although a substantial portion was deposited in the 2nd century, and mainly during the second half of the period. Some 25% of the ware by EVE was recovered from deposits dating after AD 200 and should be residual, although, as with the grey ware (VRG), production serving a local market may have continued well into the 3rd century (Parminter 1990, 185). A single VRW mortarium sherd was recovered. The virtual absence of the form reflects the chronological emphasis of the site; the use of Verulamium ware mortaria in the wider region had declined sharply by the mid 2nd century AD (cf Davies *et al.* 1994, 47). White ware mortaria were otherwise supplied by the Nene Valley and Oxfordshire industries (NVWW, OXWW). These were deposited after the mid 3rd century AD.

Fine wares contributed 16% to the assemblage by EVE. Oxfordshire red colour-coated ware (OXRC) was best represented by EVE, accounting for 7% of the entire assemblage and 48% of fine wares. Forms were limited mainly to dishes, including samian form 31 and 36 copies (Young C46 and C48 respectively). A red colour-coated mortarium (Young C100) was also recovered. The ware was deposited from the late 3rd century onwards. Nene Valley colour-coated ware (NVCC) was well-represented by body sherds, but poorly in terms of EVE. Consequently, there were few pieces that could be assigned to specific forms. Bag-shaped, funnel-necked, and folded beakers were recorded. A 'castor-box' lid was present also. The ware was reaching the site probably from the late 2nd century. Oxidised Hadham ware (MHAD) similarly consisted largely of undiagnostic sherds. A pedestal base from a tall jar was identical to one recovered in the Wessex Archaeology excavations (Seager Smith 1998, fig. 15.20). That piece was attributed to Oxfordshire (*ibid.*, 55), but, like the base here, must be a Hadham product. A white-slipped oxidised Hadham fabric was available from in late 1st and 2nd century. Two colour-coated sherds, probably from beakers, were identified as coming from Colchester (COLCC). Some 30% of the fine ware group, or 4% of the entire assemblage by EVE,

comprised colour-coated vessels that could not be assigned to a specific source (CC). Two fabrics were recognised: a fine grey fabric with rounded clear and black quartz grains and sometimes with red margins, and an orange fabric, also with clear quartz. The latter, responsible for folded beakers, was reminiscent of oxidised Hadham ware, if a little coarser, and a east Hertfordshire source may be suggested. The former may also be local, the quartz recalling the granular nature of Verulamium-region wares. Folded beakers were produced in this fabric.

Continental pottery arrived from Gaul and southern Spain. Samian took a 2% share of the assemblage. South Gaulish samian (SAMSG), probably from La Graufesenque, reached the site in the later 1st or early 2nd century, although most occurrences were found as residual pieces in later deposits. Cups (Drag. 27 and 35) and decorated bowls (Drag. 29 and 37) are represented. The ware was replaced by Central Gaulish samian (SAMCG) ware in the 2nd century. Bowls (Drag. 37 and Curle 11) and dish form Drag. 18/31 were identified. Bowls (Drag. 37 and 38) were also available in East Gaulish samian ware (SAMEG), which arrived during the late 2nd or early 3rd century. Cup form Drag. 33 was recovered, too. Again, occurrences were largely residual in late 3rd century or later deposits. Wine *amphorae* from southern Gaul (GAUL) reached the site during the 2nd and 3rd centuries. Deposition of the ware continued through to the late 4th century. South Spanish *amphorae* (BAET), containing olive oil, arrived probably from the late 1st or early 2nd century until the mid 3rd century, though deposition also continued after this date.

Chronology

Pottery was deposited throughout the Roman period (Tables 8 and 9). Deposition in the early Roman period (*c* AD 43-125) was relatively sparse. Pottery assigned to deposits that potentially formed during this time accounts for 13% of the entire assemblage by EVE. Activity in the 1st century is attested most readily by the presence of grog-tempered wares. Sherds were invariably found in association with post-conquest pottery, often Verulamium-region wares, suggesting that no deposition occurred before *c* AD 43. The range of Verulamium-region white ware products provides further indications of limited early Roman activity. Flagons and mortaria - standard products of late 1st century potters - were scarce, and the ware was instead dominated by bowls and jars, which were commonest in the 2nd century AD (Davis *et al.* 1994, 47). Pottery belonging to deposits accumulating during the mid Roman period (*c* AD 125-250) at the earliest was better represented, accounting for 55% of the assemblage by EVE. This period assemblage was evenly divided between 2nd century groups - evidenced in part by the Verulamium-region jars - and early-mid 3rd century groups, now containing Nene Valley colour-coated ware and Hadham oxidised ware. Pottery from late Roman deposits (*c* AD 250-410) contributed 33% to the assemblage by EVE. Oxfordshire products, chiefly white ware mortaria and red colour-coated bowls or dishes, were among the usual indicators of a late Roman date. The final period of ceramic deposition occurred during the second half of the 4th century AD, as evidenced by shell-tempered ware and Alice Holt grey ware storage jars. These are poorly represented in the assemblage, however, and coupled with the absence of Portchester 'D' ware, for example, suggest that activity was limited during this period, or did not extend far beyond *c* AD 350.

Some differences emerge in the chronologies of assemblages from this and other sites in the immediate vicinity. The Canon's Corner pottery (Biddulph 2001) was generally dated to the second half of the 2nd century or later. The virtual absence of early Roman material there is in contrast to the distinct, albeit small, presence here. Early Roman pottery was also recorded at the WA excavations, although much of this was found to be residual in later deposits (Seager Smith 1998, 51). All three assemblages show a later Roman - 3rd or 4th century - emphasis. Deposits of such date at Brockley Hill account for over 60% of the entire assemblage, and this distribution is substantially preserved at Canon's Corner and the WA sites. A dip in activity at Canon's Corner during the first half of the 3rd century was noted, although this was considered to be an aberration derived from the size of the assemblage (Biddulph 2001, 34). No site yielded good collections of late 4th century pottery, suggesting a commensurate decline in activity at this time.

Pottery condition and patterns of deposition

Pottery was recovered from linear and structural features, pits, waterholes, and layers (Table 10). Most of it was collected from waterholes, pits and ditches; their assemblages each accounted for *c* 25% of all pottery. The largest individual groups, however, were recovered from waterholes; each pottery-yielding deposit contained on average over 1 kg of pottery. This contrasts with ditches, whose deposits yielded an average of just below 100 g. Ditches, and to a lesser extent pits, can be characterised as having more deposits compared with waterholes, but less pottery in each. So, ditches and pits steadily accumulated pottery, but rarely received the material in large quantities at any one time, while the waterholes received much larger deposits during each episode of deposition. Open features - layers and soil within hollows - generally yielded large groups of pottery. Structural features, mainly postholes, received very little. The pottery from waterholes and open features was better preserved than that from ditches and pits. This can be seen from the mean sherd weights (MSW), suggesting that larger sherds were collected from waterholes and open features, with smaller, more fragmented pieces collected from ditches and pits. This pattern is retained in the 'completeness' and 'brokenness' statistics. The former is calculated by dividing EVE by number of vessels; the higher the value, the better preserved the pottery, where a complete vessel or assemblage is equal to 1. To calculate the latter, sherd count is divided by EVE. The higher the value, the more fragmented the pottery (Orton *et al.* 1993, 178). Table 10 reveals that the brokenness figures for waterholes and open features, like those for mean sherd weight, are lower than those of pits and ditches, the pottery being less fragmented. Considering the measures together, the trends seem clear: pits and ditches received less material per deposit and in worse condition compared with waterholes, hollows and layers. This suggests that pottery was deposited in different ways depending on feature type. Deposition in ditches and pits was secondary and casual; pottery, already fragmented from episodes of disturbance and relocation, moved with soil to fill the features. Pottery in open features had undergone less disturbance, and potentially was deposited closer to the place and time of original discard; indeed, hollows might preserve the location of middens. The pottery in the waterholes was more remarkable, with some forming part of structured deposits. Table 11 provides some indication of this, giving mean sherd weights and total deposit weights for

each pottery-yielding context. Both waterholes received large deposits in middle of the sequence of fills; the assemblage from context 118 in waterhole 115 was characterised by a high proportion of amphorae sherds and finewares. The substantial remains of a colour-coated beaker and grey ware jar were recovered from context 311 from waterhole 266. Context 365 from the same feature yielded a near-complete jar; only the rim was lacking. These groups represent a deviation from the normal pattern of deposition and suggest that the waterholes remained important as foci of social or religious activity even after infilling had begun.

It should be noted, however, that a significant level of residual pottery was evident, which accounted for almost 30% of the entire assemblage by EVE. Residual material was also noted at the WA sites and Canon's Corner; there the pottery was suggested to have been exposed for some time or undergone episodes of disturbance before final burial (Seager Smith 1998, 56; Biddulph 2001, 35). In contrast the residual pottery at Brockley Hill, like the material contemporary with the date of deposition, was generally well preserved with an average sherd weight of 25 g, and was seemingly inconsistent with this explanation. Indeed, residual pottery did not deviate far from the mean sherd weight (MSW) for each feature type. A MSW of 85 g for residual pottery from waterholes compares to 58 g overall. Residual pottery from ditches had a MSW of 8 g, compared with 9 g overall. This suggests that pottery generally experienced a similar history depending on feature type; groups within each did not incorporate pottery obviously affected by different taphonomic processes. The reason may lie in the type of pottery represented. Residual pottery was dominated by 'Belgic' grog-tempered ware, and white and grey Verulamium-region wares. The 'Belgic' material was recovered from late 1st century groups and potentially was residual for little more than a few years (if at all, if identified as Highgate Wood B ware), perhaps remaining in household use for some time after the pottery had ceased to be manufactured. The Verulamium-region wares are more problematic, in some cases being considerably older than the date of final deposition. The ending of pottery production in the region, including Brockley Hill, is reasonably well understood; evidence suggests no production of the distinctive wares much beyond the Antonine period (Davies *et al.* 1994, 40). Parminter (1990, 185) hints at continued production, although the forms represented here tie much of the material to the 2nd century. Some of them too may have remained in use well into the 3rd century. Or, being very close to source, stockpiles of vessels existed after production had ceased, making 'new' vessels available for the local market after this time. A simpler explanation may relate to the perceived dip in site activity during the first half of the 3rd century, which suggests that 2nd century deposits were little disturbed until the late Roman period, resulting in reasonably fresh, though old, pottery being incorporated into later deposits. As has been noted, however, the paucity of pottery dated to the early to mid 3rd century may not reflect an actual decline in site activity, especially as this coincides with a wider downturn in ceramic production (Going 1992, 99).

Vessel use

A number of vessels displayed evidence of use. Typically, the evidence is of burning. For example, jars were burnt externally on the wall and base, as if heated on a stove or over an open fire during cooking. An Oxfordshire white ware mortarium was burnt on the

upper part of the flange. This vessel may have been inverted and used as a lid to cover a cooking pot. Another mortarium, from the Nene Valley, was also burnt on the flange, though across an old break, suggesting that vessels remained in use to some extent after being damaged. Some Verulamium-region grey ware jars were burnt on the rim, although signs of burning on the rims of white ware vessels suggest that this could be a result of kiln firing, rather than use. The near-complete jar recovered from waterhole 266 had a burnt-on residue; indeed, the vessel's owners may have preferred to discontinue using it after this and so decided to discard it into the feature. The base of another jar was perforated after firing, suggesting that the function of the vessel had changed during its life. While showing no direct evidence of use, a cable-rimmed storage jar from the Alice Holt kilns from pit 203 may once have belonged to a ceramic beehive (Lyne and Jefferies 1979, 51), although characteristic features - perforations and internal fingering - were not seen on the small piece recovered here. Three vessels showed possible graffiti. A samian ware Drag. 33 cup from pit 17 was inscribed with a small cross on the wall. The vessel had been uniformly burnt before the cross had been cut and before breakage. A cross was seen inside the footring of a samian dish (pit 60); a second cross may have been cut on the internal surface of the base, though the incisions are less clear. Just as equivocal was a possible notch cut into the rim of a Hadham oxidised ware beaker.

Site status

Pottery offers a number of indicators of site status. Certain pottery alone, particularly 'exotic' imports, is rarely satisfactory as a status indicator, since the absence of one type can so often be off-set by the presence of another. Instead, a comparative approach is preferred, where a range of measures place the site within a hierarchy in relation to others. One useful indicator is the ratio of decorated to plain samian; higher status sites, such as towns and villas, tend to have higher proportions of decorated samian compared with lower status settlements (Willis 1998, 105). Out of the eleven vessels identified (measured by rim count), four - 36% - were decorated (all Drag. 37). This compares well to samian groups from *Insula* 14, Verulamium, where the proportion reached 28% (*ibid*, table 3). Samian from the WA sites was poorly represented, abraded, and comprised no identifiable decorated vessels. Canon's Corner yielded a single sherd of samian, representing 0.5% of the entire assemblage. While the small sample size at Brockley Hill may have resulted in the over-representation of decorated vessels - the group from *Insula* 14 numbered more than 20 vessels - the trend suggested by the samian is supported by the proportion of amphorae. These represent 4% of the entire ceramic assemblage by sherd count, and compare with 2% at the WA sites. Amphorae were absent at Canon's Corner. The range and volume of continental imports, then, suggest that the inhabitants at Brockley Hill had regular access to imported goods, including wine and olive oil, and were fully conversant with Mediterranean eating habits. More generally, the strong presence of finewares, particularly from the Nene Valley and Oxfordshire industries, reveals good trade connections and a regional outlook. However, inhabitants were by no means dependent on outside sources for specialist forms; a number of colour-coated beakers were probably of local origin, suggesting that local potters were able to match the skill and resources, if not the output, of the Nene Valley industry from the late 2nd century onwards, despite the abandonment of the early Roman Brockley Hill industry.

The nature of settlement in the area is uncertain. Previous excavations, possibly focussed on peripheral zones, have uncovered little by way of substantive occupation evidence. The settlement of *Sulloniacae*, recorded in the Antonine Itinerary, remains elusive, but the ceramics, sufficiently different from the WA sites and Canon's Corner, are, at least, consistent with the core areas of such a location.

Post-Roman pottery

A small amount of post-Roman pottery was encountered. These largely comprised medieval coarse wares and post-medieval earthenwares, including glazed pieces.

Catalogue of illustrated vessels

The following ceramic groups, presented in ceramic phase order, illustrate the typological and chronological range of the assemblage. Pieces of intrinsic interest are also shown.

Figure 13

Layer 327

1. Ring-necked flagon 1B2 (VRW).
 2. High-shouldered jar *Cam 220* (GROG).
 5. High-shouldered jar 2G (GROG).
 4. Globular beaker 3B (RDBK). The characteristic 'ring-and-dot' decoration is absent in this case; the pieces have been assigned to the ware on fabric grounds.
 5. Bowl *Cam 44* (GROG).
 6. Platter *Cam 26* (GROG).
 7. Platter 5A (GROG).
- Date: Late 1st century AD

Pit 195, context 196

8. 'Unguent jar' 2J2 (VRW).
 9. Necked jar 2T (VRW).
 10. Necked jar 2T (VRW).
 11. Folded beaker (CC). The fabric is reminiscent of MHAD; ?a local product.
- Date: Mid to late 2nd century AD

Waterhole 266, context 331

12. Necked jar 2T (VRG).
13. Folded beaker (CC). Buff-grey sandy fabric with clear rounded quartz; ?a west Hertfordshire product.

Figure 14

Waterhole 266, context 331

14. Bead-rimmed dish 4H (VRG).
 15. Bowl with incised decoration on rim and body (SAND).
- Date: Early to mid 3rd century AD

Waterhole 266, context 365

16. A near-complete necked jar, rim lacking (SAND).
- Undated within Roman period

Pit 17, context 90

17. Pedestal jar (MHAD); cf. Seager Smith 1998, fig. 15.20.

18. Conical cup Drag. 33 (SAMEG). Small x-graffito on wall; burnt uniformly across vessel before the graffito was cut and before breakage.

Date: Early to mid 3rd century AD

Pit 60, context 65

19. Dish (SAMCG). X-graffiti cut within footring and ?internally. Residual.

Date: Mid 3rd to late 4th century AD

Pit 120, context 171

20. Funnel-necked globular beaker, sandy grey ware with red margins and black ?ironstone inclusions (CC).

Date: Late 3rd to early 4th century AD

Pit 203, context 218

21. Cable-rimmed storage jar, Lyne and Jefferies, class 10 (AHFA).

22. Folded beaker (CC); a west Hertfordshire product.

Date: Mid to late 4th century AD

Ceramic Building Material

Grace Jones

A total of 1303 fragments of ceramic building material, weighing 171.604 kg, was recovered from the former MoD site at Brockley Hill. The assemblage derived from 80 contexts and is quantified by type and feature in Tables 13 and 14. Despite a mean piece weight of 132 g the material was in poor condition, exhibiting highly abraded surfaces. The vast majority was Roman in date, the only exception being a possible medieval peg-tile recovered from context 14 in Area B.

Fabrics and type

Six fabric types were identified amongst the Brockley Hill ceramic building material assemblage, summarised in Table 12. The forms were dominated by flat plain tile, brick and miscellaneous fragments. Identifiable roofing material and evidence of cavity walling formed only minor components of the assemblage (Table 13).

Roofing materials

Tegula fragments accounted for 4.1% of the total count of the assemblage and 9.7% of the weight. Imbrices were extremely rare, forming only 0.6% of the count and 0.5% of the weight. The tegulae that were present were usually abraded, and a small proportion were also warped. Both the more softly fired Fabrics A and B, and hard fired Fabric C, were utilised for the manufacture of tegulae, with approximately equal proportions of A/B and C represented. The external flange ranged in height from 37 mm to 55 mm (closely comparable with the range of 35-57 mm recorded from Canon's Corner, Allen 2002), with a peak at 40-42 mm and again at 50 mm. In a survey of Roman tile, Brodrigg

(1987, 13) records an average flange depth of 50 mm. The tegulae faces exhibited a thickness range of 12 mm to 36 mm (11-31 mm was recorded from the WA excavations, Seager Smith 1998; and 17-26 mm from Canon's Corner, Allen 2002), with a clear focus on the 20-23 mm range which is again fairly standard for tegulae (Brodrribb 1987). No complete tegulae were identified and it was not therefore possible to measure the length nor width of this class of tile. They were dominated by the hard fired Fabric C which accounted for 44% of the weight. Cut-aways, which allowed the tiles to fit together, were recognised on eight tegula fragments. The knife marks were clearly visible on one tegula from context 268.

Seven fragments from imbrices were present, in Fabrics A, B and C. They ranged in thickness from 13-19 mm, however no complete lengths or widths were reconstructable. The thickness range is closely comparable to the those recorded during the WA excavations (13-18 mm) and Canon's Corner excavations (11-16 mm).

Cavity walling

Only three box-flue tiles were identified, in Fabrics A and B, displaying a thickness of 15-17 mm. Two of the fragments had been keyed, to assist the adhesion of plaster.

Plain tiles and bricks

As noted above, the bulk of the assemblage derived from unidentified plain, flat tiles and bricks. The bricks (classified as flat tiles of more than 40 mm thickness) accounted for 7.8% of the count and 23.3% of the weight of the assemblage. This type was clearly dominated by hard firing Fabric C (49% of the weight), indicating a probable use as floor tiles as a hard wearing fabric would have been desirable. The bricks ranged in thickness from 40 mm to 60 mm and using Brodrribb's table of average measurements (Brodrribb 1987, appendix 1), it may be suggested that the most commonly occurring bricks were *lydion* (often used in bonding courses), *bessalis* (frequently forms hypocaust *pilae*) or possibly *pedalis* (one Roman foot square, commonly seen as a capping for the *pilae*) (Brodrribb 1987, 34-40). Given the lack of evidence for cavity-walling at Brockley Hill it is unlikely that these bricks were used as part of a hypocaust system. The few much thicker brick fragments may originate from *sesquipedalis* or *bipedalis* bricks, and were probably used in flooring.

Fragments classified as plain tile exhibited a thickness range of 6 mm to 39 mm, with a clear peak in the 30-37 mm range. Many of these fragments may therefore have formed part of a tegula face. Alternatively they may have been used as floor tiles. The plain tile fabrics were dominated by both Fabric A (37% by weight) and Fabric C (33%).

Manufacturing

The tegulae often appear to be slightly warped and uneven, with several displaying particularly hard firing. Some appeared to have been dried on a sand base. The plain tiles and bricks seen to have been left to dry on a bed of burnt and finely crushed flint. Many had been hard fired, some were overfired causing expansion in the clay. A blue black band was visible running through a number of the plain tiles and bricks, indicating high firing had altered the state of a number of the inclusions, particularly the quartz. Seager

Smith (1998, 56) recorded that the material from the WA excavations was also often over-fired.

Signatures were present on two tegulae, five plain, flat tiles and two bricks. The presence of the signatures on the plain tiles may indicate these are actually part of a tegula face, however it is not uncommon for bricks to also display signatures (Brodrigg 1987, 99). There was considerable variation in the signatures, one tegula displayed two concentric rings (context 271, well 266), and a plain tile fragment (possible tegula) had a single ring impressed (context 89, pit 17). A variation on this traditional signature had been created using some form of implement, possibly a twig, which had created a single ring on tiles in contexts 89 and 118, and two rings on a further tile from context 89. Three unusual forms of signature were also recorded. One example from context 90 (pit 17) is paralleled in Brodrigg's fig. 47:7 (1987); a second consisted of two sets of slightly curved lines which crossed each other (context 101) and a third (from context 90) showed some similarities with Brodrigg's fig. 47:5 (1987). This 'alpha mark' was also present amongst the assemblage from the WA excavations (Seager Smith 1998, 56).

Context of the assemblage

The ceramic building material assemblage recovered from this phase of work at Brockley Hill is larger than two previous excavations in the vicinity. The WA excavations produced 109 kg of material (Seager Smith 1998), and the excavations at Canon's Corner recovered 26 kg (Allen 2001). Nonetheless, the characteristics of all three assemblages are the same, each dominated by abraded, fragmentary pieces of flat or undiagnostic brick and tile.

The tile from the current excavation derived from two areas, A and B. The former produced the bulk of the material, 68% of the overall count and 76% of the weight. The assemblage was recovered from a variety of features including ditches, hollows, pits, postholes, waterholes, surfaces and general layers. Five features produced over 10 kg of tile: waterhole 266 (48 kg); pit 17 (25 kg); metallated surface 114 (15 kg); pit 203 (14 kg) and waterhole 115 (11kg). As was suggested for the WA and Canon's Corner assemblages, the material recovered appears to have been deposited and moved several times before final deposition. The assemblage represents roofing and flooring materials from an unlocated building. The majority of re-usable tiles may have been salvaged for use elsewhere, the remainder dumped in open features at the site, or used as road hardcore. In the case of pit 17 it appears to have formed part of a capping of cess deposits.

Slag

Graham Morgan

Ten pieces of iron slag were recovered from the excavations at the former MoD site. Much of the slag shows signs of water leaching, suggesting waterlogged conditions. It is mainly vesicular fayalite, iron silicate, with charcoal, magnetic iron oxides and rust, being typical of iron-working hearth slag. It is generally very fragmentary, none showing the distinctive lenticular hearth bottoms often seen in iron working hearths. This suggests

small scale and intermittent iron working, probably the manufacture or repair of small tools.

Worked Stone

Ruth Shaffrey

The excavations produced eleven pieces of worked stone, nine of which are fragments of rotary querns, although several are very small and three from the same context may be part of the same quern. Two further fragments, whilst surviving only as small pieces (328, 365), retain very deep grooves suggesting they may be from millstones. These two fragments along with the larger fragment of rotary quern (SF 5, Fig. 15) and three very small fragments are all of Millstone Grit.

Only one quern is sufficiently intact for anything to be determined about style; this quern (SF 5, Fig 15) is of the typical flat-topped disc type. It was found in a 4th century waterhole 115 in Area A (fill 118). Three weathered quern fragments are made of Lava (118, 234, 365) with one being slightly larger than average (520 mm diameter) but not from a millstone. A Lower Greensand saddle quern fragment was also found in the 4th century waterhole fill 118, and the only piece of worked stone not from a quern might be a fragment of mould (18). It has a flat base internally and externally and has a raised rim along the one surviving edge.

Although the varieties of Millstone Grit exploited here are less coarse than those commonly found and it is possible they originated as glacial erratics in the local area, Millstone Grit was a commonly utilised quern material in Roman Britain and particularly favoured in this region. Lava was also a popular choice for grinding and the presence of both lithologies is a unsurprising, especially given that both have been found during prior excavations at, or near, Brockley Hill (King 1986, 86; Shaffrey 2001, 35; Castle 1971). Lava querns also occur on the majority of Roman sites in London including nearby sites such as Hampermill, Watford (King 1986,106). Although a single possible quern of Hertfordshire Puddingstone was recovered during previous excavation at Brockley Hill (Seager Smith 1998, 57), the absence of it during this phase of work is in keeping with previous study showing that it tends to be found north of the outcrop (rather than south), and that few querns of it have been found in London (King 1986, 118).

The Greensand saddle quern adds to two probable rotary querns excavated previously at Brockley Hill (Seager Smith 1998, 57). An extensive survey of Greensand querns in the region, however, did not find any examples in Middlesex, either of saddle or rotary querns (King 1986, 80), whilst numerous excavations at Verulamium appear to have produced only one rotary quern of it (Frere 1972, 158). The saddle quern is from a late Roman context and is either residual or possibly a reused rotary quern, while the two earlier examples are identified as 'probable rotary querns'. Given the overall lack of Greensand querns in the area, these are unusual finds and notable given the remainder of the assemblage of worked stone, consisting as it does almost entirely of rotary querns of Lava and Millstone Grit, is fairly typical of sites in the region.

Catalogue of worked stone

Upper rotary quern (Fig. 15). Probable Millstone Grit; coarse-grained pale grey feldspathic sandstone. Fragment of flat-topped type with slightly concave grinding surface dressed with segmented radial grooving. Ctx 118. SF 5. AD 325 to 400

Probable rotary quern (not illustrated). Lava. Very weathered fragment. Ctx 118. AD 325 to 400

Upper rotary quern (not illustrated). Lava, heavily weathered. Fragment with grooved grinding surface. Ctx 234. Measures approx. 35 mm max. thickness. AD 100 to 200

Rotary quern or possible millstone (not illustrated). Millstone Grit. Small, deeply grooved fragment. Ctx 328. AD 120 to 200

Three small fragments of rotary quern (not illustrated). Millstone Grit. Ctx 364. AD 70 to 110

Lower rotary quern (not illustrated). Lava, weathered and burnt. Disc type with rough base, vertically grooved edges and smoothed grinding surface. Measures approx. 520 mm diameter x 32 mm max thickness at edge. Ctx 365. SF 6. AD 40 to 400

Rotary quern or possible millstone (not illustrated). Probable Millstone Grit: coarse grained pale grey/pink slightly feldspathic sandstone. Fragment with two very deep grooves, 20 mm apart. Measures 40 mm thick. Ctx 365. SF 7. AD 40 to 400

Probable quern (not illustrated). Lava. One smoothed surface. Ctx 309. AD 240 to 300

Possible mould (not illustrated). Fine grained grey sandstone, heavily weathered. Small fragment with rim along one side surviving to a height of about 10 mm. Possibly it was some kind of mould. Measures 60 x 50 x 40 mm to top of rim. Ctx 018. SF 3. AD 300 to 400

Probable saddle quern (not illustrated). Lower Greensand, possibly Folkestone stone. Fragment with one smoothed worked surface and a curved edge suggesting it is part of a saddle quern. Measures 170 x 110 x 65 mm. Ctx 118. AD 325 to 400

Metalwork

Leigh Allen

A total of 38 metal objects were recovered from the excavations at the former MoD site, Brockley Hill. The assemblage comprises 3 copper alloy objects and 35 iron objects. The condition of the assemblage is very poor, the ironwork in particular is quite corroded with little metal surviving. The assemblage has undergone x-radiography to aid identification. Identifiable objects comprise a very worn copper alloy coin, probably dating to the 2nd century from an unstratified context and a large number of nails and hobnails the majority of which are fragmentary. The majority of the metalwork assemblage was recovered from layers of deliberate dumping in pits/waterholes (contexts 18, 215, 271), within localised repairs within metalled surface 114 (context 309), and in layers within ditches that had accumulated through hill wash or the natural erosion of topsoil (contexts 200, 257 and 328).

Catalogue of metalwork objects

Copper alloy objects

1. Very worn coin probably dating to the 2nd century AD. SF 8, ctx u/s, diameter 22mm
2. A slender roughly cut strip with a rectangular section, possibly an off-cut. SF 14 ctx 368, length 79mm
3. A wide strip with very roughly cut jagged edges, machine made shallow grooves run the length of the strip. SF 1, ctx 271, length 395mm

Iron objects

- 4-11. Eight nail shank fragments with rectangular sections, there are no heads surviving. SF-, ctx 18, length 27-92mm
12. Irregularly shaped fragment of sheet. SF -, ctx 18, length 73mm
13. A rectangular fragment with a slender triangular section, possibly a small fragment from a blade. SF -, ctx 18, length 29mm
14. Head and short length of shank from a nail with a lozenge shaped head the same width as the shank. SF -, ctx 200, length 37mm
15. Very corroded nail with a head only a little wider than the shank. SF 7, ctx 215, length 122mm
16. Nail with an oval flat head and a rectangular section shank. SF-, ctx 257, length 22mm
- 17-18. Two fragments from nail shanks with rectangular sections in both cases the head types are too corroded to identify. SF -, ctx 257, length 41-78mm
- 19-27. Nine hobnails. SF -, ctx 257, length 14mm
20. Large crowbar with a rectangular section and an angled end. SF 12, ctx 271, length 540mm
- 21-30. Ten irregularly shaped fragments of iron sheet. SF-, ctx 309, length 24-62mm
31. A corroded nail shank with a rectangular in 3 fragments. SF -, ctx 328, length 62mm

Glass Bottle

Hilary Cool

A substantial part of a blue/green square bottle was recovered from the fill (337) of well 266 (Fig. 16). Such bottles are a common find from the later 1st century and into the 3rd century (Price and Cottam 1998, 194). The dating of this example can be refined because it has a scar on the base from having been held by the attachment of an iron pontil rod whilst the rim and the handle were finished. This method of manufacture is rarely seen prior to the mid 2nd century, so a date for the bottle somewhere in the later 2nd to earlier 3rd century would be appropriate, agreeing with the independent evidence provided by the associated pottery.

The bottle is of some interest for two reasons. The first is that so much of it survives. It is unusual to find complete or substantially complete glass vessels unless they have either been deposited as grave goods or as part of a structured deposit. In this case the latter seems most likely given its position in the fill together with the presence of the shoes. It is highly probable that it is present in this feature as part of some rite of termination.

It is possible that it was included because of its contents, but the second unusual feature may suggest that it was specially chosen. Square bottles have moulded markings on their

bases. By far the majority have simple patterns of concentric moulded circles; other patterns occur in noticeably smaller numbers, and bases with lettered inscriptions are rare. This bottle has two sets of three letters arranged either side of a circular moulding, all enclosed within a square moulding. The letters could either be read across as three sets of two (CS, VC, MM) or vertically as two sets of three (CVM and SCM). The latter option is perhaps to be preferred as sets of three letters are amongst the more common lettering patterns on the bases when lettering does occur. The letters CCV occur on rectangular bottles from Colchester and Leicester (RIB II.2 nos. 2419.96-7), SAA on similar bottles from Corbridge, Cirencester and Carlisle (RIB II.2 nos. 2149.139-42); SAI on square bottles from Cramond, Alcester, Towcester, Usk, York and Silchester (RIB II.2 nos. 2419.143-8) and MAP on one from Baldock (RIB II.2 no. 2419.125). The meaning of these letters is not always very clear. CCV has been suggested as an abbreviation for Colonia Claudia Victricensis, suggesting the bottle was made at Colchester. At present, however, it would appear that Colchester was known as Colonia Victricensis (Crummy 1997, 53-4) so that interpretation seems unlikely. More plausibly the three letter form probably stands for the initials of an individual's *tria nomina*. The full names of individuals in this form are known on bottle bases, most famously that of Publius Gessius Ampliatus found on bases in the Pompeii area (de Franciscus 1963, 137 fig. 4; Scatozza Hörich 1986, 80) and C. Salvi Grati at Aquileia (Calvi 1968, 86 no. 215, tav. E no. 3). Given it is unlikely that a Roman citizen would be manufacturing the bottles themselves, it presumably refers to the individual that owned either the glass-house making the bottles or, more likely, the establishment that was making whatever went into the bottle.

No other bottle with two sets of initials like the bottle from Brockley Hill has been recovered from Britain. The format seems unknown on the continent as well. At present, therefore, this bottle appears to be unique. It would undoubtedly have struck anyone living at Brockley Hill in the later 2nd to 3rd century as a most unusual thing in its own right and, of course, whatever its contents were might have been equally unusual. This surely would have marked it out as a suitable offering to whatever spirits that needed to be appeased or thanked when the well was filled. Interestingly two of the bottles with initials SAI also appear to have come from special deposits. That from Towcester was found in a pit together with the remains of a large number of substantially complete glass and samian vessels (Lambrick 1980, 63-8, 73). The example from Alchester was found again with other complete or substantially complete glass and samian vessels in a large pit (Mahany 1994, 60; Cracknell and Mahany 1994, 106-110, 225 no. 25). At both sites the excavators preferred what might be thought of as utilitarian explanations. At Alchester, for example, it was suggested this might have been a storage pit. In both cases, however, it seems more likely that we are looking at deliberate, structured deposition, either a termination rite or perhaps the remains of a major episode of feasting. In both cases the selection of a bottle with a lettered base seems significant given the rarity in normal bottle glass assemblages. Perhaps both at those sites as well as at Brockley Hill, the presence of letters on the base imbued the pieces, or their contents, with a special magic.

Catalogue (Fig. 16)

Square bottle (sf 11). Six joining fragments giving complete profile but lacking parts of body. Blue/green. Rim bent out, up, in and flattened; cylindrical neck with tooled constriction at base; angular finely reeded handle applied to shoulder attached to upper neck with return trail infilling gap below rim; horizontal shoulder bending over to flat sides; flat base. Base design – moulded square frame with small diagonal pellets in corners, two complete and trace of third; circular moulding centrally; two vertical rows of three letters either side – CVM and SCM, (sans serif); additional glass from pontil and scarring inside central circle. Height 160 mm; rim diameter 48 mm, base width 71 mm, handle section 53 x 4 mm.

Leather shoes

Quita Mould

Five shoes (SF 2, 3, 4, 5/6 and 13) were found in fill 331 of a timber-lined well 266 in Area A. This feature is dated to the late 2nd and 3rd centuries AD. Two of the five shoes can be dated to the mid 3rd century onward, one having decoration that allows it to be more closely dated to the mid-late 3rd century and found on only a limited number of shoes in Britain previously. No Roman leather has been found during excavations at Stanmore or its immediate locality in recent years. The majority of Roman leather recovered from Britain comes from military contexts or large urban centres with military associations, and leather from civilian contexts is relatively rare. Groups dating to the mid-late third century are uncommon, so that, although the assemblage of leather from Brockley Hill is small, it is of interest.

Construction and style

The shoes are of nailed construction, the most commonly found shoe type in use throughout the Roman period. Shoes of nailed construction have soles made of several layers held together principally by nailing. These layers, usually comprising an insole, a middle sole, middle laminae or small pieces of middle packing, and an outer sole, are known collectively as the bottom unit. The shoes comprise principally of complete or near complete bottom units of 'natural' foot shape, with oval toes and relatively wide treads that taper to the seats, lacking distinct waists. The outermost components of the individual bottom units, that is the insole and sole, remain attached so that the presence of a middle or laminae lying between them cannot be seen. Constructional thonging is present on four of the shoes, however, and the presence of a middle sole or laminae may be inferred. Two shoes (SF2, 4) have constructional thonging of type 2, two (SF3, 13) are of type 1 or 2 but cannot be further classified because the forepart is obscured by their surviving uppers (Fig. 17). A single example (SF6) had no thonging employed but a middle lamina can be seen in section where the bottom unit is broken. The bottom unit components appear to be of cattle hide.

Two shoes (SF3, 6) have nailing of type 1A (van Driel-Murray 2001a, 350-1 and fig 21) with a single line of hobnails around the edge and line down the centre with infilling at the tread and seat (Fig.17, 1). The others (SF2, 4, 13) are more heavily nailed. Two have

a double line of nailing around the outer edge, and a single line at the inner edge (type 3 *ibid.*); one (SF2) with a gap at the waist (type 3B), the other (SF4) with a line down the centre (type 3A). A single shoe (SF13) has a continuous double row of nailing around the edge infilled by vertical lines with two nails at the waist (type 2C; Fig. 17, 2). The extent of nailing on the soles indicates that these shoes were everyday, outdoor, working wear.

All the shoes have fragments of their uppers surviving. Three shoes have heel stiffeners present (SF 2, 4, 13), complete examples measuring 40-42 mm in height. One (SF4) has an area of its calfskin upper preserved on the outside of the heel stiffener. Another (SF2) has fragments of the nailed lasting margin (SF2) present. A single fastening strap (SF5) from the shoe upper was associated with a third bottom unit (SF6) but is not sufficiently diagnostic to indicate the style of upper represented.

Two shoes (SF 3 and 13, illustrated in Figure 17) have parts of the vamp area of their uppers preserved at the toes. Though neither shoe has enough of its upper surviving for the style to be known it is clear that both uppers have a side seam rather than a toe seam; a feature suggesting a date no earlier than the middle of the 3rd century. One shoe (SF3) is of particular interest, having the area of calfskin upper preserved at the toe decorated with two converging lines of small copper alloy studs with a group of three at the apex. The small studs measure between 1.5-2 mm in diameter. Shoes with vamps decorated with small metal studs date from the mid to the late 3rd century (van Driel-Murray 2001a, 342). Finds to date suggest that this form of decoration had gone out of fashion by the 4th century (Carol van Driel-Murray pers. comm.). Few shoes with this decoration have been found in Britain nor are they common in the rest of NW Europe but this is more a reflection of the limited number of assemblages of later 3rd century footwear recovered. Examples have been found at Swan Lane in the city of London (van Driel-Murray pers. comm.) but none have been recognised from London excavations in recent years (Margaret Broomfield pers. comm). At least four shoes decorated with metal studs have been found at Vindolanda on Hadrian's Wall, where a large assemblage of 3rd-4th century footwear from the 'Inner Ditch' associated with the Second Stone Fort has been studied (van Driel-Murray 2001b, 187-191). There two eyelet boots fastened with integral laces had decorative metal studs on the vamp (van Driel-Murray 2001a, 367 fig. 62-3). They are two variants of a common 3rd to mid 4th century style, each with side seams like the Brockley Hill example and one (*ibid.* fig 63) with a similar nailing pattern (type 1A).

Size

Shoe size was calculated from the insole measurement of the wet (unconserved) shoes. While the shrinkage undergone by leather during burial is uncertain (Grew and de Neergaard 1988, 103), the presence of iron hobnails makes it unlikely that the bottom units have shrunk significantly. All the bottom units are of adult size. One (SF13), of adult size 1(33), is of a size to fit a woman or adolescent. The others are of man's size, SF3 adult size 4(37), SF4 adult size 6(39), and SF2 adult size 10(44). The latter is a large foot size, a feature often seen on Roman shoes of nailed construction and of a closed style.

The significance of the finds

The Brockley Hill shoes are relatively well preserved; four of the five bottom units are complete, none is heavily worn and all have areas of their uppers surviving. Two shoes are for the left foot, two for the right, the other cannot be classified, no pairs are represented. Two of the shoes have diagnostic features suggesting that they date no earlier than the middle of the 3rd century; as such they are likely to represent the latest items in the deposit 331. The greater part of a blue-green square glass bottle (SF11) with unique lettering on the base (see above) and a near complete jar containing burnt residue were found in deposits 337 and 365 respectively, directly below in the fill sequence. One shoe (SF3), for the left foot, has decoration seen on only a very limited number of shoes in this country previously. Shoes for the left foot are often selected for structured deposition as part of a rite of termination (van Driel-Murray 1999, 4), in this case placed in the well, along with the glass bottle and pottery jar and their contents, to mark its passing out of use. The five shoes appear to form a discrete group and may have all been placed in the well as part of the ceremony rather than as a result of domestic rubbish disposal.

Catalogue of illustrated items (Fig. 17)

1. Nailed shoe bottom unit for left foot with oval toe, complete insole and sole present, the insole being slightly smaller than the sole. Constructional thonging type 1 or 2 forepart obscured by overlying toe area of upper, type 1A nailing. Toe area of the upper surviving, decorated with two converging lines of small copper alloy studs with a group of three at the apex. Upper leather is worn calfskin 1mm thick. Insole Length 240 mm, sole length 254 mm. Adult size 4(37). SF 3, context 331
2. Nailed shoe bottom unit for right foot with oval toe, fragmentary insole and complete sole with nailed lasting margin of upper between. Constructional thonging type 1 or 2 forepart obscured by overlying upper remains, type 2C nailing. Vamp area of upper present. Heel stiffener, height 4.2mm. Upper leather is worn obscuring the grain pattern. Length 215 mm. Adult size 1(33). SF13, context 331 (waist and seat area of insole shown displaced in illustration).

THE ENVIRONMENTAL EVIDENCE

Animal Bone

Jennifer Kitch

A total number of 55 (1420 g) fragments of animal bone was recovered from excavations at the former MoD site. Only 31% of the fragments were identified to species or size category. The bone was generally in poor condition with a few exceptions, scoring on the Lyman criteria an average of grade 5 (Lyman 1996). No evidence of butchery and pathology was noted amongst the assemblage. The bones displayed signs of being water logged with some splitting, cracking and vivianite concretions, which had affected the condition of the bone considerably. The assemblage contained mainly cattle and horse, where identifiable. Cattle dominate the assemblage, with two additional fragments identified as horse. The remaining assemblage was unable to be identified further. The identifiable bone is limited to large mammals, which is most likely a result of a

preservation bias towards the more robust larger bones.

Worked wood

Damian Goodburn

Many pieces of worked wood were recovered from excavations at the former MoD site, derived from deep cut features where the clayey soil was waterlogged. The assemblage is predominantly of oak. A small proportion of the worked wood was potentially suitable for tree-ring dating, although no datable matches were found by the dendrochronologist. Therefore, all the material has been dated by reference to the associated finds.

Many of the timbers could not be lifted from the excavation area due to site conditions and safety issues, but some idea of their nature could be gleaned. In other cases it was possible to clean and examine wrapped worked wood off-site at the OA stores. The general approach used was compatible with both the Museum of London procedures for worked wood recording and the EH Guidelines on waterlogged wood (Spence 1990 and Brunning 1996).

Results

Structural evidence from wells

Only one of the waterhole/well features was found to have had a lining of timber (283) and this could only be partially investigated. However, the records show that the very irregular cleft and hewn wooden elements were arranged to overlap at the corners in a 'log cabin-style'. The internal dimensions were roughly 1 m by 1.15 m with the timbers extending as much as 250 mm beyond the corners in some cases. The timbers were of irregular thickness centring on *c* 50mm. Well linings of this general form have not been found in the City of London or central Southwark until the early medieval period, but a similar example was found in the Roman settlement at Shadwell recently (Goodburn, in prep c). Another broadly similar example made of cleft oak planks with sawn corner joints was also found at Moor Hall Farm in outer east London. The Romanized version of this type of lining was normally made of sawn planks, or squared beams with fairly neatly sawn corner joints (Wilmot, 1982). The lining from Brockley Hill well 283 is the crudest such feature of Roman date currently known to the present author.

Traces of what may possibly have been collapsed fence pales and stakes from around the top of some of the waterhole/well features were also found. These include a weathered half oak pole stake (363) from fills in waterhole 266 and a possible spear shaped oak fence pale tip from fill 118 in waterhole 115. Spear shaped terminals to Roman fence pales are clearly depicted on Trajan's column and three examples of two types are known from two other London Roman sites (Goodburn, in prep d). However, it is of course possible that some of this material derives from fences a short distance away rather than around the top of the cuts themselves. In recent times well heads were usually given a wall or fence around the top to prevent animals, people and rubbish from falling in, a practice which also seems to have applied to some prehistoric waterholes such as the late Bronze Age examples from Swalecliffe in Kent as well (Masefield *et al.* 2003).

It is likely that some of the short cross-cut poles which were found close together were laid down to form simple steps or the equivalent of 'duckboards' in the wet fills of the cuts. This is most likely for two groups of logs laid side by side in the edge of waterhole 266. Such steps have also been found in several late prehistoric waterholes from south-east England such as those of Swalecliffe and at Heathrow Terminal 5, but are unknown in Roman wells in central London (Masefield *et al.* 2003).

Withy rope (Fig. 18)

An unusual find in a Roman period context was a length of twisted withy rope, possibly of hazel, from fill 331 of waterhole 266. No parallel material has been found in Roman London, although twisted withy rope has been found at a number of pre- and post-Roman sites. The still partially coiled rope was very difficult to expose, record and lift and had been fragmented in situ to some extent, but the following general characteristics could be seen; it was made of a smooth even rod untwisted for a few cms at each obliquely cut end. Its total length must have been about 3 m with a butt diameter of *c* 25 mm and top of 14 mm. These features are characteristic of well grown hazel or willow coppiced stems today, and we must suggest a coppice origin for this rod. The function of the withy rope may well have been agricultural or it could perhaps have been used to bind a firewood bundle of some type as was still done recently for fuel faggots in southern England.

Woodworking debris

Wood chips and offcuts were found in some of the well/waterhole fills particularly in fill 118 from waterhole 115. These were varied in character, some derived from cutting oak poles to length with axes others from hewing small oak logs by the notch and chop method probably to make a beam(s). It has been possible to identify non-oak roundwood material from waterhole 115 and well 266 as Maloideae, the hawthorn, apple, pear, service tree group. This material is likely to derive from work in nearby hedges and orchards. Both classes of small wooden debris are evidence of activities going on close by.

Discussion

Woodworking methods

Virtually all the worked wood found at Brockley Hill was axe cross cut and trimmed. Only one small fragment showed evidence of the use of the saw, a thin piece of broken sawn oak plank (343) from a fill of waterhole 266. The 17 mm thick fragment had clear saw marks on one face and an edge that had probably been planed, it may have been some form of Roman-style joinery off cut. The rest of the material comprised minimally trimmed logs, branches, rods and a small number of cleft (carefully split out) items. The best preserved axe marks varied in size but the largest were *c* 90 mm wide, probably cut by a relatively heavy, moderately narrow-bladed axe, which might have been of Roman or native form. Some of the Roman axe forms were substantially wider in the blade up to 150 mm (occasionally as much as 200 mm wide, as found at the London amphitheatre, Goodburn, in prep a). However, narrow bladed forms closer in proportion to those of the pre-Roman Iron Age were also still in use for some purposes, such as pointing and cross cutting the round oak piles used for the late 3rd century western city waterfront palace

recently re-excavated at Queen Victoria Street, London (Goodburn in prep b). Thus, the sizes of axes used by those who worked the Brockley Hill wood was at the low to mid point of the Roman range of axe sizes, and they probably functioned as general purpose tools, for tree felling, lopping, cross cutting and trimming relatively small logs.

Evidence for woodworking in the hinterland of Roman London

To demonstrate what is distinctive about the woodwork from Brockley Hill it is necessary to briefly outline what is typical of the woodwork found in fully Romanized London and the Southwark suburbs. From systematic study of the inner London material we can note the following key points concerning typical civic and military Roman woodwork after the first few years of the mid 1st century AD;

- 1/ The Romans normally used saws to cross cut converted timber, with axes being used for logs in the round.
- 2/ The Romans normally used large saws to produce planks and sometimes small beams from hewn baulks of timber.
- 3/ They normally axe hewed beams straight and square although sometimes foundation piles were used in the round or cleft sections.
- 4/ They had a range of joints cut with moderate precision such as mortise and tenon joints and lap dovetails.
- 5/ They used iron nails frequently but wooden pegs only in some joinery and some forms of boat building.
- 6/ They usually prepared timber to standardised sizes measured in units such as Pes (close to modern British foot).
- 7/ The conversion of round logs into square or rectangular section beams seems to have taken place well outside the urban areas as diagnostic debris of that process has not been found in Londinium or its immediate suburbs. This implies a well organised timber trade system.

Several studies have been published with evidence of the above generalisations such as Milne 1985, Goodburn 1991, and Brigham and Goodburn *et al.* 1995. However, during the last four years systematic analysis of assemblages of worked wood from low status Roman period sites in some outer suburban and hinterland settlement areas has revealed evidence of very different but contemporary traditions of work. Well dated assemblages from outlying sites in Southwark, outer east London and even backwaters of the City have had examples of woodwork very different to what had been previously expected. The Brockley Hill material fits into this new group of 'unofficial' Roman period woodwork collections from the London region, in which work was predominantly carried out with axes with very limited or no use of saws, nails, and typically Roman joints. Neatly squared timbers are also rare in this 'native' style work, in which there is very little evidence of the accurate measured standardisation so typical of official work. Similarly simple 'native' style woodwork has also been found in other parts of Roman Britain, particularly on its fringes such as outside the fort at Vindolanda on Hadrian's Wall (Birley 1977).

This material often looks much more like late prehistoric or Anglo-Saxon work than that of the Roman period and is only shown to be Roman in date by the closely associated finds, tree-ring dates and occasional fragments of typically Roman workmanship such as a sliver of sawn and nailed planking (eg One example of sawn planking was found at Brockley Hill see above) .

A likely explanation for this difference approach to often mundane woodworking tasks in the hinterland of Roman London is that the work was carried out by native 'British' people in their own tradition.

Plant remains

Laila Sikking and Elizabeth Huckerby

A total of 86 samples, ranging in size between 1 and 40 litres, were taken during the excavation for the recovery of waterlogged and charred plant remains. Most of the samples were from Romano-British pits and waterholes. Eighteen samples with waterlogged material and 17 samples with charred remains were assessed by Elizabeth Huckerby and Francis Claxton in 2004. Based on this assessment three samples were analysed for charred plant remains of which one was from pit 217 and two from pit 61. Six samples were analysed for waterlogged plant remains of which two were from the fills 365 and 331 of the Roman well/waterhole 266 and the remaining four from fill 118 of the Roman waterhole 115. A further three samples were processed from this feature and were scanned rapidly but not analysed.

Methodology

Charred plant remains

The samples taken for charred plant remains were floated using a modified Siraf machine; the flots were collected on 250 micron mesh and air dried. The flots were sorted for charred plant remains with a Meiji EMT stereo dissecting microscope and all plant material was identified, where possible, and the number of each type recorded. The data are shown in Table 15.

Waterlogged plant remains

Sub-samples, 1 litre in volume, were hand floated; the flots were collected on 250 micron mesh and retained in water. The flots were sorted for waterlogged plant remains with a Meiji EMT stereo dissecting microscope and all plant material was identified, where possible, and recorded on a scale of +-++++, where + equals 1-5 items and ++++ equals more than 100 items. The data are shown in Table 16 and the plants are ordered in broad ecological categories within which they are placed alphabetically. Botanical nomenclature for both charred and waterlogged plant remains follows Stace (1991).

Results and discussion

Charred plant remains

The results of the analysis of charred plant remains are given in Table 15. Cereal grains were only recovered in fill 216 from late Roman pit 217 (a re-cut of 203). One grain of spelt wheat (*Triticum spelta*) was positively identified, although given the state of preservation of the grains and the absence of rachis fragments, most wheat grains could only be identified as emmer/spelt wheat-type (*Triticum dicoccum/spelta*). Hazelnut shell fragments (*Corylus avellana*) are the only other possible indication of food products in this sample.

The assemblage of weed seeds is dominated by species of disturbed land and grassland, such as *Conium maculatum* (hemlock), *Potentilla* type (cinquefoil), *Ranunculus* sp. (buttercup). All species present are only represented by a single specimen. Pit 61 in Area B, which probably dates to the later 3rd or 4th century, contained only weed seeds, including brome (*Bromus* sp) and knotgrass (*Polygonum* sp), both of which can be associated with cultivation or waste ground.

Waterlogged plant remains

A sequence of incremental samples were taken through fill 118 of a shallow pit 115, which was probably used as a waterhole (see Figure 12). This fill seems to have been gradually deposited during the later Roman period, probably when the waterhole was going out of use (see above). Some differences in the plant assemblage were recorded in the analysis demonstrating that the flora was more diverse in the lower samples, when activity in the surrounding area is likely to have been more intense. Plants associated with cultivated or open ground are well represented in the lowest sample (59) analysed from the fill and include abundant small nettle seeds, (*Urtica urens*), black nightshade (*Solanum nigrum*), corn spurrey (*Spergula arvensis*) and common chickweed (*Stellaria media*). Ruderal weeds such as stinging nettle (*Urtica dioica*) are abundant and there are sporadic records of swine cress (*Coronopus squamatus*). Today swine cress is found characteristically near pathways, on waste ground or in gateways. Some plants associated with grassland, common sorrel (*Rumex acetosa*), together with a number of species or groups, buttercups (*Ranunculus repens*-type), that are not associated with any specific ecological categories were also identified.

Another group of plants recorded in fill 118 of the possible waterhole 115 are the aquatics or plants of wet ground. The latter suggesting that the feature was surrounded, as one would expect, by damp ground. The presence of gipsywort (*Lycopus europaeus*), which can grow in fens, suggest that the soil may have been base rich. The large number of seeds of the water crowfoots (*Ranunculus Batrachium*-type), duckweeds (*Lemna*) and smaller numbers of seeds of water cress (*Rorripa nasturtium-aquaticum* and *R. microphylla*) and bulrush (*Typha*) suggest that the waterhole is likely to have been quite overgrown when the fills were accumulating. The large numbers of *Daphnia ephippia*, a resting stage of an aquatic invertebrate, suggest that waterhole 115 may have dried out seasonally as the ephippia are usually produced as a response to drier conditions (Allan Hall *pers. Comm.*).

A similar assemblage of plants associated with cultivated or open ground are recorded in the fills of the Roman well/waterhole 266 in the north part of Area A but in addition corn marigold (*Chrysanthemum segetum*) and black bindweed (*Fallopia convolvulus*) were identified. Corn marigold grows on drier more acidic soils. Common mallow (*Malva sylvestris*), swine cress (*Coronopus squamatus*) and stinging nettle were also identified. Today common mallow is often found growing on waste, rough ground, by roadsides and railways. Aquatics and plants of wet ground are poorly represented in the fills of Roman well/waterhole 266 although watercress and occasional sedge (*Carex* spp) seeds are recorded with *Daphnia ephippia*.

Discussion

The record of charred and waterlogged plant remains from the roadside site at the base of Brockley Hill is limited, but as earlier studies proved to be either unproductive or restricted to the study of charcoal, the data do contribute to our knowledge of the environmental conditions of the study area. Economic plants and native food plants are poorly represented and only a few grains of spelt wheat, emmer/spelt wheat (*Triticum dicoccum/spelta*), undifferentiated cereal grains and cereal fragments together with charred hazel nut (*Corylus avellana*) shell fragments were identified in pit 217, which has been dated to the later 3rd or 4th century AD. The only other plants recorded that may have been used as a food source are the sporadic records of blackberry pips (*Rubus fruticosus* agg) in waterhole 115 and well/waterhole 266. The fills from both these features also contain seeds from plants that are associated with cultivated or open ground and this may suggest some nearby cultivation. This is corroborated by the data from the pollen analysis of the fills of waterhole 115, which suggested nearby cultivation (see Peglar below).

The remainder of the plant assemblages are indicative of ruderal communities, grassland, damp ground or shallow water. The identification of crowfoot, duckweed, and bulrush seeds with *Daphnia ephippia* in fill 118 of waterhole 115 also corroborates the pollen analysis data of a shallow water body becoming overgrown as the fills accumulated.

Pelling (2001) recorded no charred plant remains other than occasional fragments of charcoal from a small area of Watling Street and associated ditch, towards the base of Brockley Hill at Canon's Corner. Similarly earlier excavations in 1997 at the adjacent WA site only discuss data from the charcoal analysis (Gale 1998). Gale thought it likely that the charcoal resulted from industrial activity (eg charcoal production) rather than from food preparation because no dietary residues were identified (*ibid.*).

The archaeobotanical record from the recent phase of excavation confirms that domestic activity was not widespread within this area of the settlement. However both the pollen analysis and the analysis of the waterlogged plant remains do suggest that some crops were being cultivated close to the site. Although the data from the present study are not extensive they do provide information about the local economy, which was previously thought to have been exclusively industrial in nature, but has now been shown to have been associated with some crop cultivation.

Insect remains

Mark Robinson

Excavations at Brockley Hill exposed several wells and deep pits which probably served as waterholes. Eight samples were assessed for insect remains from four of these features. Remains were poorly preserved or absent from the majority of the samples but the Coleoptera from two samples from waterhole 266 showed potential for analysis (see Fig. 12). One litre each of sample 96 from fill 365 and sample 126 from fill 331 was washed over onto a 0.25 mm mesh and subjected to paraffin flotation. The Coleoptera recovered were identified and the results listed in Table 17.

About half the beetles in sample 96 and all the beetles from sample 126 were water beetles including *Helophorus aquaticus* or *grandis*, *Helophorus* cf. *brevipalpis* and *Hydrobius fuscipes*. All are characteristic of stagnant water and *H. fuscipes* tends to occur in water above a bed of plant debris. Although there were too few terrestrial Coleoptera from Sample 96 to build up a detailed picture of the environment, they provided some insights. *Platystethus cornutus* occurs in wet mud as might be found around the edge of the waterhole. *Longitarsus* sp. and *Apion* sp. feed on herbaceous vegetation with deciduous trees, particularly *Quercus* sp. (oak). The presence of some domestic animals was suggested by the dung beetle *Aphodius* sp. Structural timbers were likely to have provided a home for *Anobium punctatum* (woodworm beetle).

Charcoal

Rowena Gale

This report presents the analysis of a small assemblage of charcoal from features associated with the Roman settlement area at the former MoD site. Although the exact nature of the settlement is uncertain, the charcoal is attributed to the remains of domestic hearth debris. Six samples were selected for full analysis from the fills of pits 61 and 217 and well 283.

Bulk soil samples were processed by flotation and sieving. The resulting flots and residues were scanned under low magnification and the charcoal separated from plant macrofossils. The condition of the charcoal was poor and friable and most samples were very fragmented. In some pieces, the diagnostic structures were overlain by a coating of soil sediments and examination was difficult. Fragments measuring >2 mm in radial cross-section were considered for species identification.

Results

The taxa identified are presented in Table 18 (see Brockley Hill House report above for more information on identification methods). The anatomical structure of the charcoal was consistent with the following taxa or groups of taxa:

Aceraceae. *Acer campestre* L., field maple

Aquifoliaceae. *Ilex aquifolium* L., holly

?Betulaceae. *Alnus glutinosa* (L.) Gaertner, European alder

Corylaceae. *Corylus avellana* L., hazel

Fagaceae. *Quercus* sp., oak

Oleaceae. *Fraxinus excelsior* L., ash

Rosaceae. Subfamilies:

Pomoideae, which includes *Crataegus* sp., hawthorn; *Malus* sp., apple;

Pyrus sp., pear; *Sorbus* spp., rowan, service tree and whitebeam. These taxa are anatomically similar; one or more taxa may be represented in the charcoal.

Prunoideae. *Prunus spinosa* L., blackthorn.

Well 283

Well 283 was located centrally in Area A and is very loosely dated to the 2nd-3rd century AD (see Fig. 12). The well was of a timber box type construction, around which deposits of gravelly clay (355 and 356) had been incorporated. Pieces of charcoal from sample <125> in context 355 were identified as oak (*Quercus* sp.), field maple (*Acer campestre*), the hawthorn/ *Sorbus* group (Pomoideae) and blackthorn (*Prunus spinosa*). The charcoal was very fragmented. The most likely explanation for its inclusion here is that it was already present in the clay prior to its placement around the well structure. Alternatively, the charcoal may represent a dump of hearth material used as backfill, which subsequently became embedded in the clay.

Pit 61

Pit 61 formed one of a group of three inter-cutting pits in the north of Area B and dates to the later 3rd or 4th century AD (Fig. 12). Charcoal and pottery were recorded from a number of the fills, the last of which appeared to represent the deliberate back-filling of the feature. The charcoal is interpreted as originating from fuel debris, possibly from domestic use (ie heating/ cooking). Although sparse in the basal layer (72), charcoal fragments <125> were identified as hazel (*Corylus avellana*). Charcoal from layers 74 and 75 was slightly more abundant but very degraded. These samples consisted mostly of oak (*Quercus* sp.), including largewood and some partially vitrified pieces (vitrification sometimes results from exposure to temperatures exceeding 800°C; Prior and Alvin 1983); also field maple (*Acer campestre*), the hawthorn/ *Sorbus* group (Pomoideae), blackthorn (*Prunus spinosa*), cf. holly (*Ilex aquifolium*) and hazel (*Corylus avellana*)/ alder (*Alnus glutinosa*) (the last two taxa were too degraded to identify more positively).

Pit 217

Charcoal samples <89> and <90> from the fills 215 and 216 of late Roman pit 217 were the largest in the assemblage and included fragments measuring up to 10 mm in radial cross-section. The structure of the charcoal in both samples was poorly preserved. The taxa identified included oak (*Quercus* sp.), hazel (*Corylus avellana*), field maple (*Acer campestre*), the hawthorn/ *Sorbus* group (Pomoideae), blackthorn (*Prunus spinosa*) and ash (*Fraxinus excelsior*). Associated finds of pottery, grain, bone and nutshell suggest that the charcoal derived from domestic hearth debris.

Discussion

Although most of the seventeen environmental samples included charcoal, many were unsuitable for identification. Six samples were selected for full analysis to obtain environmental data and to assess the economic use of woodland resources. Associated pottery and other domestic debris (eg, cereal grain, bone and nutshell in pit 217) suggest that charcoal from the fills of pits 61 and 217 represents discarded domestic hearth debris (ie, firewood). Pit 217, however, may also have included some industrial waste and thus the presence of industrial fuel can not be ruled out. The supply of firewood from a common source is indicated by the similarity of the taxa from these pits (oak, field maple, hazel, the hawthorn group and blackthorn; also *cf.* holly in pit 61 and ash in pit 217). The charcoal was too comminuted to assess the use of coppiced stems but it was clear that some mature oak was obtained from largewood.

The origin of the charcoal from clay deposits placed around the timber box structure of the well 283 was less certain, since it could already have been present in the clay used for backfilling the well structure or, possibly, it was dumped from hearth debris to bulk up the clay. The sample was small but included oak, field maple, the hawthorn group and blackthorn – the close resemblance of this sample to that from pits 61 and 217 could implicate a common origin.

The site was based on the lower slopes of the hill at about 85m OD on clay subsoils and gravel, which appear to have been prone to waterlogging or perhaps a fluctuating water table. A fairly varied range of taxa was identified from the charcoal deposits. Oak was almost certainly the dominant element in local woodland, growing in association with ash, field maple and hazel. The waterlogging of many features preserved the remains of oak structures, poles and logs, which provided further evidence of the availability of this taxon (see Goodburn above). Shrubby species such as hazel, hawthorn and blackthorn would have occurred as scrub or in marginal woodland and also possibly as hedging, perhaps defining the rectangular enclosures recorded adjacent to the roadside.

Interestingly, despite the waterlogging of the soil, there was little evidence of the use of wetland species such as alder (*Alnus glutinosa*) or willow (*Salix* sp.), which could infer that conditions at the site were relatively dry during the Roman period of occupation. Owing to the poor condition of the charcoal, we have no direct evidence of the use of coppiced wood but, in view of the prominent roadside position of the settlement and the likely demands for building timber and fuel, woodland management could be anticipated. All the species named in this report are potentially suitable for coppicing (Rackham 1990, 6-7). The taxa named in this study closely parallel those identified from two adjacent areas just to the south (Gale 1998). Although much larger samples of charcoal were collected from these areas, the degraded condition correlated to that of the charcoal from this site. Large amounts of oak were recorded, including both largewood and fast grown roundwood but, once again, evidence of coppicing was unproven.

The pollen

Sylvia Peglar

Monoliths from two waterholes were submitted for pollen analysis. Twelve 1 cc. samples were taken (6 from each waterhole) from the monoliths, and prepared for pollen analysis using a standard chemical procedure (method B of Berglund & Ralska — Jasiewiczowa 1986). The samples were then stained with safranin, dehydrated in tertiary butyl alcohol, and mounted in 2000 cS silicone oil. Slides were examined at a magnification of 400x (1000x for critical examination) by equally spaced traverses across a slide to reduce the possible effects of differential dispersal on the slide (Brooks & Thomas 1967). The aim was to obtain a pollen count of at least 100 grains. Pollen identification was made using the keys of Moore *et al.* (1991) Faegri & Iversen (1989), and a small modern pollen reference collection.

The results are given in Table 19 as percentages of the total pollen sum. SumP (trees + shrubs + herbs + Ferns).

Results

Waterhole 115

At least 150 pollen grains and spores were counted from all six samples. The preservation was reasonably good, although as much as 7.8% of the grains were indeterminable (Sample 38 (12cm)).

Waterhole 266

The pollen from the samples from waterhole 266 were of variable quality and quantity, with high values of indeterminable pollen (up to 26.7% in Sample 92 (6 cm)). Because of the poor quality of the grains, and differential preservation, the results from these samples should be viewed with some discretion.

The assemblages from both waterholes were dominated by the pollen of grasses, Gramineae, with many other herb taxa, indicative of an open landscape. All samples had taxa characteristic of grasslands (pasture), such as *Plantago lanceolata* (ribwort plantain), *Solidago*-type (daisy-type), *Centaurea*-type (knapweed-type), *Veronica*-type (speedwell-type) and Compositae (Liguliflorae) (dandelion-type). All samples also contained taxa characteristic of waste and disturbed ground, for example, *Urtica* (nettle), Compositae (Liguliflorae) (dandelion-type), Umbelliferae (carrot family), Chenopodiaceae (goosefoot family), Caryophyllaceae (chickweed family), *Polygonum aviculare*-type, (knotweed), *Rumex crispus*-type (docks) and *Artemisia* (mugwort).

The samples from waterhole 115 also contained cereal grains, up to 2.7% in Sample 39 (10 cm). Only 1 cereal grain was found in Waterhole 266. *Vicia*-type grains (probably *Vicia faba* (broad bean)), were also found in the Waterhole 115 samples, suggesting that crops, including cereals and beans, were being grown close to the site.

There is very little evidence for any expanses of woodland in the area although small patches of oak (*Quercus*) woodland with an understorey of hazel (*Corylus*) were probably scattered around. There are no finds of the pollen of *Acer* (maple), *Fraxinus* (ash), *Ilex* (holly) or *Populus* (poplar), woods identified from the charcoals, but this is

possibly due to the small pollen counts. Waterhole 115 has aquatic taxa present. *Lemna* (duckweed) and *Nymphaea* (white waterlily) are plants of shallow water. The zygospores of a green alga *Spirogyra* are also present. These taxa are indicative of a ditch or shallow pond. The *Lemna* percentage is high in the top-most sample, and grains of the bulrush (*Typha angustifolia*-type) are also found in this top sample, possibly suggesting the shallowing and overgrowth of the pond or ditch.

The fill in both waterholes therefore indicates that when the sediments were laid down, there was an open landscape with scattered oak woodland (some distance from the site), with much grassland and disturbed waste ground. Perhaps at the time the sediments were laid down, local woodland had become very sparse and wood may have been transported to the site along the main road running close by.

DISCUSSION

Over the past 10 years there has been a considerable amount of archaeological investigation around the base of Brockley Hill in the immediate vicinity of Watling Street Roman road (Bowsher 1995, Mckinley 1998, Smith 2001). This work has revealed evidence for extensive Roman-British activity in the area and yet the exact nature of this activity remains somewhat uncertain. The excavations by OA in 2003 at the former MoD site have gone some way in adding to our understanding of the local Romano-British environment and patterns of land use, although the picture is still far from clear. In particular the problem of severe disturbance and truncation - which was also a feature of the WA sites to the south - has ensured that accurate phasing sequences have not been able to be produced. Nevertheless, the evidence from the pottery has enabled an overall chronology to be built up for the site, and thus most importantly we are able to compare its development with other sites in the region.

Activity of some kind seems to have spanned the entire Roman period, although it appears most concentrated from the later 2nd to later 3rd/early 4th century AD. There is evidence for some early activity on site, with a large shallow pit in the northern corner of Site A containing 1st century AD pottery, but none of this would seem to have been pre-conquest in date. The first enclosure system was possibly established in the later 1st century AD, maybe even contemporary with the initial construction of Watling Street road, although the dating evidence is very slight for this period, suggesting any activity was quite minimal. It was probably not until the mid to late 2nd century that there was occupation of any scale in the vicinity, and a number of the wells/waterholes can plausibly be ascribed to this period. The enclosure system was also re-organised, although whether this was done in a single-co-ordinated episode or else as piecemeal development is uncertain. The function of these enclosures, which were probably delineated with hedges, and the waterholes is uncertain, as they do not seem to relate directly to any domestic activity. However, there are deposits of domestic waste in many of the features, and the nature of the ceramic assemblage suggests that this was not all dumps of redeposited material, perhaps making it more likely that areas of occupation were not too far distant. Furthermore the environmental analysis has suggested that some crops were being cultivated close to the site, thereby indicating that this was not just an

industrial landscape. Indeed the only evidence for industrial activity on the site is small scale and intermittent iron working, probably for the manufacture or repair of small tools.

One of the enclosures in Area A had a gravel surface laid down, but this does not appear to have been the same as the uncompacted gravel dumps encountered in excavations to the north and south of the site, which were interpreted as evidence for road maintenance (Mckinley 1998, 64). Instead it appears to have been deliberately laid down on top of the natural clay within the enclosure in order to provide a stable dry surface on ground that would otherwise have quickly become waterlogged and churned up with any sustained activity. The enclosure and metalled surface may have extended up to the edges of Watling Street, possibly located for the needs of human, animal and wheeled traffic travelling along that busy road from London to Verulamium. The waterholes do not appear to have functioned in any major industrial or domestic capacity and so may have also been for the use of road traffic, including drovers herding their stock, as suggested for the WA site to the south (Mckinley 1998, 65). This is furthered by the presence of dung beetles in one of the waterholes, suggesting the presence of animals at the site. One of the waterholes in the north of Site A (266) appeared to have acted as a focus for the deposition of many objects, conceivably in acts of a ritual nature. The finds included a near complete pot, very rare glass vessel, a group of five unpaired shoes (one with unusual decoration), quern fragments and significant quantities of other pottery and ceramic building material. The assemblage probably came from a period when the well was going out of use in the mid 3rd century AD, and the deposits could therefore be from some rite of termination.

Activity on site appears to have lessened by the start of the 4th century AD, and some of the waterholes at least seem to have silted up substantially by this time. However there were two (115 and 60/61) that were probably dug during the later 3rd century and may well have been functioning through until at least the early part of the 4th century. It is not certain if the nature of the site had changed at this time but this seems unlikely. There is very little to suggest any sustained activity after *c* AD 350, as was also the case with the surrounding excavated sites.

The site in the local landscape

The OA excavations at the former MoD site lay between an area of evaluation carried out by MoLAS in 1995 to the north (Boucher 1995) and two areas of excavation completed by WA in 1997 to the south (Mckinley 1998; see Fig. 1). Whilst the MoLAS work revealed little more than the Watling Street road itself and associated ditches, the excavations to the south provided evidence for an extensive area of roadside activity, albeit of an enigmatic nature. The features revealed here included a series of large ponds or wells along with spreads of clay and gravel and dumps of abraded Roman masonry and ceramics. The general date and character of the site was not too dissimilar to that revealed in OA's excavations, and it quite likely that they were essentially part of the same roadside zone, catering for the needs of traffic along the road and for possible road maintenance. The Cannon's Corner excavations in 2001 may have been an eastern extension of this zone (see Fig. 1). As the MoLAS evaluation mostly produced early Roman ceramic material, it seems that the former MoD site represents the northernmost extent of this mid-late Roman activity, at least on the western side of the road.

There is enough evidence from all of the excavated sites near the base of Brockley Hill to suggest that a settlement of some status did lie in the local vicinity, and this is quite likely to that of *Sulloniacis*, which could well lie on the eastern side of the road, to the north of the cremation burials (Fig. 1). It is still the case that no real link can be established between activity at the base of the hill and that on the higher slopes. There are marked chronological and functional differences, with the pottery industry near the top ceasing to function at around the same period as roadside activity commenced at the base. Although this is an area which received much archaeological attention in recent years, it is clear that a great deal of further work is needed in order to gain a clearer understanding of the nature and development of Romano-British activity.

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LOCATION OF THE ARCHIVES

The site archives have been deposited with the Museum of London.

BIBLIOGRAPHY

- ALLEN (2001), L Allen, 'Ceramic building material' in A Smith, 36-7
- APPLEBAUM (1951), S Applebaum 'SULLONIACAE – 1950: Excavations at Brockley Hill' (Report on the excavations at Brockley Hill, Middlesex, August and September 1950), *Trans London Middlesex Archaeol Soc* X, 201-228
- BERGLUND & RALSKA-JASIEWICZOWA (1986), B E Berglund and M Ralska-Jasiewiczowa 'Pollen analysis and pollen diagrams' in B E Berglund (ed) *Handbook of Holocene Palaeoecology and Palaeohydrology*. Chichester. 455-484
- BIDDULPH (2001), E Biddulph 'Roman pottery', in A Smith, 34-5
- BIRLEY (1977), R Birley *Vindolanda: a roman frontier post on Hadrian's Wall*. London
- BOWSHER (1995), D Bowsher 'An evaluation of the Roman road at Brockley Hill, Middlesex' *Trans London Middlesex Archaeol Soc* 46, 45-57
- BRIGHAM, GOODBURN & TYERS (1995), T Brigham, D Goodburn, and I Tyers, with J Dillon A Roman Timber Building on the Southwark Waterfront, London, *Archaeol J* 152, 1-72
- BRODRIBB (1987), G Brodrigg *Roman brick and tile*. Gloucestershire
- BROOKS & THOMAS (1967), D Brooks and K W Thomas 'The distribution of pollen grains on microscope slides. The non randomness of the distribution'. *Pollen & Spores*, 9, 621-629.
- BRUNNING (1996), R Brunning *Waterlogged Wood*, English Heritage
- BUCKLAND, HARTLEY, & RIGBY (2001), P C Buckland, K F Hartley & V Rigby 'The Roman pottery kilns at Rossington Bridge: excavations 1956-1961', *J Roman Pottery Studies* 9, 1-96
- CALLENDER (1965), M H Callender *Roman Amphorae with Index of stamps*, London
- CALVI (1968), M C Calvi *I Vetri Romani del Museo di Aquileia*, Aquileia
- CASTLE (1972a), S A Castle 'Brockley Hill, The site of *Sulloniacae*?' *London Archaeologist* vol.1, no.14, 324-7
- CASTLE (1972b), S A Castle 'Excavations at Brockley Hill, Middlesex *Sulloniacae*, 1970' in *Trans London Middlesex Archaeol Soc* 23, pt2, 148-159
- CASTLE (1972c), S A Castle 'A Kiln of the potter Doinus', *Archaeol J.* 129 (1972.), 69-88. K F Hartley, The stamped mortaria, 82-88
- CASTLE (1973), S A Castle 'Trial Excavations at Brockley Hill part 2' *London Archaeologist* vol 2, no. 4 1973. 78-83. K F Hartley, The stamped mortaria, 82-83
- CASTLE (1974-6), S A Castle 'Roman Pottery from Radlett, 1959; *Hertfordshire Arch.* IV (1974-76) 149-152. K F Hartley, The stamped mortaria, 150-152

- CASTLE (1976), S A Castle 'Roman pottery from Brockley Hill, Middlesex, 1966 and 1972-4' *Trans London Middlesex Archaeol Soc* 27, 206-27. K F Hartley, The mortarium stamps, 211-222
- CASTLE & WARBIS (1973), S A Castle & J H Warbis 'Excavations on Field No.157, Brockley Hill, Middlesex, (*Sulloniaca*)'. *Trans London Middlesex Archaeol Soc* 24, 85-110
- CLARK (1995), J Clark (ed.) 'Horseshoes' in *Medieval Finds from Excavations in London: 5 The Medieval Horse and its Equipment c.1150-c.1450*. HMSO, London, 75-123
- CRACKNELL & MAHANY (1994), S Cracknell and C Mahany (eds.) *Roman Alcester: Southern extramural area 1964-1966 excavations. Part 2: Finds and Discussions*, CBA Research Report 97, York
- CRUMMY (1997), P Crummy *City of Victory*, Colchester
- DAVIES, RICHARDSON & TOMBER (1994), B Davies, B Richardson & R Tomber *A dated corpus of early Roman pottery from the City of London*, CBA RE Rep 98, London
- DRIEL-MURRAY (1999), C van Driel-Murray 'And did those feet in ancient time.....Feet and shoes as a material projection of the self' in P Baker, C Forcey, S Jundi, R Witcher (eds.), TRAC 98. Proceedings of the eighth annual theoretical Roman archaeology conference, Leicester 1998, Oxford, 131-140
- DRIEL-MURRAY (2001a), C van Driel-Murray 'Footwear in the North-Western Provinces of the Roman Empire,' in O Goubitz, C van Driel-Murray and W Groenman-van Waateringe, *Stepping through Time*, Zwolle
- DRIEL-MURRAY (2001b), C van Driel-Murray 'Vindolanda and the dating of Roman footwear', *Britannia* 32, 185-197
- DRUMMOND-MURRAY & SEELEY (In prep), J Drummond-Murray and F Seeley, F, MoLAS excavations at the Northgate House Pottery production site, Moorgate, City of London. MoLAS
- ELLIS (2000), P Ellis (ed) *The Roman Baths and Macellum at Wroxeter: Excavations by Graham Webster 1955-85*. English Heritage Arch Rep 9, 302-305
- EVANS (2001), J Evans 'Material approaches to the identification of different Romano-British sites types'; in S James & M Millett (eds), *Britons and Romans: advancing an archaeological agenda*, CBA Res Rep 125, 26-35
- FAEGRI & IVERSEN (1989), K Faegri & J Iversen *Textbook of modern pollen analysis*. 4th. Ed. Chichester
- de FRANCISCIS (1963), A de Franciscis 'Vetri antichi scoperti ad Ercolano', *Journal of Glass Studies* 5, 137-9
- FRERE (1972), S S Frere *Verulamium Excavations, Volume I*. Rep. Res. Comm. Antiqs. London No. XXVIII. Oxford. K F Hartley, 'The Mortarium Stamps', 371-381
- FRERE (1984), S S Frere *Verulamium Excavations, Volume III*. Monograph No. 1. Oxford University Comm. Arch. Oxford. K F Hartley, The mortarium stamps, 280-291

- GALE (1998), R Gale, 'Charcoal' in J McKinley, 59-62
- GALE (forthcoming(a)), R Gale 'Charcoal', in S Bates, The excavation of Romano-British pottery kilns at Ellingham, Postwick and Two Mile Bottom, Norfolk, 1995-6, E Anglian Archaeol Occ Paper.
- GALE (forthcoming(b)), R Gale 'Charcoal from a Roman pottery production site', in M A B Lynne, Redcliffe Farm, Arne, near Wareham, Dorset.
- GALE (forthcoming(c)), R Gale 'Charcoal', in J Lovell, Excavations at Horticultural Research International, Littlehampton, 1997, Sussex Archaeological Collections
- GALE & CUTLER (2000), R Gale & D Cutler *Plants in Archaeology*. Otley/ London: Westbury/ Royal Botanic Gardens, Kew
- GODWIN (1956), H Godwin *The History of the British Flora*, Cambridge
- GOING (1992), C J Going 'Economic 'long waves' in the Roman period? A reconnaissance of the Romano-British ceramic evidence.' *Oxford Journal of Archaeology* 11.1, 93-115
- GOODBURN (1991), D Goodburn, 'A Roman timber-framed building tradition', *Archaeol J* 148, 182-204
- GOODBURN (In prep a), D Goodburn 'Worked wood' in C Cowan, R Wroe-Brown and N Bateman, Excavations at the London Amphitheatre, Guildhall Yard City of London. MoLAS
- GOODBURN (In prep b), D Goodburn 'Worked wood' in T Bradley and J Butler, Publication report on excavations by Pre-Construct Archaeology at the Salvation Army headquarters site City of London. Pre-Construct Archaeology
- GOODBURN (In prep c), D Goodburn 'Worked wood' in A Duncan, Excavations by Pre-Construct Archaeology at Tobacco Dock Shadwell, E London. Pre-Construct Archaeology
- GOODBURN (In prep d), D Goodburn 'Worked wood' in T Brigham and B Watson, MoLAS excavations at Regis House City of London MoLAS
- HARTLEY (1979), K F Hartley 'A mortarium from Brockley Hill, Middlesex', *Trans London Middlesex Archaeol Soc* 30, 188-189
- HAWKES & HULL (1947), C F C Hawkes & M R Hull *Camulodunum: First Report on the Excavations at Colchester 1930-1939*. Rep. Res. Comm. Soc. Antiq. London no. XIV. Oxford
- HODGES (1964), H Hodges *Artefacts*. London
- HOLDER (1896), A Holder *Alt-Celtischer Sprachschatz*, Leipzig
- JACKSON & POTTER (1996), R P J Jackson & T W Potter *Excavations at Stonea, Cambridgeshire 1980-85*, British Museum press. K F Hartley, 'Stamped mortaria', 429-435
- KENYON (1948), K M Kenyon *Excavations at the Jewry Wall Site, Leicester*. Rep. Res. Comm. Soc. Ant. London XV Oxford

- KING (1986), D King 'Petrology, dating and Distribution of Querns and Millstones. The results of Research in Bedfordshire, Buckinghamshire, Hertfordshire and Middlesex' *University of London Institute of Archaeology Bulletin* 23, 65-126
- LAMBRICK (1980), G Lambrick 'Excavations in Park Street Towcester', *Northants Archaeol* 15, 35-118
- LYMAN (1996), R L Lyman *Vertebrate Taphonomy*, Cambridge Manuals in Archaeology, Cambridge University Press, Cambridge
- LYNE & JEFFERIES (1979), M A B Lyne & R S Jefferies *The Alice Holt/ Farnham Roman pottery industry*, (CBA Res Rep 30), London
- MAHANY (1994), C Mahany (ed.) *Roman Alcester: Southern extramural area 1964-1966 excavations. Part 1: Stratigraphy and Structures*, CBA Research Report 96, York
- MARSH & TYERS (1978), G Marsh & P Tyers 'The Roman pottery from Southwark', *Southwark Excavations 1972-74, vol. II*, Southwark and Lambeth Archaeological Excavation Committee
- MASEFIELD (2003), R Masefield 'A Later Bronze Age Well Complex at Swalecliffe, Kent', *Antiq J.* 83, 47-121
- MCKINLEY (1998), J I McKinley 'Excavations of a Romano-British Roadside Site at Brockley Hill, Stanmore, Middlesex, 1995-7' *Trans London Middlesex Archaeol Soc* 49, 31-66
- MILNE (1985), G Milne *The Port of Roman London*, London
- MITCHELL (1974), A Mitchell *A Field Guide to the Trees of Britain and Northern Europe*, London
- MOORE, WEBB & COLLINSON (1991), P D Moore, J A Webb and M E Collinson *Pollen analysis*. Oxford
- MoLAS (2000), MoLAS 'Former Government Buildings, Brockley Hill, Stanmore, London Borough of Harrow. An Archaeological Evaluation Report.' Unpublished Client Report, Museum of London Archaeological Services
- MUDD ET AL (1999), A Mudd, R J Williams & A Lupton *Excavations alongside Roman Ermine Street, Gloucestershire and Wiltshire: Volume 1: Prehistoric and Roman activity*, Oxford Archaeological Unit
- O'CONNELL & BIRD (1994), M G O'Connell, M G & J Bird 'The Roman temple at Wanborough, excavation 1985-1986' in *Surrey Arch Coll* 82, 1-168. K F Hartley, 'Mortarium stamp' 138
- O'NEIL (1951), H E O'Neil 'Watling Street, Middlesex' *Trans London Middlesex Archaeol Soc* 10, 137-9
- ORTON, TYERS & VINCE (1993) C Orton, P Tyers, & A Vince *Pottery in archaeology*, CUP, Cambridge
- PAGE (1898), W Page 'Notes on a Romano-British pottery kiln lately found at Radlett, Herts'. *Proc. Soc. Ants. London* 2nd. Ser. XVII, 261-271

- PARMINTER (1990), Y Parminter 'The pottery', in *Excavation of the Iron Age, Roman and medieval settlement at Gorhambury, St Albans* (D S, Neal, A Wardle, and J Hunn), English Heritage Rep 14, London, 175-201
- PRICE & COTTAM (1998), J Price and S Cottam *Romano-British Glass Vessels: a Handbook* CBA Practical Handbook in Archaeology 14, York
- RACKHAM (1990), O Rackham *Trees and Woodland in the British Landscape*. London
- RIB II.2, (1991), R G Collingwood and R P Wright, *The Roman Inscriptions of Britain Volume II Instrumentum Domesticum (personal belongings and the like)*. Fascicule 2, Frere, S. S. and Tomlin, R. S. O. (eds), Stroud
- RICHARDSON (1951), K M Richardson 'Report on the excavations at Brockley Hill, Middlesex, August and September 1947' *Trans London Middlesex Archaeol Soc* 10, new ser, 1-23
- RICHMOND & GILLAM (1953), I A Richmond & J P Gillam 'Report of the Cumberland Excavation Committee for 1947-1949: 3. Milecastle 79 (Solway)' *Trans Cumberland and Westmorland Antiq Archaeol Soc* new ser. LII, 17-40
- RICHMOND & ST JOSEPH (1957), I A Richmond & J K St. Joseph 'The Roman Fort at Dalswinton, in Nithsdale' in *Trans Dumfriesshire and Galloway Nat Hist and Antiq Soc* xxxiv (for 1955-56). J P Gillam, 'The Coarse Pottery from Dalswinton' in Appendix 2, 20-21
- SCATOZZA HÖRICHT (1986), L A Scatozza Höricht *I vetri Romana di Ercolano*, Ministero per i beni culturali ed ambientali soprintendenza archeologica di Pompei Cataloghi 1, Rome
- SEAGER SMITH (1998), R Seager Smith 'Pottery' and 'Ceramic Building Material' and 'Worked Stone' in J McKinley, 51-7
- SEELEY & THOROGOOD (1994), F Seeley & C Thorogood 'Back to Brockley Hill', *London Archaeol* Vol. 7 no. 9, 223-8
- SEELEY & DRUMMOND-MURRAY (forthcoming), F Seeley & J Drummond-Murray Excavations at Northgate House: the Roman pottery industry in the Walbrook Valley, MoLAS
- SHAFFREY (2001), R Shaffrey 'Worked Stone' in A Smith 'Excavations at Canon's Corner, Barnet, Middlesex'. *Trans London Middlesex Archaeol Soc* 53, 35-6
- SHELDON (1996), H Sheldon 'In serach of Sulloniacis' in J Bird. M Hassall and H Sheldon (eds) *Interpreting Roman London*, 233-41
- SMITH (2001) A Smith 'Excavations at Canon's Corner, Barnet, Middlesex' *Trans London Middlesex Archaeol Soc* 52, 27-39
- SPENCE (1990), C Spence (ed.) *Museum of London Archaeological Site Manual* 2nd edition
- SUGGETT (1954), P G Suggett 'Excavations at Brockley Hill, March 1952 to May 1953,' *Trans London Middlesex Archaeol Soc* New Series vol. XI, pt. iii, 259-276

- SUGGETT (1958), P G Suggett, 'Report on Excavations at Brockley Hill, Middx, August 1953 and 1954, *Trans London Middlesex Archaeol Soc* Vol. 19, pt.i, 65-75
- SYMONDS & TOMBER (1994), R P Symonds & R S Tomber 'Late Roman London: an assessment of the ceramic evidence from the City of London' *Trans London Middlesex Archaeol Soc* 42, 59-99
- SYMONDS & WADE (1999), R P Symonds & S Wade *Roman Pottery from excavations in Colchester, 1971-86* (eds. P. Bidwell and A. Croom)
- TOMBER & DORE (1998), R Tomber & J Dore *The national Roman fabric reference collection: a handbook*, MoLAS monograph 2
- TUTIN & HEYWOOD *ET AL.* (1964-80), T G Tutin V H Heywood, *et al. Flora Europaea*, 1-5, Cambridge
- TYERS (1998), P A Tyers 'Amphoras and the origins of the Brockley Hill Roman Pottery Industry' *London Archaeol* vol. 8 no. 11, 292-7
- WEBSTER, HARTLEY, MARVELL & SELL (2004), P V Webster, K F Hartley, A G Marvell & S H Sell 'A Roman pottery kiln at Abernant Farm, Caerleon (NGR ST 3680 9140)', *J Roman Pottery Studies* 11, 112-6
- WILLIS (1998), S H Willis 'Samian pottery in Britain: Exploring its distribution and archaeological potential', *Archaeol J* 155, 82-133
- WILMOT (1982), T Wilmot 'Excavations at Queen Street in the City of London, 1953 and 1960 and Roman timber lined wells in London', *Trans London and Middlesex Archaeol Soc* 33, 1-78
- WILSON (1984), M G Wilson 'The other pottery', in *Verulamium excavations, vol III* (S Frere), OUCA Monogr 1, Oxford, 202-266
- YOUNG (1977), C J Young, *Oxfordshire Roman pottery*, BAR Brit Ser 43, Oxford

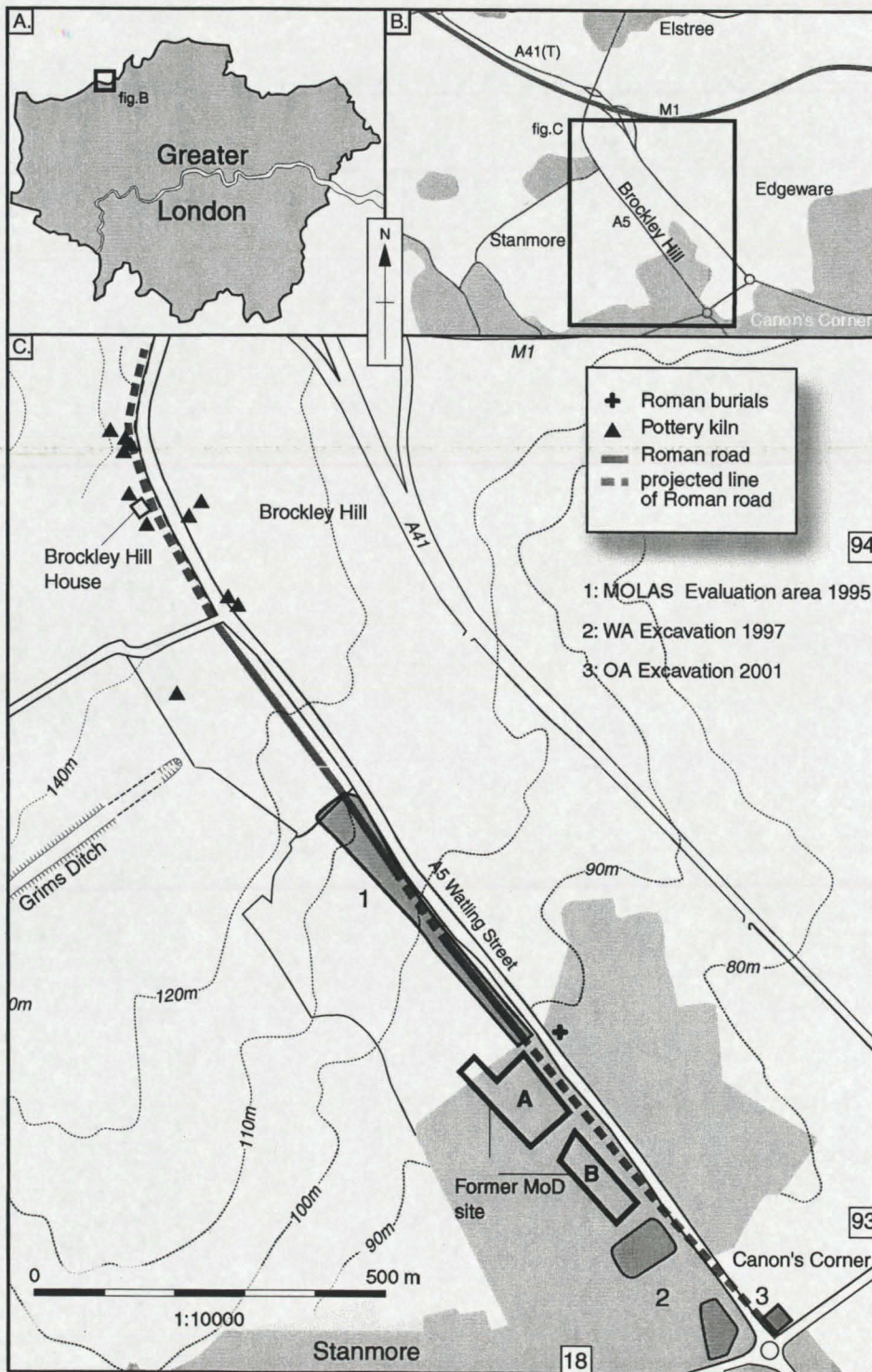


Figure 1: General site location

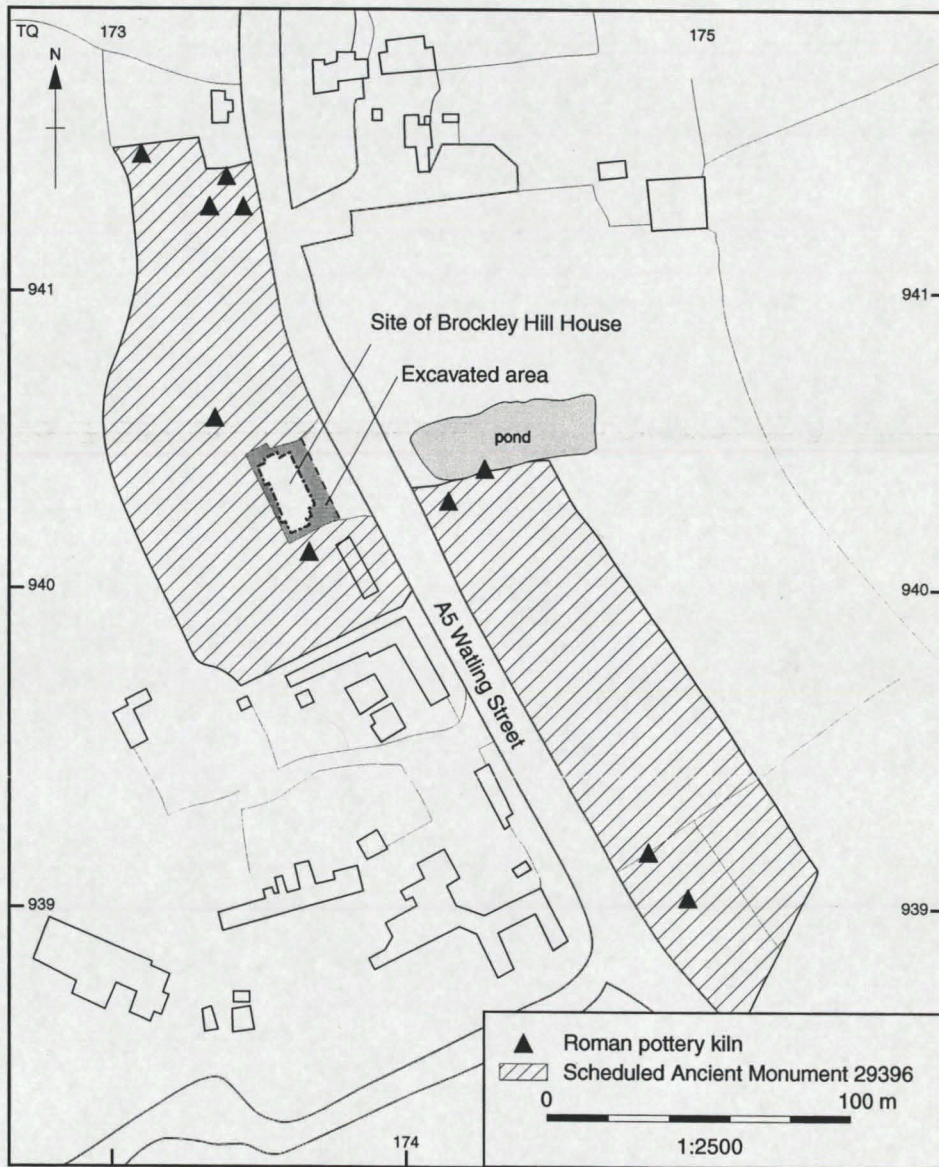


Figure 2: Site location of Brockley Hill House

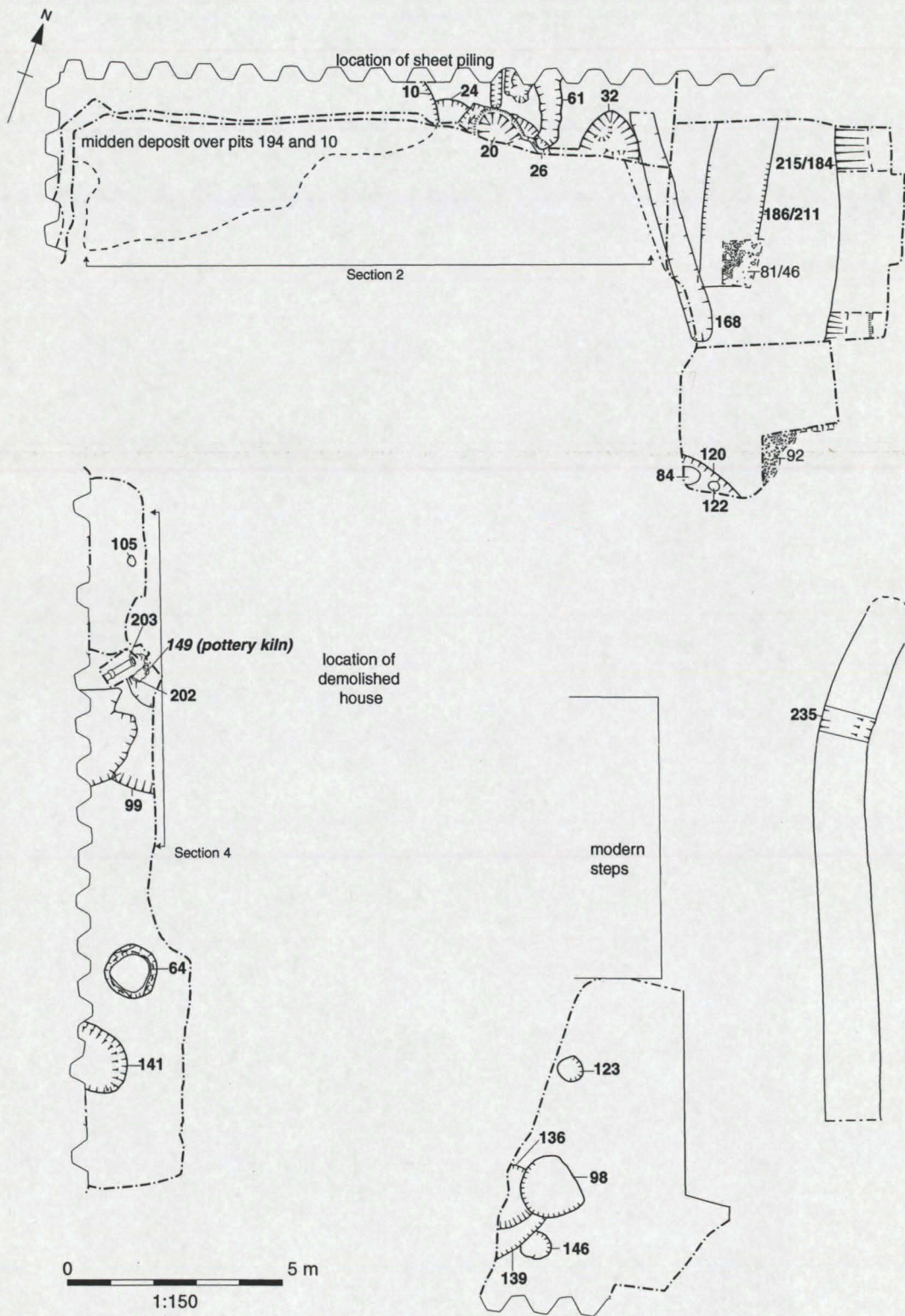


Figure 3: Brockley Hill House Trench Plan

Section 4 : Kiln and kiln pit

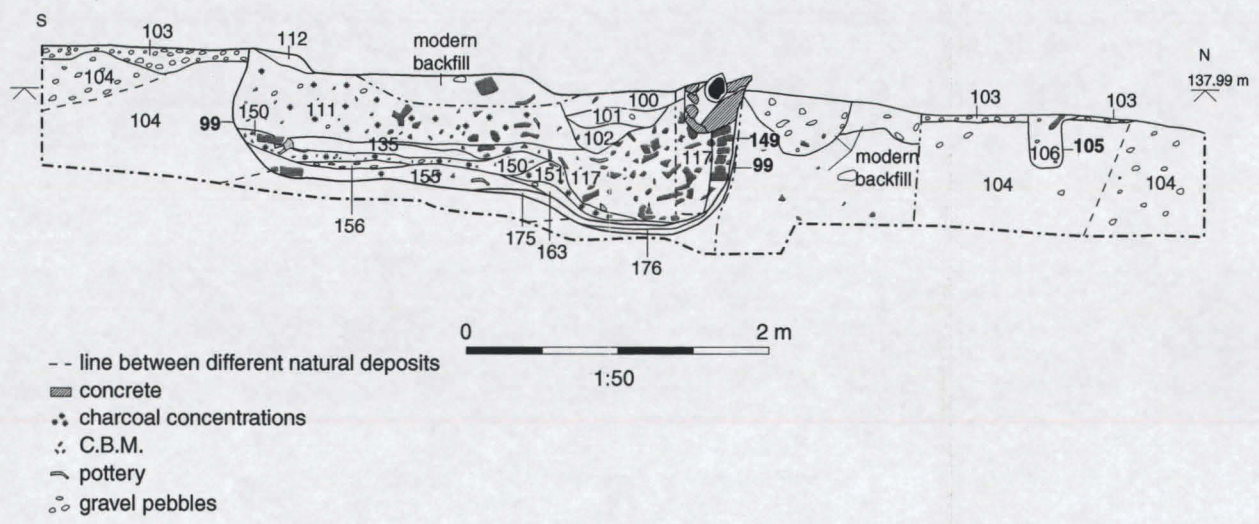


Figure 4: Brockley Hill House, section plan: kiln

Section 2 : Midden/extraCTION pits and dump layers

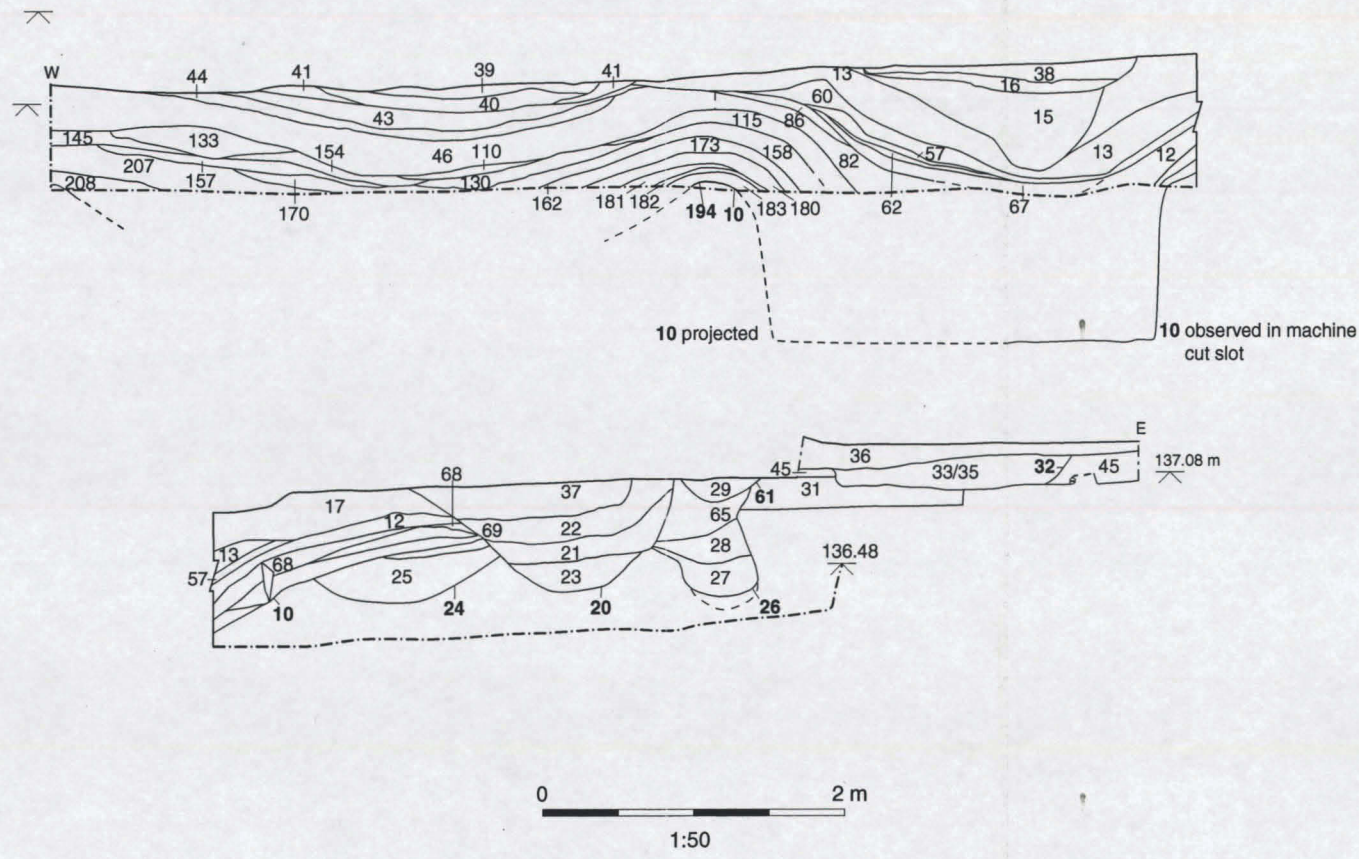


Figure 5: Brockley Hill House, section plan: middens

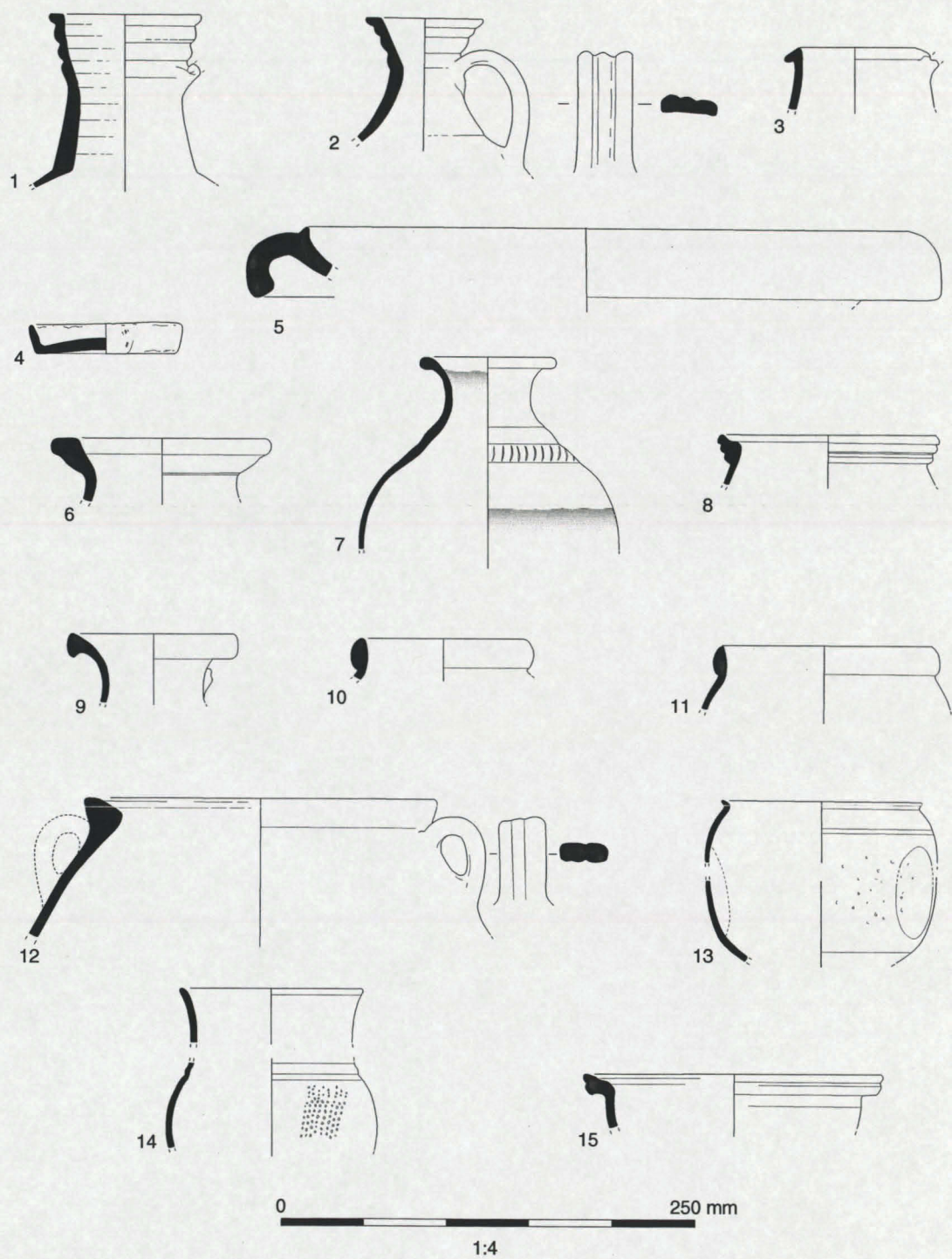
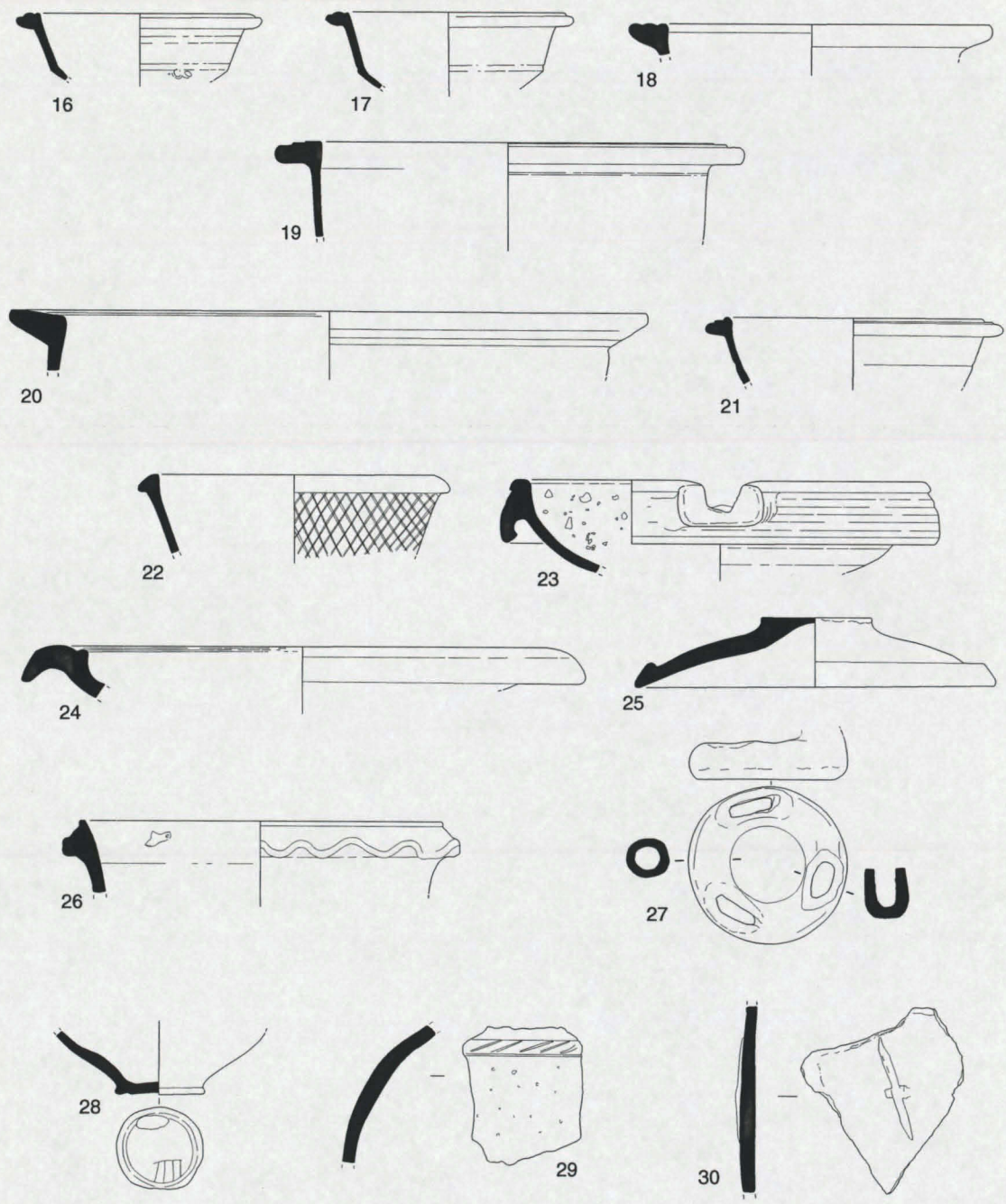


Figure 6: Brockley Hill House pottery (1-15)



0 250 mm

1:4

Figure 7: Brockley Hill House pottery (16-30)

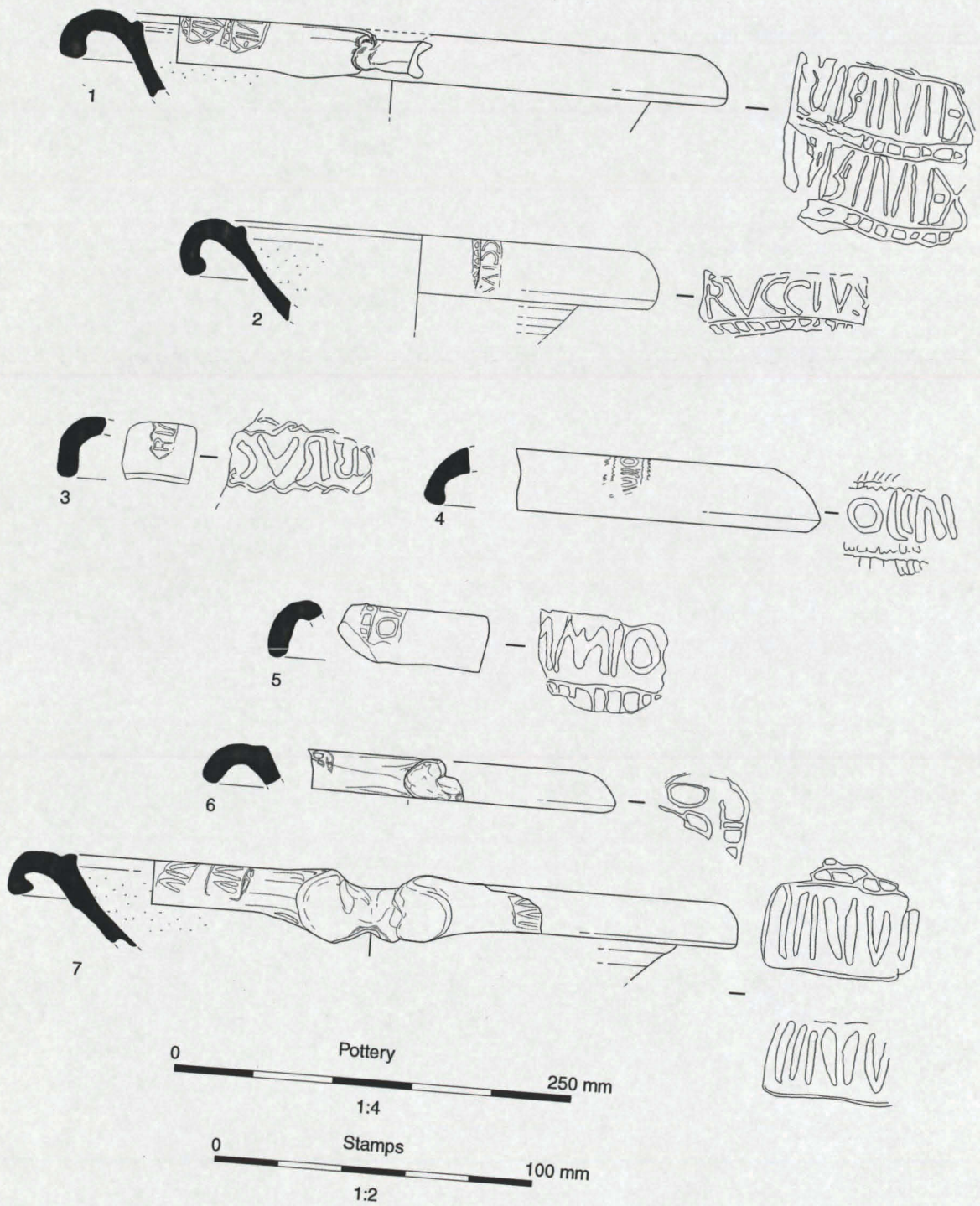


Figure 8: Brockley Hill House stamped mortaria (1-7)

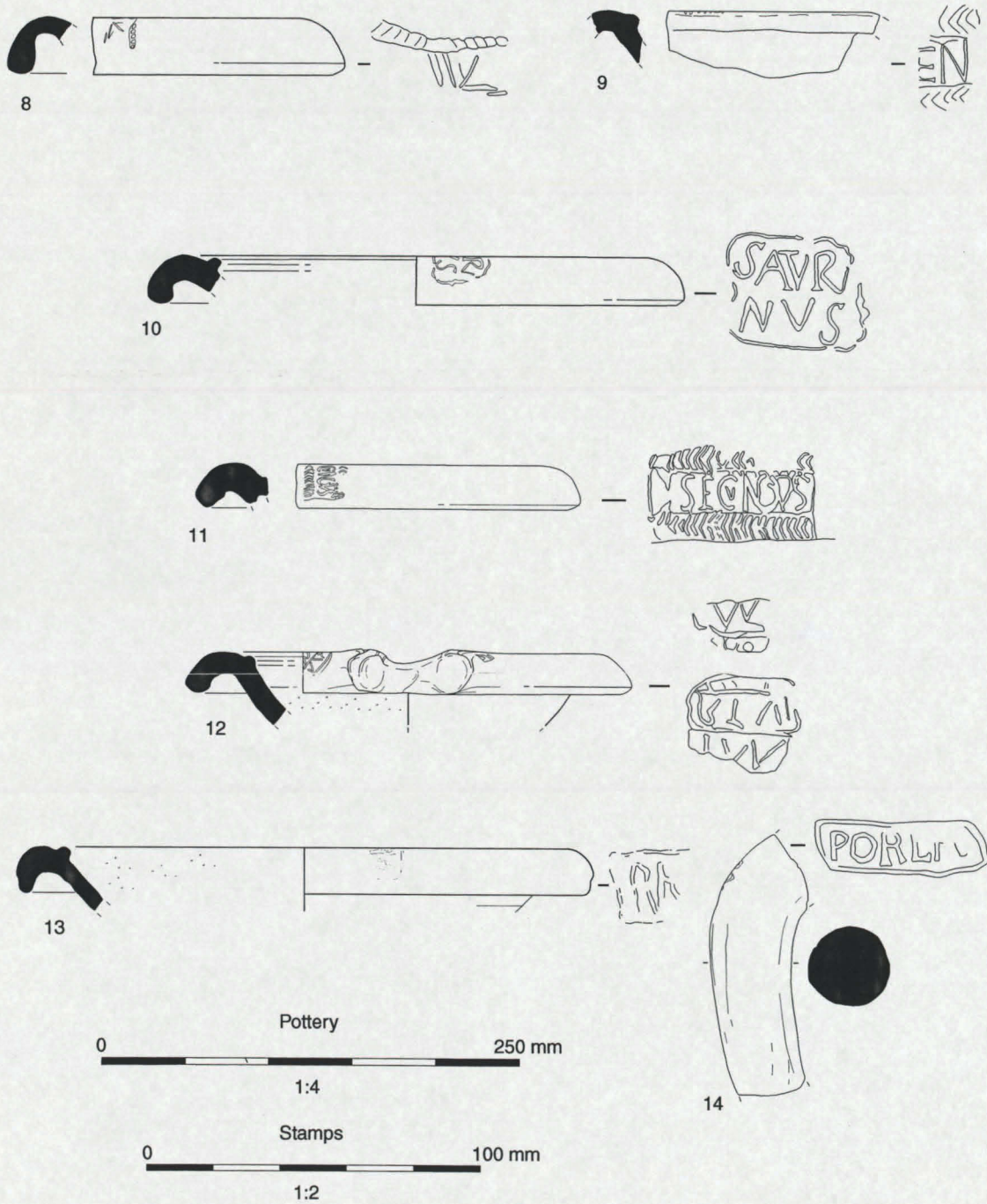


Figure 9: Brockley Hill House stamped mortaria and amphora handle (8-14)

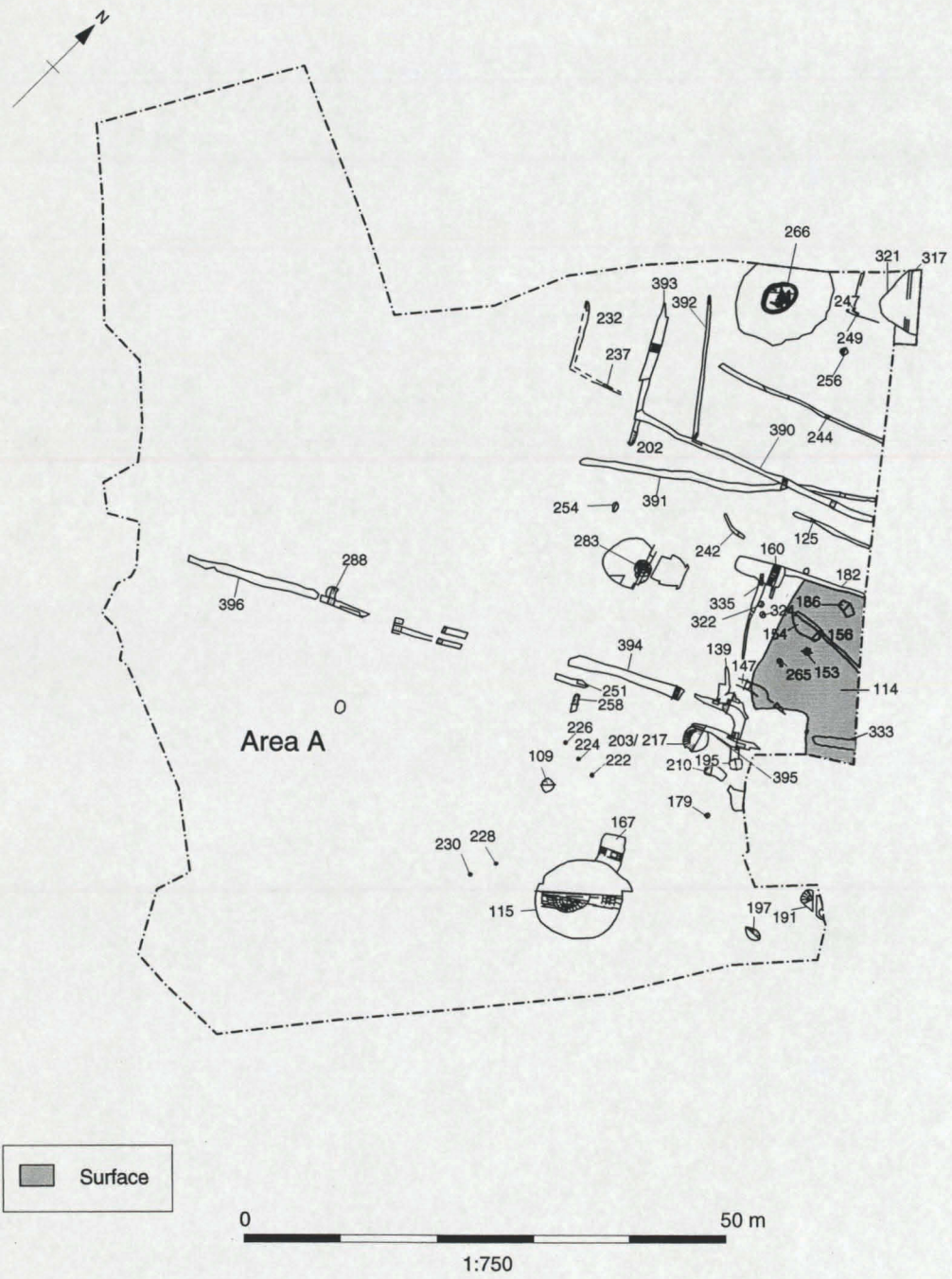


Figure 10: Brockley Hill former MoD site Area A

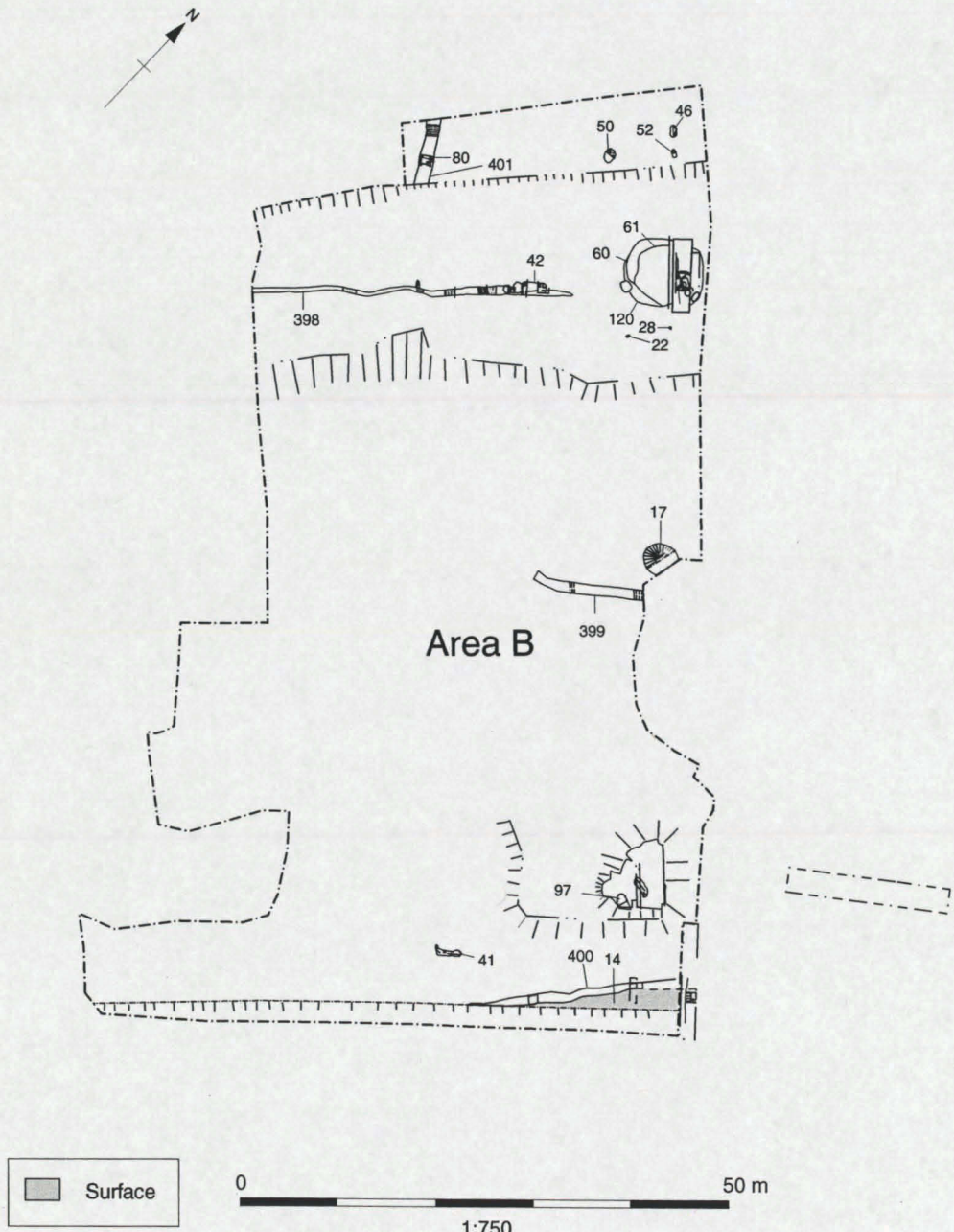


Figure 11: Brockley Hill former Mo`D site Area B

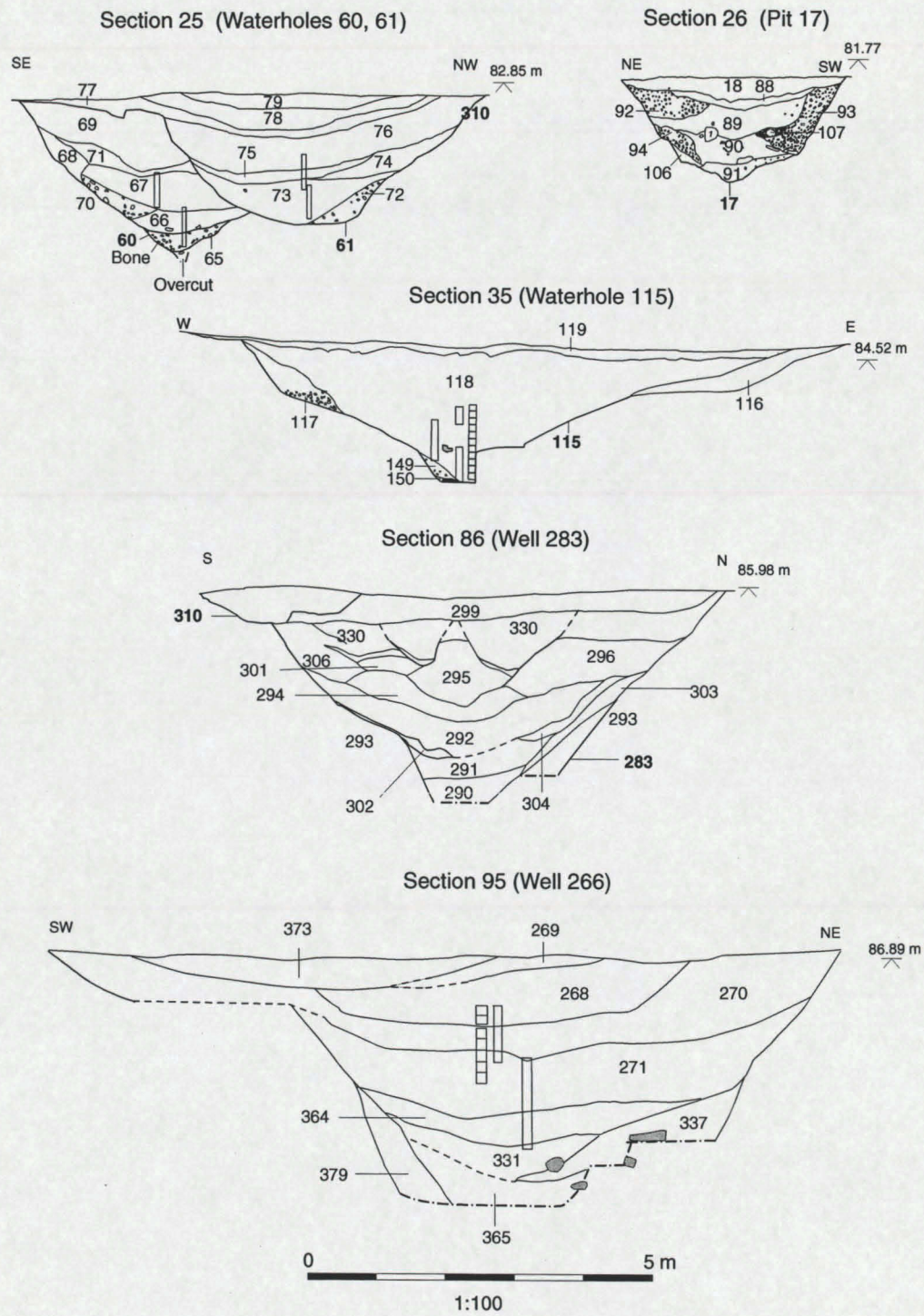


Figure 12: Brockley Hill former MoD site sections through waterholes and pits

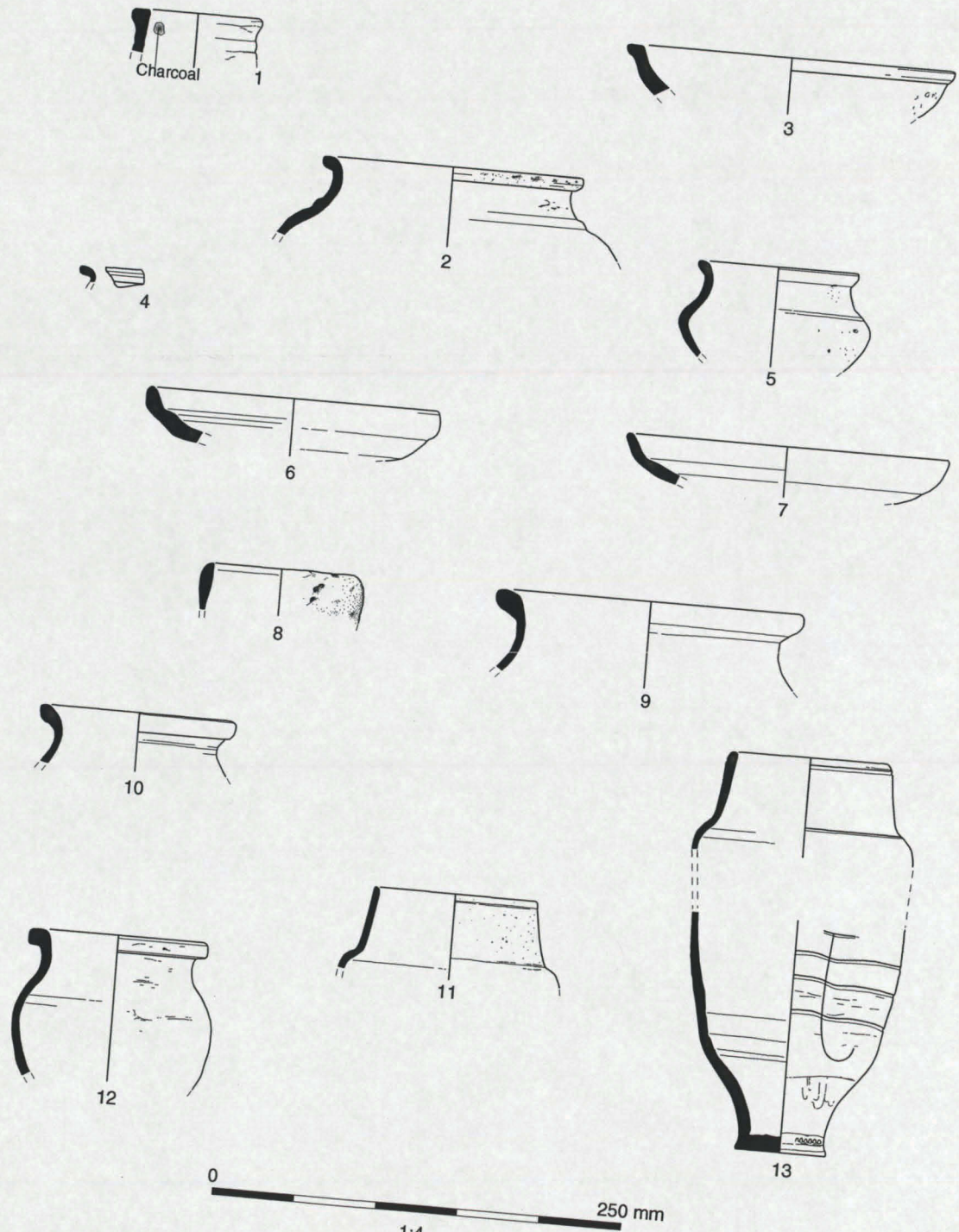


Figure 13: Brockley Hill former MoD site pottery (1-13)

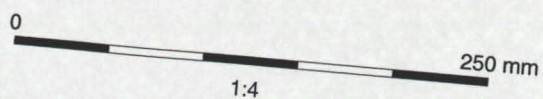
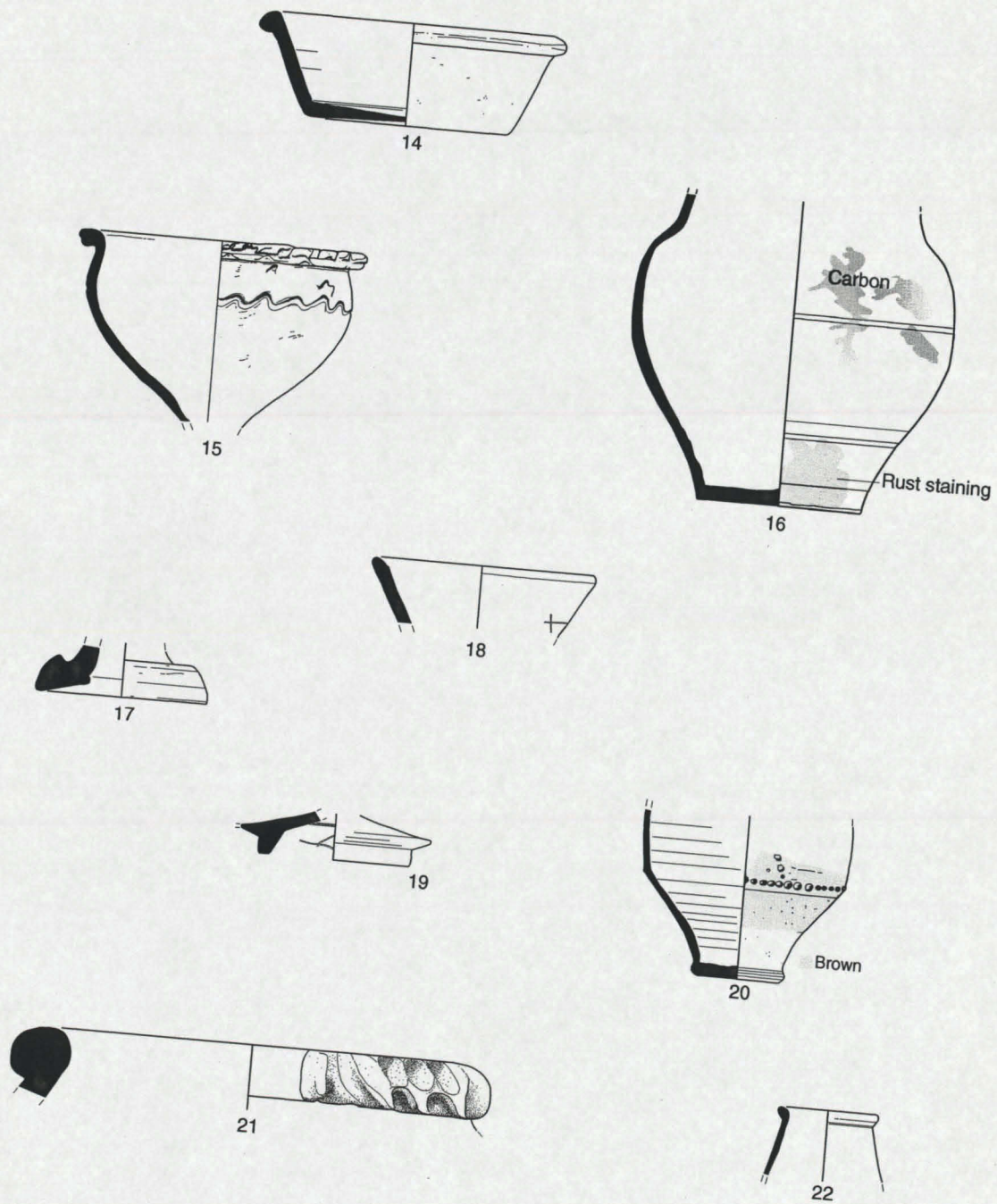
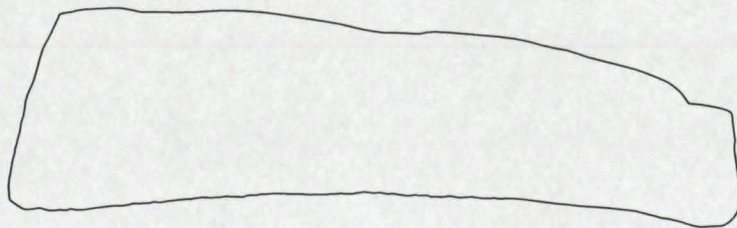
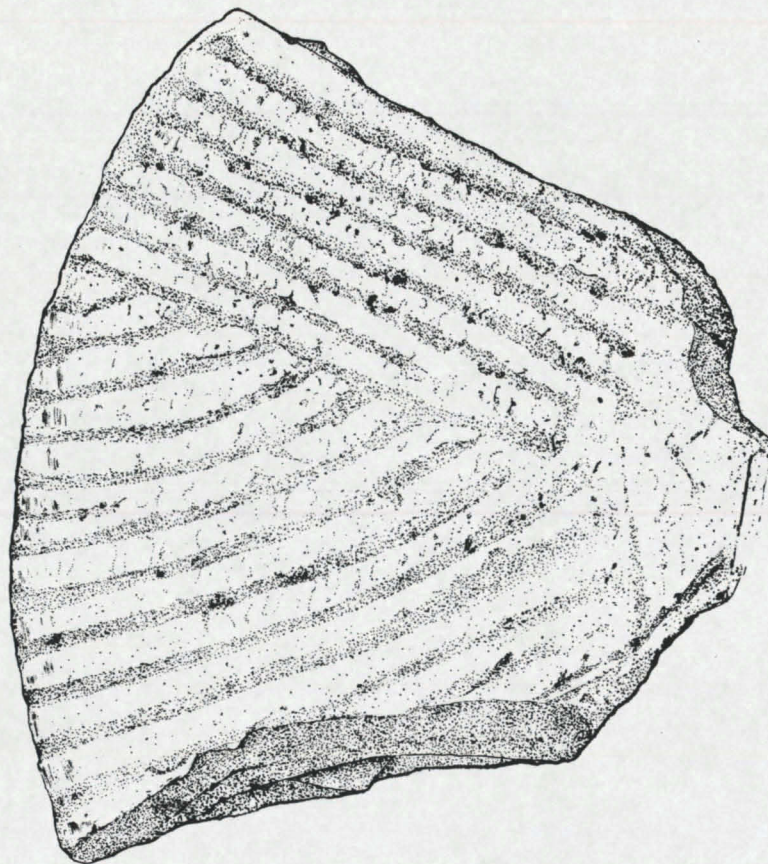


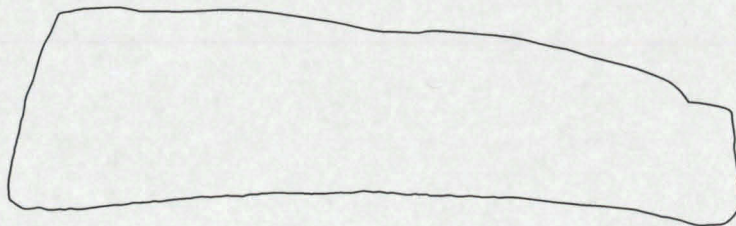
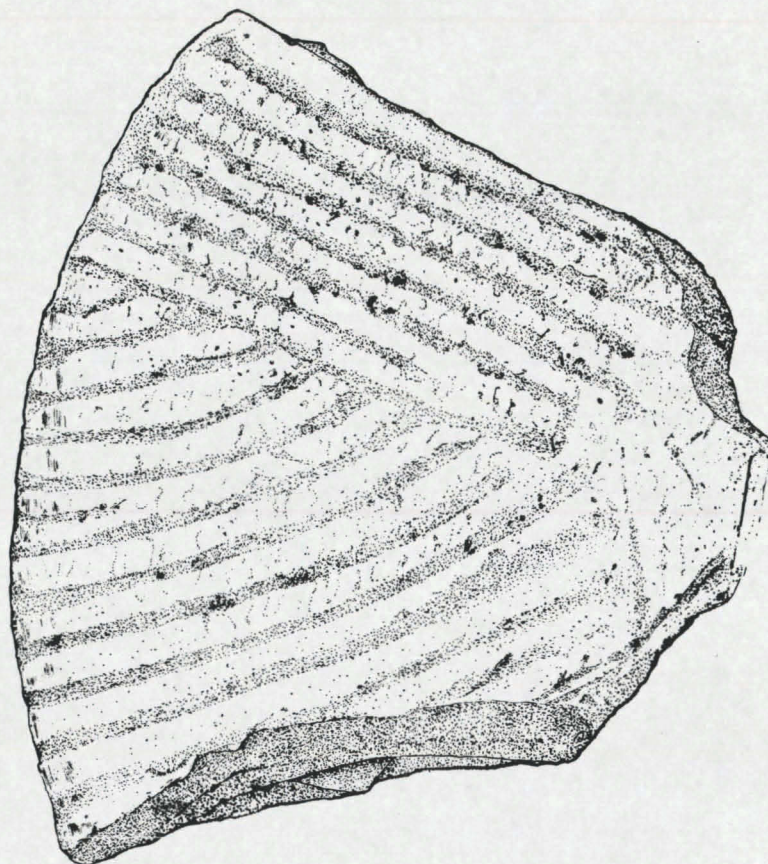
Figure 14: Brockley Hill former MoD site pottery (14-22)



0 100 mm

1:2

Figure 15: Upper rotary quern from former MoD site



0 100 mm

1:2

Figure 15: Upper rotary quern from former MoD site

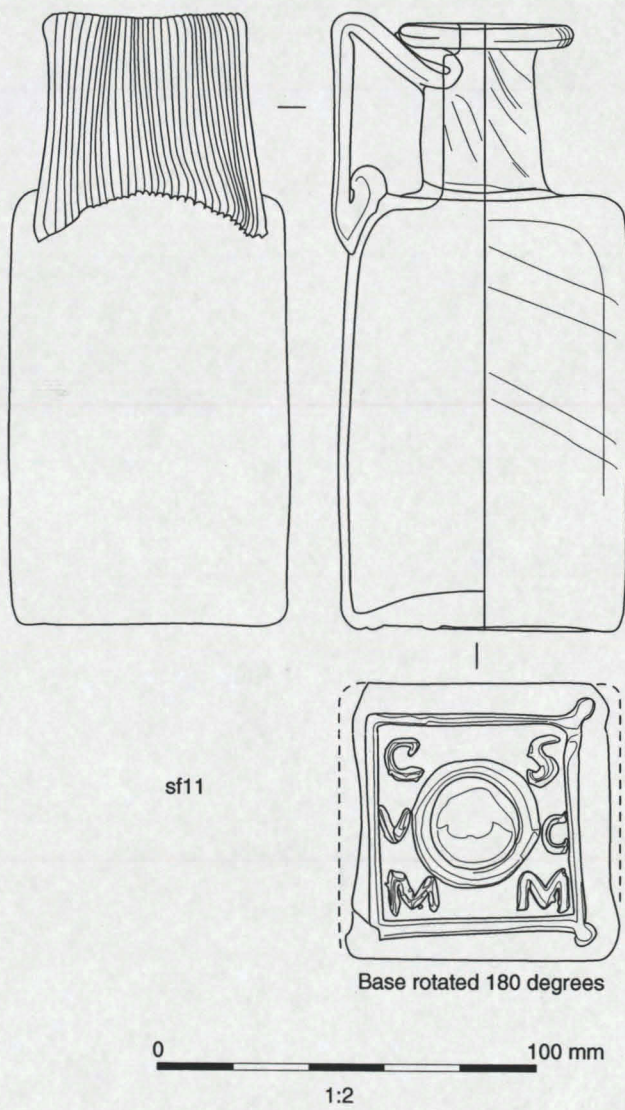


Figure 16: Glass bottle from former MoD site

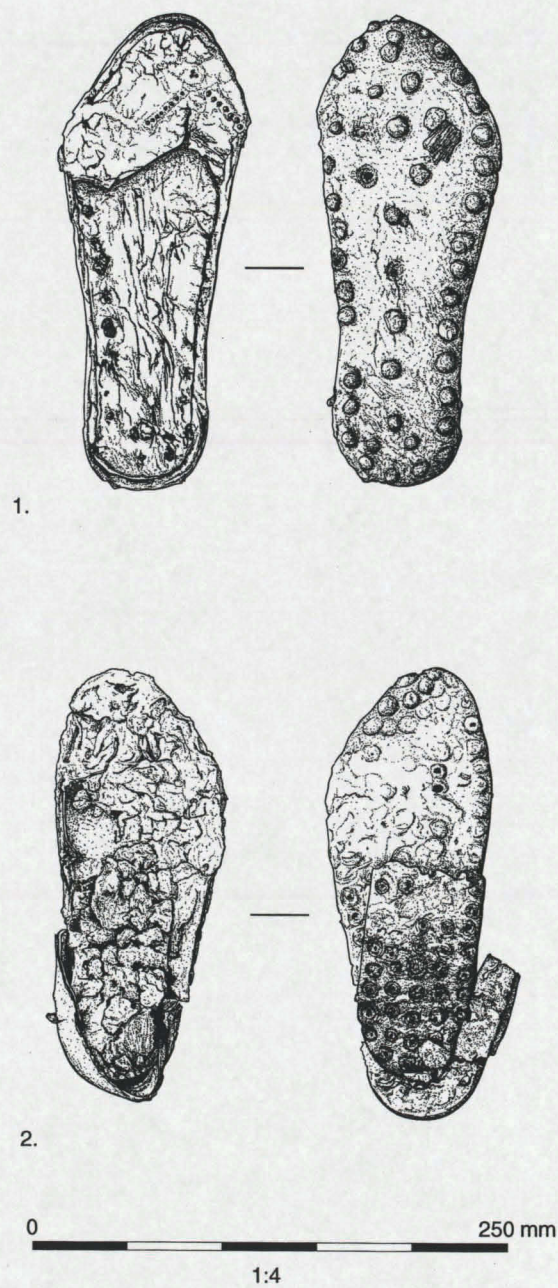


Figure 17: Leather shoes from former MoD site. Top, constructional thonging seen along insoles: Bottom, nailing patterns on soles (diagrammatic representations)



0 100 mm
1:2

Figure 18: Withy Rope from waterhole 266