A ROMANO-BRITISH LANDSCAPE AT BROCKLEY HILL, STANMORE, MIDDLESEX: EXCAVATIONS AT BROCKLEY HILL HOUSE AND THE FORMER MoD SITE

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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 (BROHH and LBK; see Fig 1). 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 in the vicinity, mostly within the boundaries of the Scheduled Monument (29396). In 2003 an excavation and evaluation at the former Ministry of Defence (MoD) site towards the base of Brockley Hill (TQ 1790 9310) 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, probably for the use of road traffic, including drovers herding their stock. Within the enclosures was some evidence for surface metalling, along with a number of waterholes and constructed wells which contained waterlogged material, including worked wood and leather. One of the waterholes may have acted as a focus for possible ritual deposition, with finds including a very rare glass vessel. The site appears to have been in use throughout the Roman period, although the pottery evidence suggests more sustained activity in the 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 at *c.*140m OD near the crest of Brockley Hill (TQ 1738 9403); the hill rises progressively from its base (65m OD) at Canons Corner, about 1.5km to the south. Brockley Hill is part of a ridge which encloses the north side of the London basin, and has views over to the Thames in the south. The former MoD site also lies on the 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.

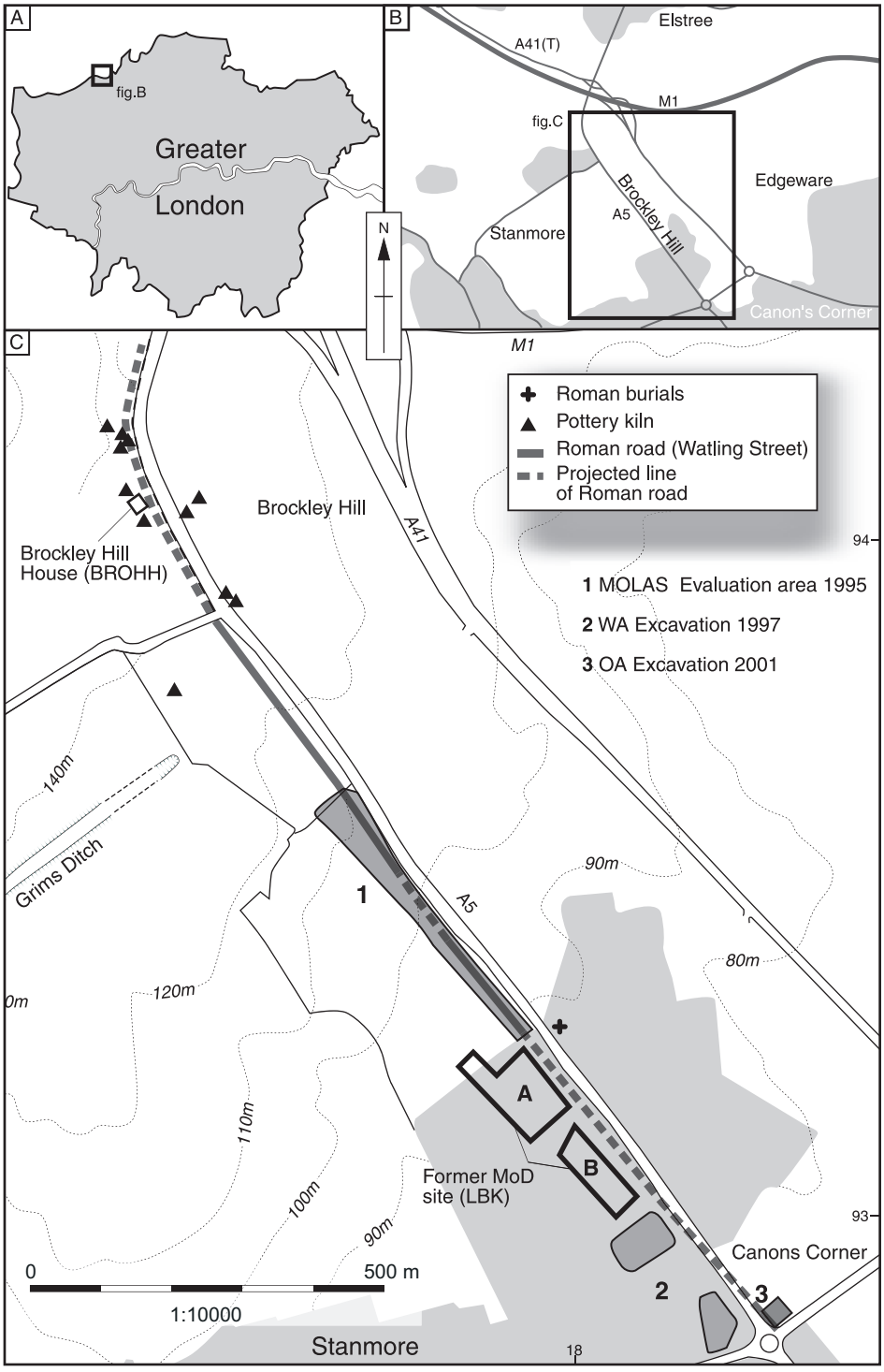

Fig 1. General site location

ARCHAEOLOGICAL BACKGROUND

The excavations lie within an area of widespread archaeological investigation, mostly concentrated along the line of Roman Watling Street (Fig 1c; see Thompson 2000 and 2009, for gazetteer of archaeological work). There is nothing to indicate that this area (and Harrow in general) was anything more than a wooded backwater prior to the establishment of London and Watling Street in the mid-1st century AD. Even after this date, much of the region around Brockley Hill appears to have remained as relatively wooded, marginal land, with little evidence to suggest widespread cultivation or villa estates, presumably because it lay on the unproductive London Clay (*ibid*).

The principal research objectives throughout the investigations at Brockley Hill have been to determine the exact course of the road (Bowsher 1995; McKinley 1998; Smith 2001), and to locate definitively the Roman settlement of *Sulloniacis*, 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 *Sulloniacis*, 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 Monument incorporating Romano-British pottery kilns (Fig 2). This was an important 1st- to 2nd-century AD pottery production centre — the earliest of the wider Verulamium region potteries — but there is as yet no definitive evidence for a Roman settlement in the vicinity, aside from a small number of late Roman cobbled floors presumably associated with timber buildings (Suggett 1958; Castle 1976, 225). Approximately 14 kilns and numerous pits associated with workshops and domestic waste have been located, with the period of production ranging from *c.*AD 50 to 160/170 (Seeley & Thorogood 1994, 223).

The absence of any real evidence for settlement on the hill indicates that it is unlikely to be the location of *Sulloniacis*, which is thought to have been a posting-station with associated domestic dwellings and roadside shops, rather than a major settlement (Castle 1972a, 327). It is probable that *Sulloniacis* lay further south, with possible candidates including the edge of the medieval site at Edgware and Red Hill (Sheldon 1996; Thompson 2000). Bird (2005, 24) has suggested, however, that the potteries on Brockley Hill could still have been on the same landholding as *Sulloniacis*, a name interpreted as 'the estate of Sullonios', possibly a entrepreneur operating along Watling Street in this relatively marginal area between London and Verulamium.

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 Canons 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 site was quite similar in date and character to the former MoD site and to some extent to the Canons Corner site on the other side of the road. This evidence all points to continued activity of some kind in the area after the apparent decline of the pottery industry further up the hill.

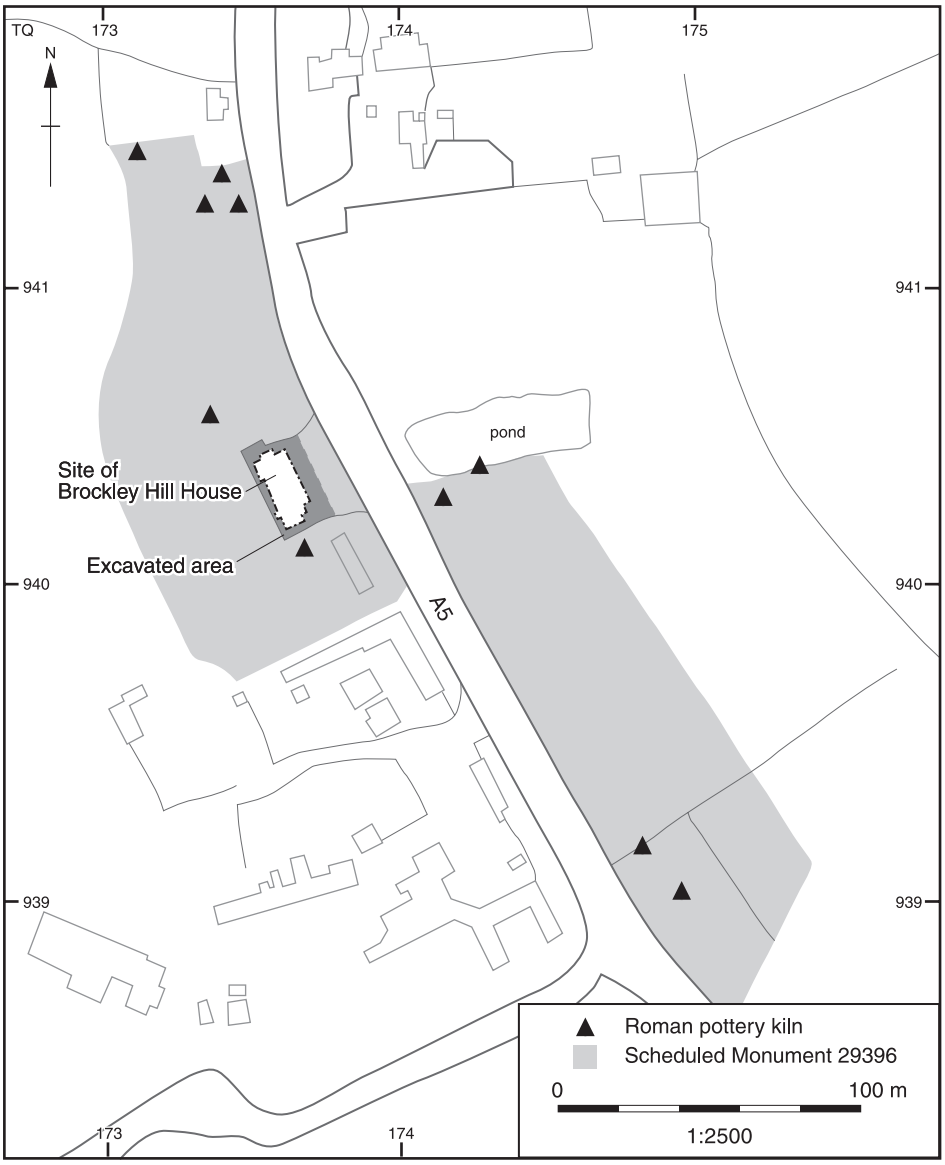

Fig 2. Site location at Brockley Hill House

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

Alex Smith

INTRODUCTION AND EXCAVATION METHODOLOGY

Oxford Archaeology (OA) was contracted to undertake an archaeological watching-brief at Brockley Hill House from September to October 2000; 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, Watling Street (now the A5; Figs 1–2). The adjoining land is a Scheduled Monument (SM no. 29396), and so the landscaping methodology had to be devised carefully to minimise disruption to the archaeology. While the area immediately surrounding the house was outside the SM, 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. The main excavated area was the narrow band of relatively undisturbed ground between the edge of the demolished 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. The footprint of the house itself was not excavated as the archaeology had been destroyed by the cellars. In total, an area of around 150m² was subsequently excavated (see Fig 3). Where trenches were excavated through cut features 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 and planned 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 and a section of an extensive ditch which may have formed part of Watling Street. A fairly consistent date range of pottery was recovered, indicating that most of the features belonged to the mid-1st century to the mid/later 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.

West side

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

Along the northern half of the excavated area lay part of a mortared brick pottery kiln (149), lying within a construction pit (99), 3.1 by 1.0m across and 0.8m 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, hence its original dimensions remain unknown. The firing-chamber of the kiln lay at the northern end of the pit and consisted of eight courses of regular mortared brick (202), with another five-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

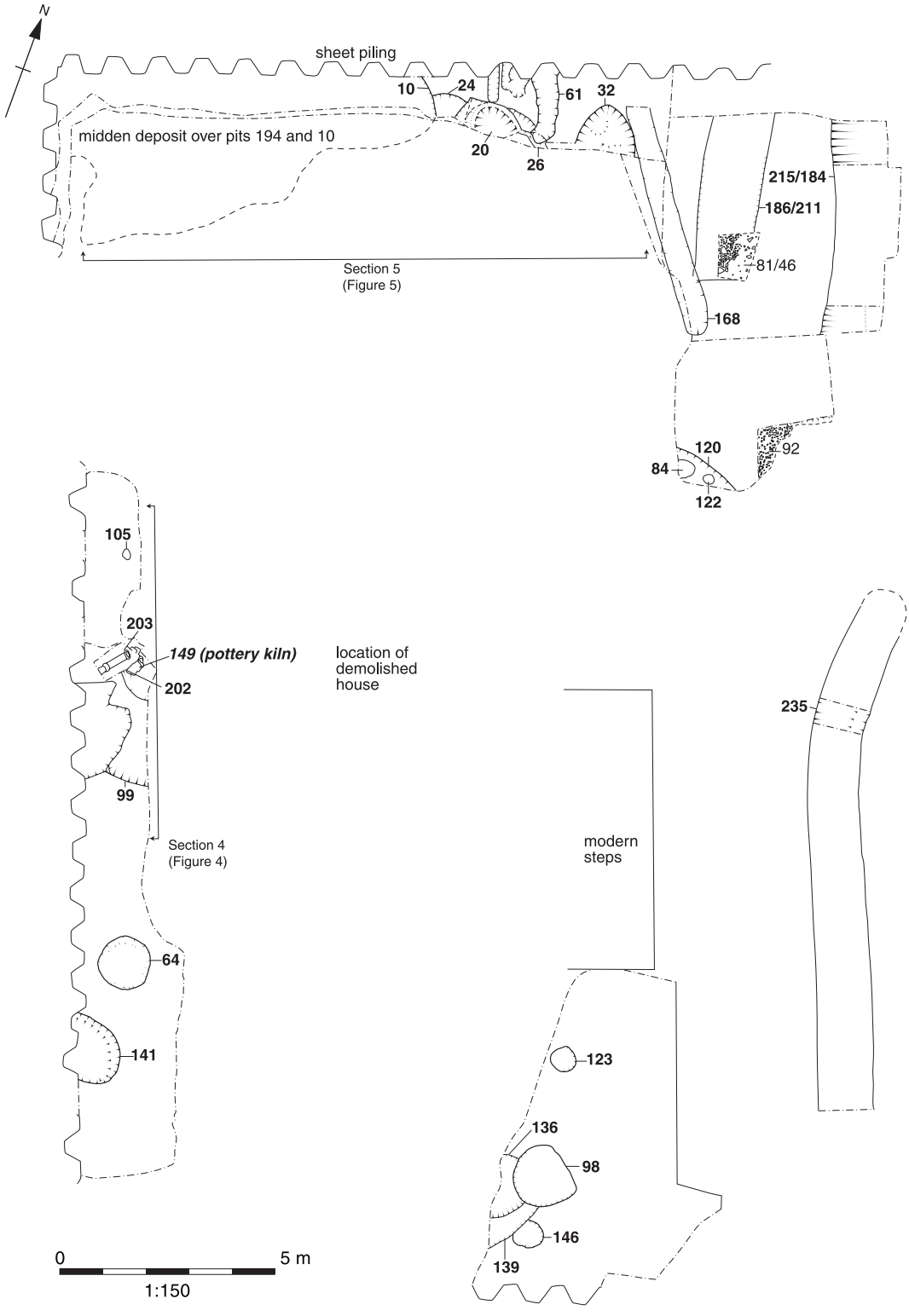

Fig 3. Brockley Hill House trench plan

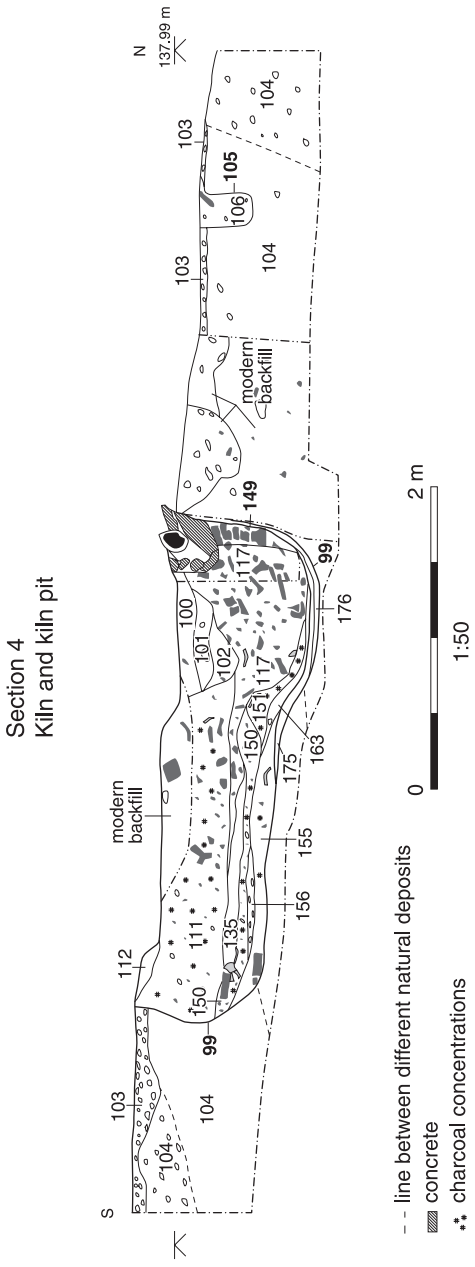

Fig 4. Brockley Hill House, section plan: kiln

this layer. This and all subsequent deposits contained 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 the kiln structure into the chamber, and was cut by a modern pipe. Approximately 2m north of the kiln was an isolated posthole with no finds (105).

Pits 141 and 64

The only other archaeological features were two substantial isolated pits (141 and 64). Pit 141 to the south was heavily truncated; it was *c.*1.5m in diameter and reached 1.55m in depth before excavation ceased. Datable pottery (*c.*AD 70–160) came from the upper fills (159, 152, 142), indicating contemporaneity with the use of the kiln. Pit 141 contained the highest quantity (5) of stamped mortaria of any feature on site. Lying 1m to the north was pit 64, with a diameter of 1.1m and a depth of 1.8m. 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 to mid-2nd century AD, indicating that the pit 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 and 194) and dump layers (Figs 3 and 5)

This part of the site contained two very large pits which were presumably used for clay extraction, and then subsequently in-filled with midden material in periodic episodes. Pit 194 was 6–8m in length, although its exact dimensions remain unknown, while directly to the east, pit 10 was *c.*4.1m in length and *c.*0.85m wide. Both were truncated by the 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 pits, dating *c.*AD 50–160 (probably the end of the 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 70–140, although an Oxfordshire white ware mortarium rim dating to AD 240–300 was also recovered from this layer. In broad terms, the layers of dumped material contained two date ranges — the lower levels *c.*AD 50/70–120/40, and upper levels *c.*AD 140–160/200. This most probably represents successive dumping episodes of mixed kiln and domestic refuse throughout the use of the kiln site.

A circular pit (20) further to the east, 1.2m diameter and 0.65m in depth, was probably also used for the disposal of waste material. It contained pottery dating AD 50–160, with most 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), 1.5m across and 0.15m 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 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 amphora 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.*1.4m by 3.8m and *c.*0.81m deep, was uncovered on the north-eastern corner, sealed with a layer

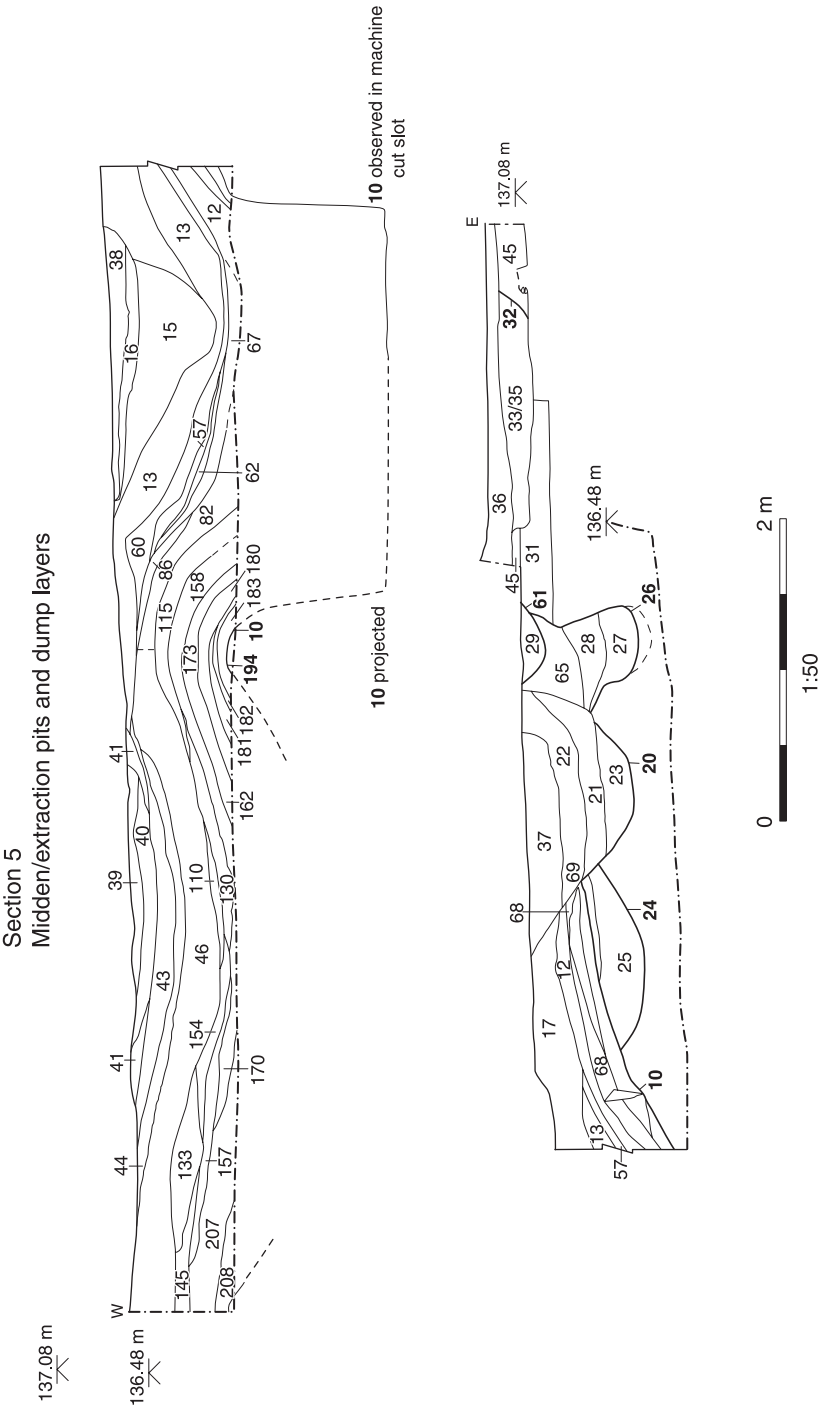

Fig 5. Brockley Hill House, section plan: middens

of cobbling (81/46); the latter was probably part of a larger cobbled area represented further to the south by 92. The fills of 186/211 contained no diagnostic pottery, although a probable mid-2nd-century coin was recovered from just below the cobbled surface. This surface produced pottery mostly dated to AD 150/160, while subsequent layers contained pottery of early to mid/later 2nd-century date. The function of this pit is unclear; it may have been contemporary with the last phase of the kiln, with the cobbled surface perhaps being laid when the kiln went out of use in the mid-2nd century.

To the south of the rectangular pit, part of a north-west–south-east ditch was revealed (120), with late 1st/early 2nd-century pottery in its fill. It cut posthole 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; these may have formed part of the Watling Street western road ditch. In section, it lay 1.2m across and *c.*0.82m in depth, and contained no datable pottery.

South-east area

Pits (98, 136 and 139) and postholes (123 and 146) (Fig 3)

Pits 98 and 136 and posthole 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 posthole 146. Pit/posthole 123 contained no datable pottery.

Post-Roman features

Along the eastern side of the demolished house lay a 1.2m-wide ditch (235) traced for approximately 13m, 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 163,637g, 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 in the vicinity.

Nature of the assemblage

The assemblage was generally in good condition, although this varied within individual features. An overall average sherd size was recorded as 15.9g. Pottery was recovered from the processing of fifteen samples taken to retrieve environmental material and accounted for 1,465 sherds (6,112g); the average sherd size of 4.2g 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 produced between 30 and 100 sherds, and 72 produced less than 30 sherds. 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 carbonised 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

Table 1. Quantification of pottery assemblage by fabric types

Fabric	Description	Sherd count	% sherds	Weight (g)	% wt	ENV	EVE
?VRCC	?Verulamium region colour-coated ware	3	0.03	10	0.01		
?BHWS	Brockley Hill white slip	6	0.06	45	0.03		
AMPH	Miscellaneous amphora type fabric	2	0.02	137	0.08		
BAET	Baetican Dressel 20 amphora fabric, unspecified	24	0.23	3025	1.85	1	70
BB1	Black-burnished 1 ware	5	0.05	57	0.03	2	12
BB2	Black-burnished 2 ware	5	0.05	56	0.03	3	19
BBS	Black-burnished-style ware	33	0.32	573	0.35	7	118
BHWS	Brockley Hill white slip	443	4.32	5420	3.31	39	826
CCRB	Miscellaneous colour-coated ware	3	0.03	6	0		
COAR	Miscellaneous coarse ware	1	0.01	51	0.03		
COLCC	Colchester colour-coated ware	8	0.08	54	0.03	1	12
COLWW	Colchester white ware	2	0.02	6	0	1	30
FINE	Miscellaneous fine ware	1	0.01	15	0.01		
GROG	Grog-tempered ware	112	1.09	1989	1.22	17	177
HWB	Highgate 'B' grog-tempered ware	130	1.27	2993	1.83	8	79
HWBR	Highgate 'B' red-slipped	1	0.01	16	0.01	1	7
HWC	Highgate 'C' sand-tempered ware	86	0.84	736	0.45	8	128
MHAD	Much Hadham ware	1	0.01	6	0		
MHWW	Mancetter-Hartshill white ware	1	0.01	18	0.01		
MICA	Miscellaneous mica-dusted ware	5	0.05	35	0.02	4	29
NKGW	North Kent grey ware	2	0.02	18	0.01		
NVCC	Nene Valley colour-coated ware	45	0.44	233	0.14	6	148
OXID	Miscellaneous oxidised ware	212	2.07	2664	1.63	17	202
OXWW	Oxfordshire white ware	3	0.03	113	0.07	1	14
RWS	Miscellaneous red- and white-slipped ware	3	0.03	21	0.01		
SAM	Miscellaneous samian ware	17	0.17	73	0.04	2	5
SAMCG	Central Gaulish samian	34	0.33	606	0.37	9	141
SAMEG	East Gaulish samian	4	0.04	70	0.04		
SAMLG	La Graufesenque samian ware	59	0.57	724	0.44	23	129
SAMMV	Les Martres de Veyre samian ware	3	0.03	59	0.04	1	7
SAND	Miscellaneous sand-tempered ware	389	3.79	3403	2.08	49	718
VCWS	Verulamium region coarse white-slipped ware	5	0.05	321	0.2	1	20
VEGE	Early Roman vegetable/chaff-tempered ware	2	0.02	58	0.04		
VRG	Verulamium region grey ware	154	1.5	2266	1.38	15	178
VRR	Verulamium region red ware	7	0.07	143	0.09	2	30
VRW	Verulamium region white ware	8454	82.36	137617	84.1	472	8960
Total		**10265**	**100%**	**163637**	**100%**	**489**	**12059**

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 (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: Black-burnished wares, Highgate Wood B, BR and C, and

North Kent Greyware. Unsourced coarsewares formed a sizeable component of the assemblage. Recent petrological studies of Verulamium coarse ware by Seeley and Drummond-Murray (2005) 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; only small proportions originated from Les Martres de Veyre and other Central Gaulish sources.

Within this report the term 'kiln products' is taken to refer to vessels likely to have been produced by the Brockley Hill kilns, but 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 in 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 was 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.

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

Table 2. Quantification of kiln products by sherd count, weight and EVE

Fabric	Sherd count	% sherds	Weight (g)	% wt	EVE	% EVE
BHWS	443	4.9	5420	3.7	826	8.2
MICA	5	0.1	35	0	29	0.3
VRG	154	1.7	2266	1.6	178	1.8
VRR	7	0.1	143	0.1	30	0.3
VRW	8454	93.3	137617	94.6	8960	89.4
Total	**9063**	**100**	**145481**	**100**	**10023**	**100**

Table 3. Quantification of forms occurring in local fabrics

Description	Form code	ENV	EVE
Unidentified	?	8	72
Flagon (unidentified)	1	34	371
Hofheim flagon	1A	5	42
Ring-necked flagon	1B	5	60
	1B2	106	3784
	1B3	1	30
	1B5	10	137
	1B7	23	631
Pinch-mouthed flagon	1C	2	100
Disc-mouthed flagon	1D	8	565
Two-handled flagon	1E	1	6
Flagon with continuous body	1H	1	19
Amphora-type flagon	1J	13	336
Pulley-rimmed flagon	1K	3	25
Flask or bottle	1N	1	47
Jar (unidentified)	2	39	382
Bead-rimmed jar	2A	3	25
Necked and cordoned jar	2G	30	505
Neckless jar	2J	8	103
	2J1	1	50
	2J2	1	10
Honey-pot jar	2K	3	54
Necked jar	2T	23	322
Storage jar	2V	1	2
Hook-rimmed jar	2W	1	6
Jar or beaker	2M	1	25
Beaker (unidentified)	3	2	21
Everted-rimmed beaker	3C1	1	30
Bowl (unidentified)	4	14	139
Reed-rimmed bowl	4A	28	278
	4A1	1	15
	4A1/2	3	21
	4A2	2	29
	4A3	4	63
	4A4	19	349
	4A5	1	10
	4A6	1	22
	4A7	3	25
	4A8	13	172
Curving walled bowl	4F	2	28
Bead-rimmed bowl	4H	1	8
Mortarium (unidentified)	7	5	-
Bead and flange mortarium	7BEF	15	210
Hook-flanged mortarium	7HOF	43	438
Lid	9A	31	340
Tazza	9C	7	82
Crucible	9T	4	34
Total		**532**	**10023**

fabrics, with a 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 — 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 only the rim of a disc-necked vessel in NVCC and a ring-necked flagon and unidentified type in an oxidised ware. Lids (9A) were present in oxidised and reduced sandy wares. One of the more unusual forms was a triple vase (9E) in VCWS.

Imported amphorae 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 amphora handle was stamped PORLFS (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 (see 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%, and 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, of which a small quantity was present. A further development, the

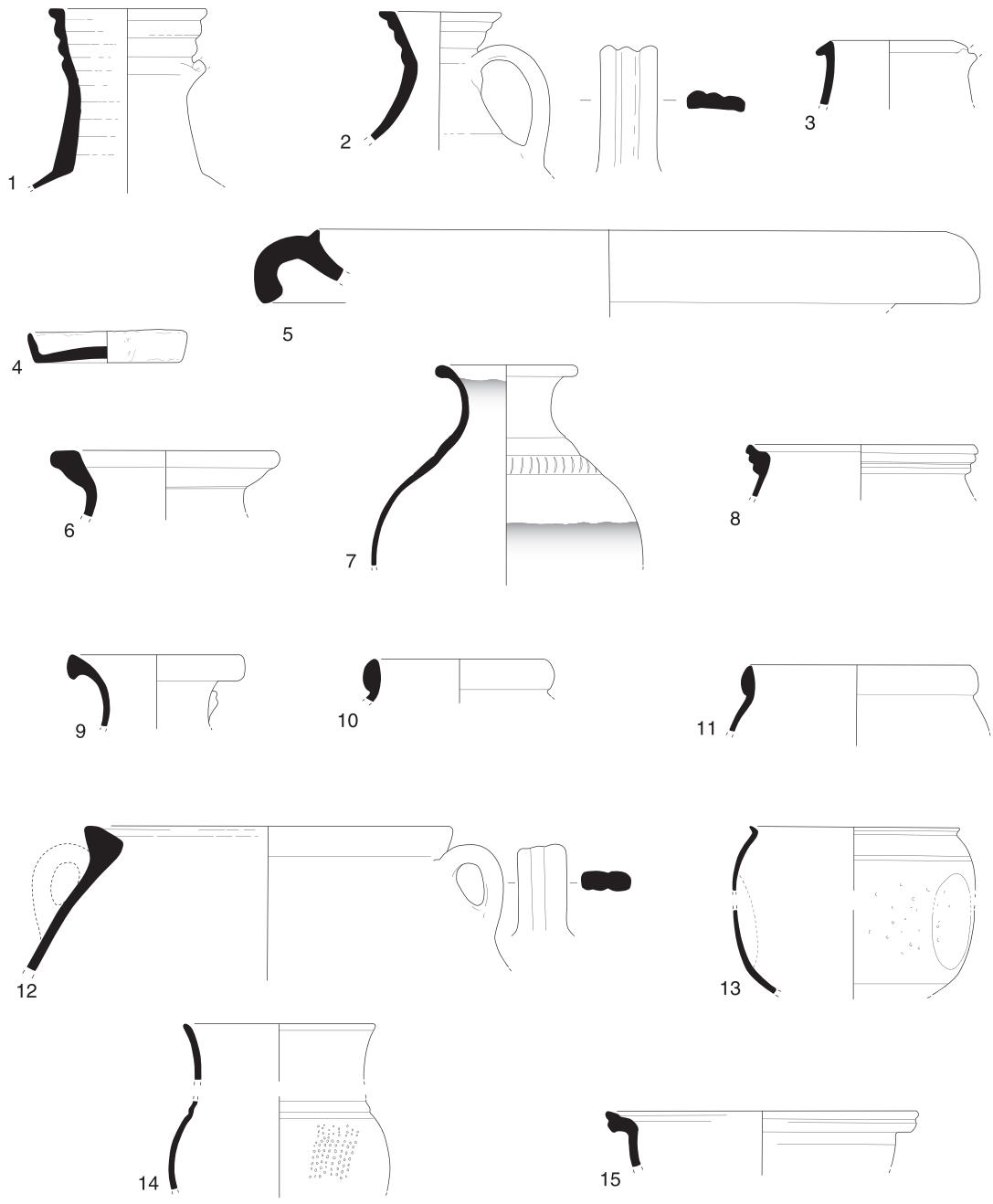

Fig 6. Brockley Hill House pottery (Nos 1–15). Scale 1:4.
Pit 99 (AD 70–120)
1. Ring-necked flagon 1B2 (VRW). Context 135; 2. Ring-necked flagon 1B2 (VRW). Context 135; 3. Disc-mouthed flagon 1D (VRW). Context 135; 4. Shallow dish (VRW). Handmade. Context 155; 5. Hook-flanged mortarium 7HOF (VRW). Context 150.
Pit 141, context 152 (AD 140–160)
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).

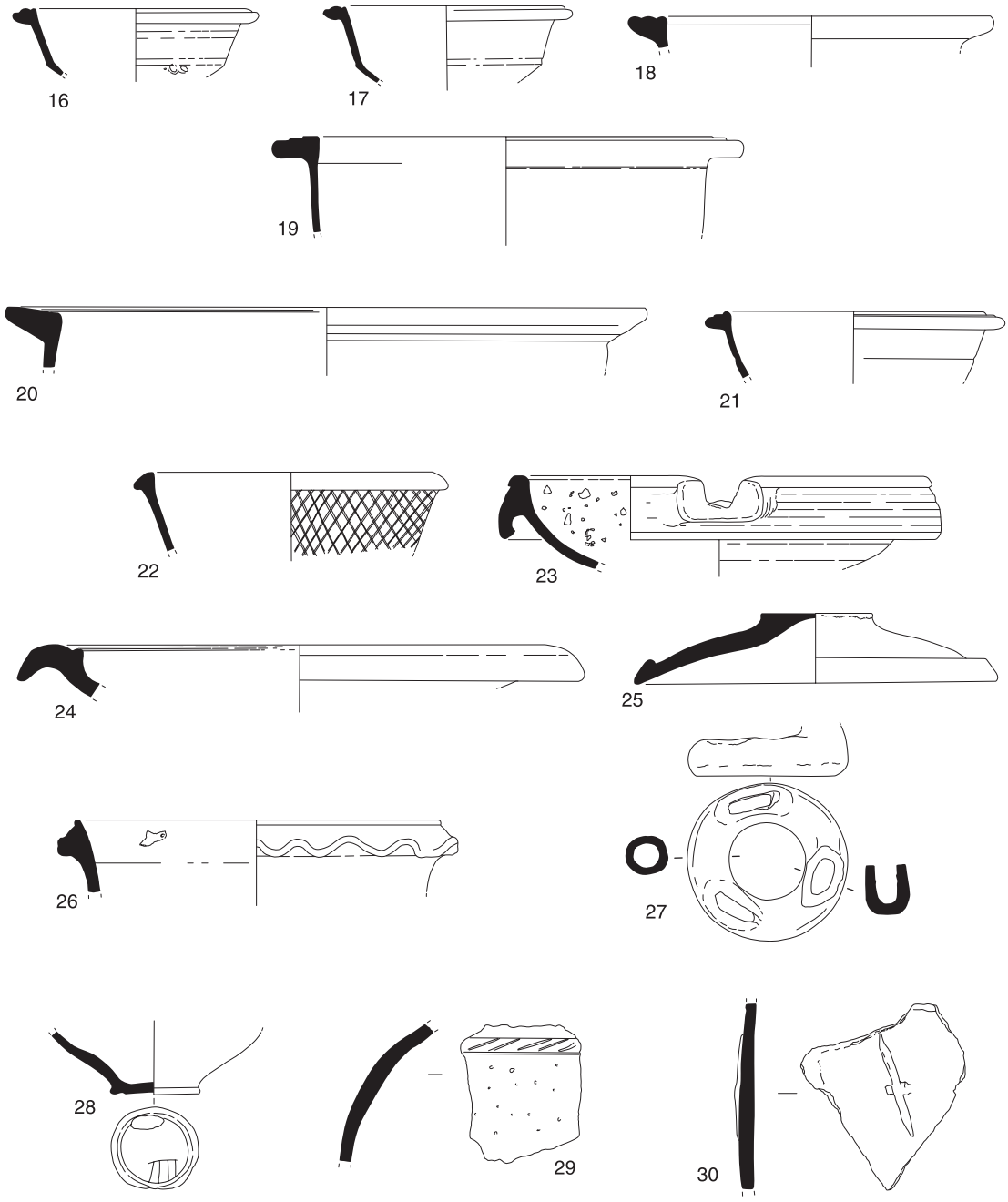

Fig 7. Brockley Hill House pottery (Nos 16–30). Scale 1:4.
Pit 141, context 152 (AD 140–160)
16. Reed-rimmed bowl 4A2 (BHWS). Notched at carination; 17. Reed-rimmed bowl 4A2 (BHWS); 18. Reed-rimmed bowl 4A4 (BHWS); 19. Reed-rimmed bowl 4A4 (VRW); 20. Reed-rimmed bowl 4A8 (BHWS); 21. Reed-rimmed bowl 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'.
Pit 64, context 70 (AD 43–100)
29. Jar (HWB). Handmade, incised decoration on shoulder.
Layer 86 (AD 50–160)
30. Body sherd (VRW). Applied clay strip, possibly from face pot, cf. Davies et al 1994, fig 37.182–3.

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 evidence from London that suggests 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 the latter form were recorded. Pinch-mouthed flagons (1C), small two-handled flagons (1E), wide-mouthed flagons (1H), and large double-handled amphorae (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 included 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 mica-dusted fabric (MICA). Bowls were similarly restricted in the range of forms represented, being confined predominately to reed-rimmed bowls. Within this class all types were present (Marsh & 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 mortarium type in BHWS, with the remainder occurring in VRW. Enough of the rim survived on two examples to be certain 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 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.

Catalogue of illustrated pottery

The illustrated ceramic group (Figs 6–7) shows the typological range of the pottery from the site's main periods of activity. Pieces of intrinsic interest are also shown.

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). '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 II 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

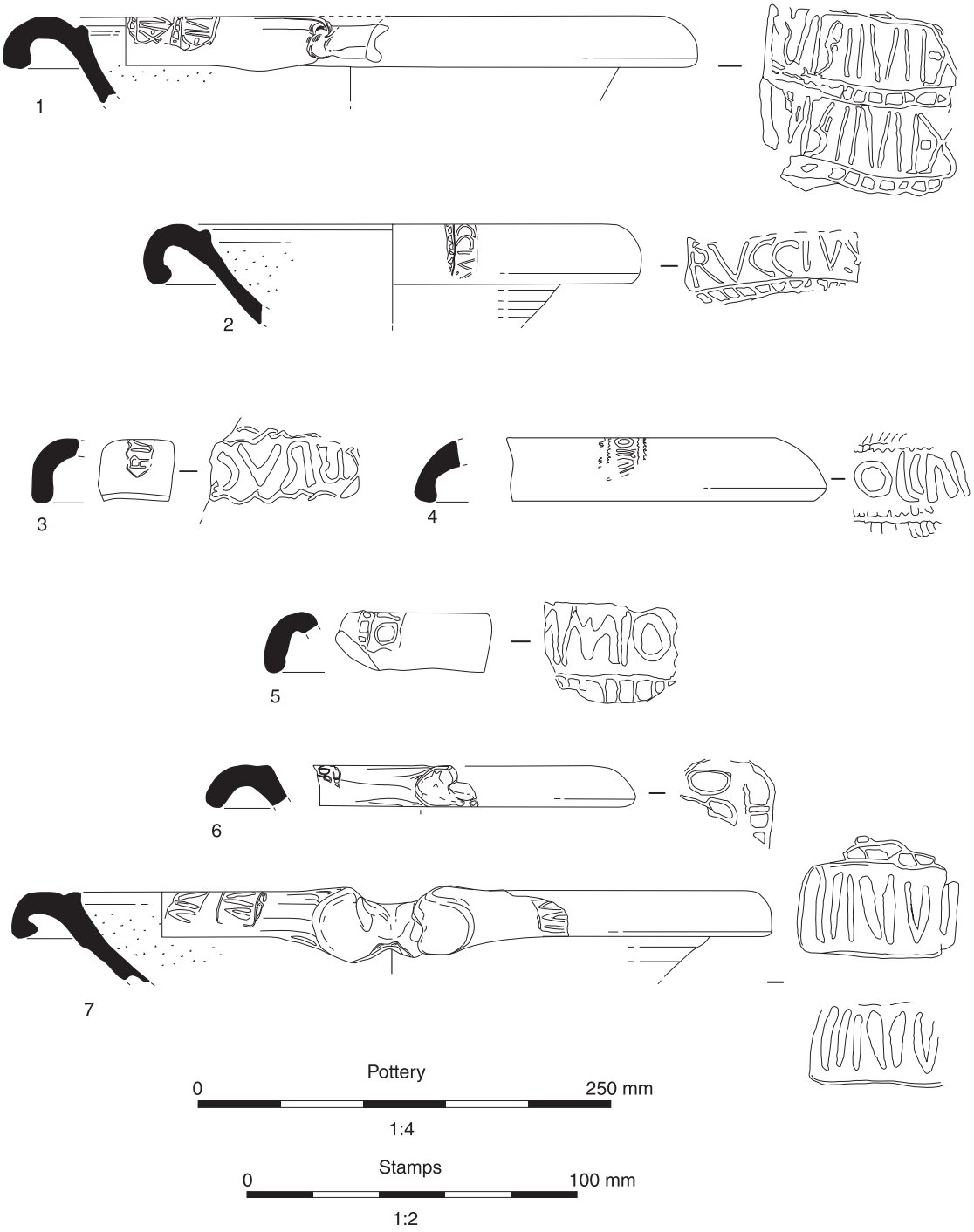

Fig 8. Brockley Hill House stamped mortaria (Nos 1–7)

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.

Bruc(c)ius
(context 72; prn: 832; Fig 8, 2)
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 (6exx); Castle 1972b, 157, fig 4, MS4; Castle & Warbis 1973, 102, fig 7, M1; Castle 1976, 213, 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 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, 3exx mentioned, plus 1 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 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 (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 & Wade 1999, 206, fig 4.25, nos 35–6) 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.

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 30 mortaria from Brockley Hill with stamps from the same die (1972c, 84) as well as two mortaria stamped with die A and four with stamps from die B, all of which led to the 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) found 14 more mortaria of Doinus: 1 with stamp A (MS13), 2 with stamp C (MS14-15), and 11 with Stamp D (only 8 mentioned specifically, MS19–26).

More than 180 mortaria of Doinus have been recorded from sites in Scotland, England and Wales, excluding those found at Brockley Hill; 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 2nd or very late 1st century; this suggests that stamp D is from his latest die. A date within the period AD 85–110 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 & St Joseph 1957, 20–1) and this would support this dating.

Iunius 1
(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 unpub), 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 & 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 a 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 recorded 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' 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 Frere 1984, 286, 83–7 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/

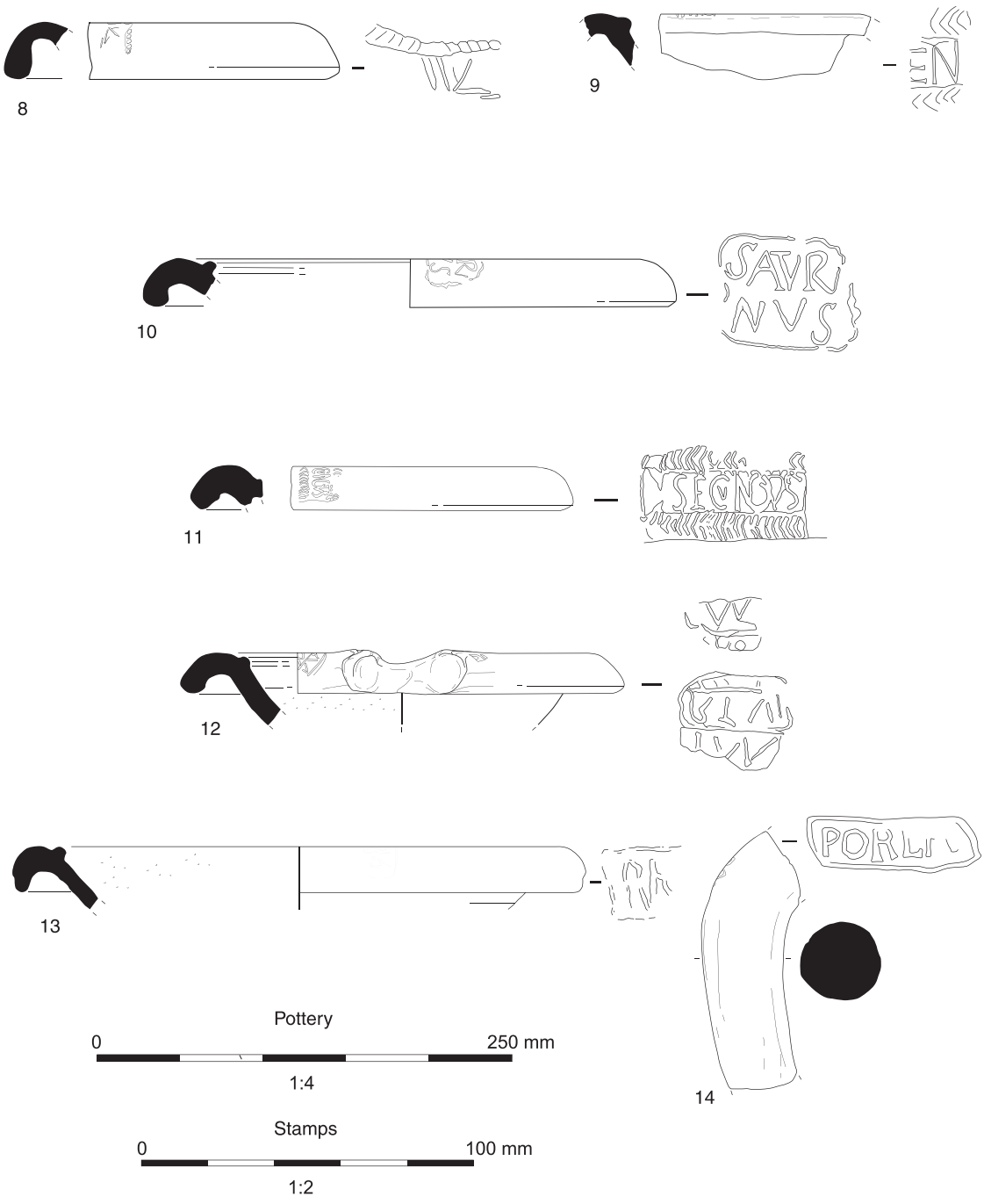

Fig 9. Brockley Hill House stamped mortaria (Nos 8–13) and amphora handle (No. 14)

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, indicating 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 illus). Castle published three namestamps in 1972 (fig 6, M64–66), and 32 namestamps in 1976 (fig 8, MS94–125) plus two counterstamps (MS126–127); Castle found two extra namestamps (not published). Thus, a total of 47 of his mortaria have been recorded from Brockley Hill. A mortarium of his found at the Northgate kiln site in London has given rise to speculation that he could also have been active there, but the evidence is not conclusive although his work is of the right date (Seeley & Drummond-Murray 2005, 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); Cardurnock; 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 & Gillam 1953, fig 7 no. 38, 36). A stamp at Verulamium was in a deposit dated AD 130–140 (Frere 1972, 378, no. 36, B II 28C). The rim-profiles and spouts used by Saturninus 1 all point to activity within the period AD 110–140.

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).

Forty-nine of his mortaria have been found at sites throughout England, Wales and Scotland, at least 17 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 or even Mictvs. The stamp has occasionally been interpreted as Samertucus (O'Connell & 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 & Hull 1947, 212, 135).

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 filled with 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 the original matrix.

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.

Unidentified stamps
(Context 62; prn:620; Fig 9, 13)
A partially impressed, right-facing stamp survives. 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. 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 28–9 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 & Wade 1999 (160, fig 3.16, no. 37 and 158), where Funari suggests that this stamp may have been in use for at least the period *c.*AD 90–130.

Discussion

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, while some 25 deposits were dated by pottery from the late 1st century to the beginning of the 2nd century. Activity during this period is confirmed by the mortaria stamps of Brucius, Doinus and Secundus. In total, pottery assigned to early Roman deposits (that is, placed within the range AD 43/50–120/130) accounts for *c.*25% of the assemblage by EVE. This represents a more intensive occupation compared with the 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 was almost absent at Canons Corner (Biddulph 2001, 34).

Pottery attributed to middle Roman deposits (*c.*AD 120/130–160) contributed about 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 the site between AD 110 and 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 the 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 the latter sites intensified, activity at Brockley Hill House declined. Pottery dating after AD 150/160 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 on a very small scale. In contrast, the assemblages from the former MoD site, the WA sites (Seager Smith 1998) and Canons 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. The kiln-associated deposits also yielded large individual groups of pottery, each weighing on average 1,244g. Similar sized assemblages were recorded from pits and dumps. The mean sherd weights from these feature types were broadly similar, ranging from 14 to 16g per sherd, suggesting that all 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 Canons 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 on 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 82g. 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 having entered 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; as a result, jars never dominated here as they usually did on most Romano-British sites. Beakers formed little part of the repertoire of Verulamium region potters and 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 differences. 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 & 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.

Clearly the assemblage has been shaped by

Table 4. Comparison of local and non-local pottery supply

Type	Non-local		Local	
	EVE	% EVE	EVE	% EVE
1 Flagon	150	7.3	6153	61.8
2 Jar	781	38.5	1452	14.6
2/3 Jar or beaker	96	4.7	25	0.3
3 Beaker	208	10.3	45	0.5
4 Bowl	267	13.2	1163	11.6
5 Dish	250	12.3		
6 Cup	88	4.3		
7 Mortarium	14	0.7	648	6.6
8 Amphora	70	3.4		
9 Miscellaneous	105	5.3	456	4.6
Grand Total	**2029**		**9942**	

the products of very local potters. However, the assemblage comprised not only vessels removed through quality control, but also included pottery used and discarded by the people working (and possibly living) at the site. This 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 number of mortaria produced at Brockley Hill and elsewhere were worn internally. A number of more specialised forms were evident at the site. Frilled-rimmed *tazze* with pedestals (9A) were chief amongst 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 with 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.

Willis (1998, 105) has observed that the proportion of decorated compared with plain samian increased on 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 Canons 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.

Metalwork

Leigh Allen, Alex Smith and Paul Booth

Three certain coins were found. 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 sestertius 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 a 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 kiln and nearby middens and pits. Analysis was undertaken on charcoal from *in-situ* contexts within the kiln to indicate the selection/use of fuel for industrial firing, and for comparative purposes, from pits and middens located in other parts of the site.

The condition of the charcoal varied but was mostly rather friable. 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.

Results

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 80mm in length and 40mm 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 *c.*100 rings. Context 117 represented the collapse of the upper part of the kiln into the 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

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*).

Pit 186/211

Charcoal, <15>, was also examined from a large rectangular pit 186/211. 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

Charcoal sample <4> from context 12, the fill of pit 10, consisted predominantly of oak (*Quercus* sp.) heartwood from largewood, but also included hazel (*Corylus avellana*), 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

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

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 15–20m 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 the 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 110mm in diameter 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).

In the early phases of infilling of pit 98, 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 2003), Redcliffe, Dorset (Gale forthcoming), and Worthing Road, Sussex (Gale 2002). Firewood used at these sites usually consisted of roundwood (often coppiced) up to about 50mm 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

Table 5. Charcoal from pottery kiln pit 99 and associated features

Description	*Acer*	*Alnus*	*Betula*	*Corylus*	*Fraxinus*	*Pomoid-eae*	*Prunus avium*	*Prunus spinosa*	*Quercus*	*Salicaceae*
Kiln pit 99 (5 samples)	1	1	-	6	1	2	-	*cf.* 1	346h, 1r, 19s	-
Fill of pit 98 (2 samples)	-	-	-	1	-	-	-	-	49h, 4s	-
Deposit 43 (1 sample)	1	-	1	3	2	11	*cf.* 1	11	69h, 3s	-
Midden/ pit 10 and 194 (2 samples)	2	-	-	5	-	2	*cf.* 1	4	97h, 27s	*cf.* 2
Pit 211 (1 sample)	-	-	-	2	-	1	-	-	29h, 10r	2

Key. h = heartwood; r = roundwood (diameter <20mm); s = sapwood (diameter unknown).
The number of fragments identified is indicated

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, 1 inch thick and 2 foot long, produced the best result for the main firing, followed by fine brushwood to increase the temperature (Lyne & 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 100mm in diameter. These were not obtained from coppiced poles but from extremely slow-growing trees, possibly a hundred 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). 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 volume; McKinley 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 (24g) of bone was recovered by hand during excavations, with an additional 57 fragments (40g) recovered from environmental samples sieved through a mesh of >10mm and 10-4mm. 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 (contexts 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. It is most likely that the animal bone derived from domestic refuse, and was dumped in with other waste material.

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 emphasises the apparently 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 kiln site lies at the heart of the primary pottery production area near to the crest of the hill, 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 *c.*AD 50–170, with other production centres known at Verulam Hills Field, Radlett and Little Munden (Seeley & Thorogood 1994, 223). The Brockley Hill potteries are known to have been among the earliest of this industry, established around the same time as the founding of London and the construction of Watling Street (Thompson 2000). This industry was the most important supplier of coarseware pottery to London in the late 1st and early 2nd centuries AD, and it was also of national importance, producing early highly Romanised 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 almost certainly to have ceased by the latter part of the 2nd century. After this time, it has been suggested that production moved to other areas such as Oxfordshire, where the local clays were 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 & Thorogood 1994, 227–8); two production sites in particular, lying either side of Watling Street, were used to support 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 a number of potters may have had their workshops here at any one time. It seems most likely that the potters themselves were not local, with the earliest at least probably being brought in from the Continent (Bird 2005, 22). Other potters are known to have previously worked in Colchester, while some later moved on to the Mancetter/Hartshill potteries in Warwickshire (Thompson 2000).

The growth of the industry at Brockley Hill 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 from further afield. Nevertheless, the same conditions could also be found in less 'marginal' areas closer to London or Verulamium, and Bird (2005, 24) has suggested the location of Brockley Hill may have been chosen as it did not interfere with existing land-rights. The potteries instead were established in previously unused or unallocated lands, perhaps by a local entrepreneur associated with the landholding of *Sulloniacis*, 'the estate of Sullonis' (*ibid*, see below).

The extent, and indeed the very existence, of domestic settlement at Brockley Hill remains largely unknown. Moreover, 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 been a considerable fluctuation in any resident population levels. It may well have been that the potters came to the area in spring, used local labour that was drafted in, and then departed in the autumn, with very little or no occupation in the intervening period (Thompson 2000). Two Roman cremation burials near to Watling Street further down the hill (Suggett 1958) may mark the southern limit of any seasonal settlement associated with the pottery industry and a scatter of 1st- and 2nd-century artefacts just to the north may indicate the primary domestic area. No certain domestic buildings have yet been found in the area, with the possible exception of a number of insubstantial 'huts', comprising sunken clay floor surfaces, interpreted as drying sheds (*ibid*, 67). There is certainly no direct evidence for the settlement/posting-station of *Sulloniacis*, 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, probably further to the south. A further piece of sandstone masonry was recovered from a Roman gully further up the hill, near a well containing finds dating to *c.*AD 120–250 (Castle & 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 364–375), 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.

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

Alex Smith, Lisa Brown and Kate Brady

INTRODUCTION AND EXCAVATION METHODOLOGY

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 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).

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. Further evaluation involved the excavation of a single small

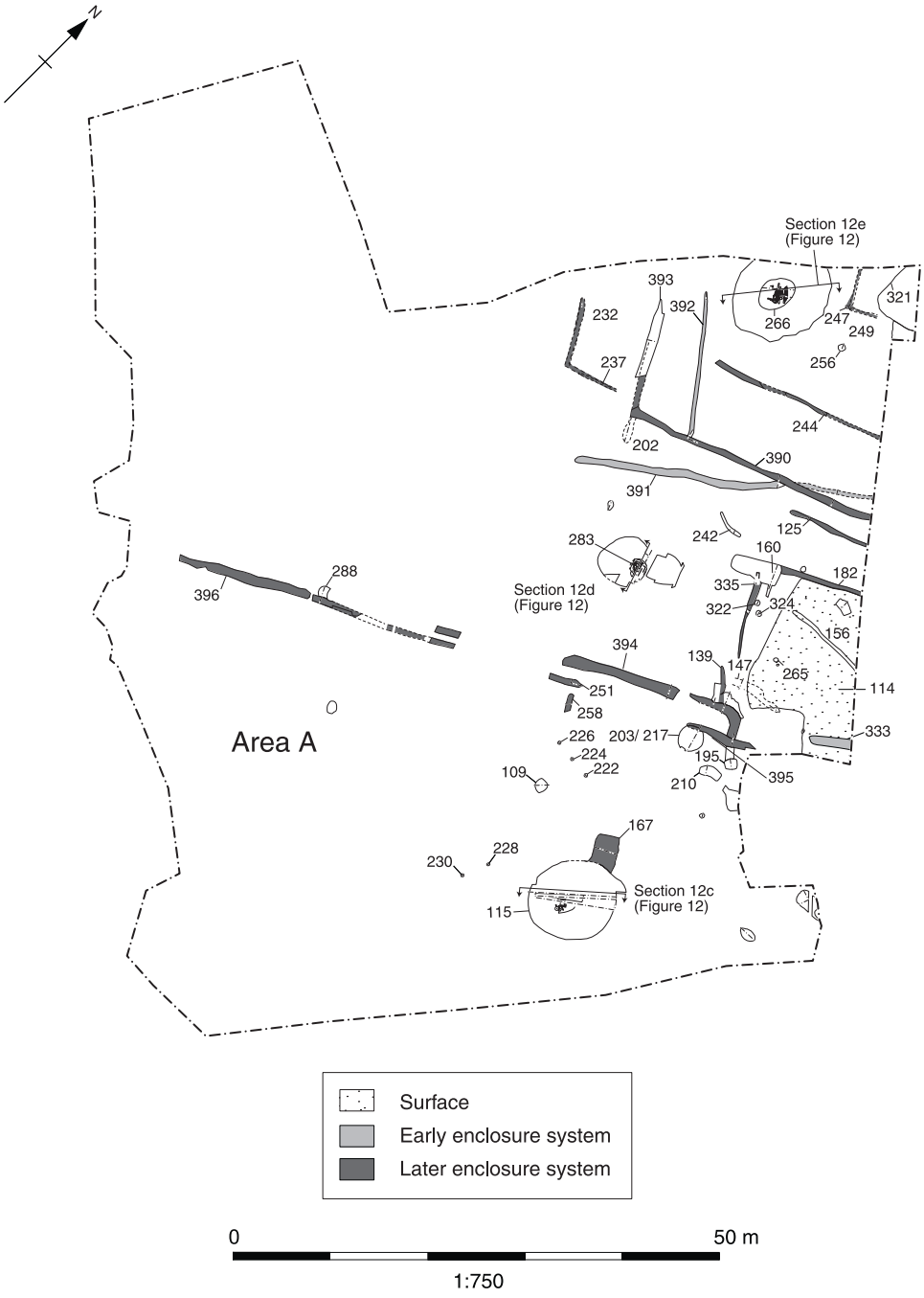

Fig 10. Brockley Hill former MoD site, Area A

trench (*c.*42.5m²) 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

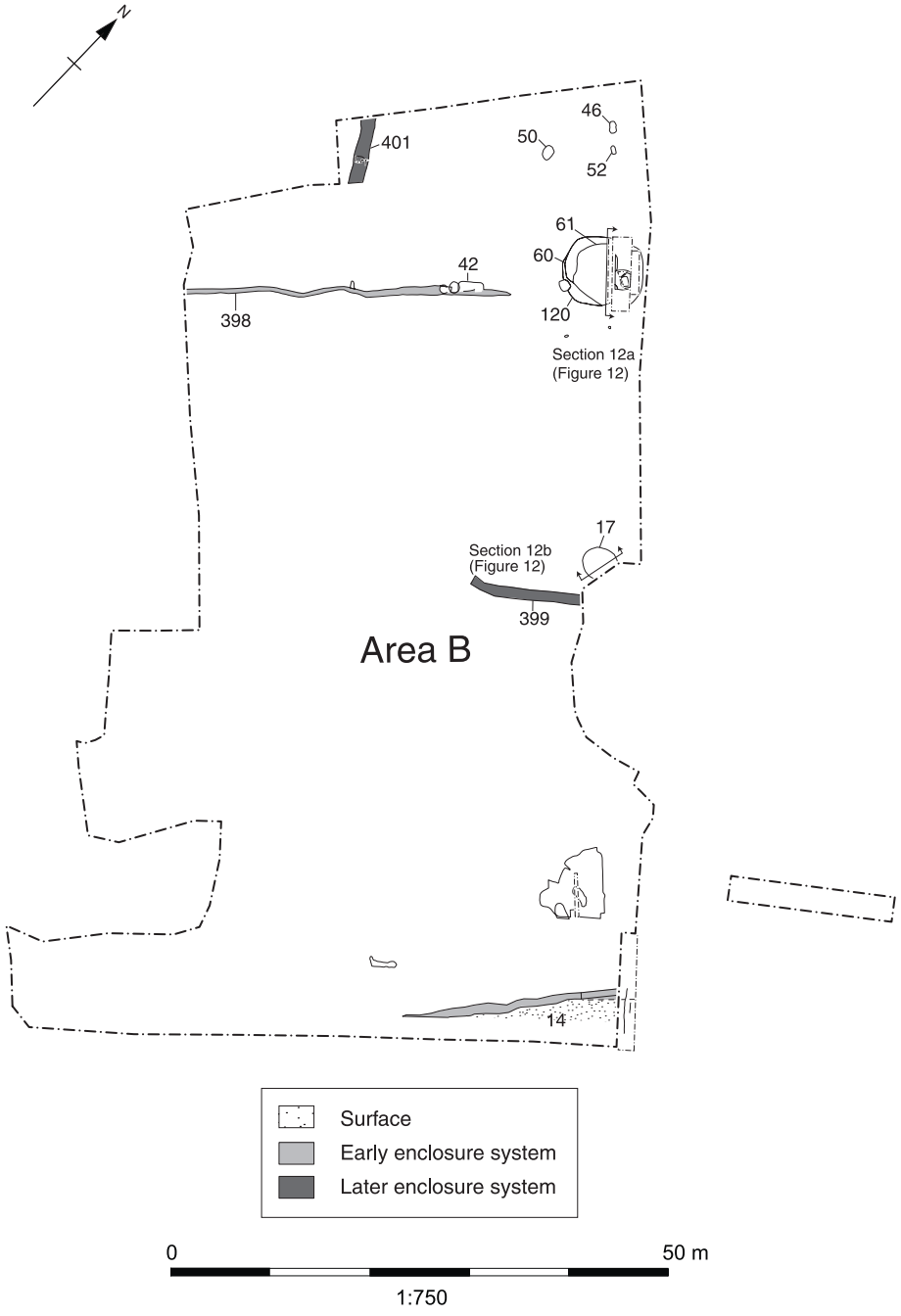

Fig 11. Brockley Hill former MoD site, Area B

significantly impacted and truncated archaeological horizons. Recorded deposits in general survived only in fragmentary form, with the exception of deeper features 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, many of which had been severely truncated by later activity. Although differential preservation almost certainly played a role, in Area A the focus of 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 were 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.

Early enclosures

During the early Romano-British period an enclosure system represented by boundary ditches was laid out on an ENE–WSW and NNW–SSE alignment, apparently defining at least four areas. Ditch 391 extended for a length of 31m, while another ditch, 392, ran approximately perpendicular to it. A short length of ditch, 333, lay some 26m to the south of ditch 391, on the same alignment, and was regarded as early on the basis of alignment and stratigraphic position underneath a layer of cobbling (114).

Two ditches in Area B may also belong to this early enclosure system. Ditch 398 lay on the same alignment and contained pottery dated to AD 50–70. At the southern end of Area B, ditch 400 lay on a similar but slightly divergent alignment and produced pottery dated to AD 50–70 as well as more generic Roman material.

Later enclosures

Area A: northern enclosures

Sometime 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. The westernmost of these, 232 and 237, produced a few sherds dated to AD 100–200. The gullies were very insubstantial, and 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. Two additional shallow gullies, 244 and 125, had 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 another L-shaped length of ditch, 390, probably post-dated gullies 232 and 237. Fragments of a jar dated to AD 200–250 were recovered from the single fill of the east–west stretch of this ditch.

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. 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 0.17m thick, but it was cut by pit 186, which produced 3rd/4th-century pottery along with fragments of tile. Maintenance of the surface into the later Romano-British period is indicated by a number of repairs, the latest of which contained pottery dated to AD 240–300. Evidence for activity associated with the surfaced enclosure consisted of two

pits (324, 322), and a posthole (265). All of these features had been heavily disturbed by modern activity, although 2nd-century pottery was recovered.

Area A: southern enclosure

Ditch 394 lay to the south of the metalled area and extended for 32.5m on an ENE–WSW alignment before turning southwards for a further 4.9m, where it was cut by pit 195 (see below). A primary fill produced a few fragments of tile and pottery dated to AD 50–70, while the upper fills contained pottery dated to AD 250 or later, along with a piece of hearth slag. The western stretch of the ditch was truncated by modern disturbance. A small length of gully, 139, extended northwards from the corner of ditch 394, and contained pottery dating to AD 350–400. A large pit, 203/217, situated in the north-east corner of the enclosure 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 three 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 may have corresponded with terminal 251 in representng an entrance to the enclosure, *c.*11m across, and contained four sherds of pottery dated AD 260–360.

The northern terminal of 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 northwest, 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). Its upper fill contained 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. The upper fill of ditch 401 produced a small group of pottery sherds dated to AD 240–400 along with a dump of 39 tile fragments. It was cut through by a posthole. Ditch 399 was of similar proportions and 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 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 the 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 (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 produced a single pottery sherd dated to AD 20–70. At only 0.44m deep, the pit was probably too shallow to have functioned as a waterhole, but it may have been abandoned when only partly dug.

Well 266 (Fig 12)

A large well, 266, lay at the northern edge of Area A. It was sub-circular in plan, measuring 7.6m across the top, with straight sides, and was excavated to a depth of 3.5m. 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 (365 and 337), there were fragments of chopped logs and timbers that may once have belonged to a barrier or superstructure around the top of the well. A near complete jar with missing rim from 365 (Fig 14, 16) was only broadly datable to AD 40–400. The vessel had burnt residues adhering to it and may have been discarded as useless but, bearing in mind other items recovered from surrounding deposits, it could represent a special deposit. Fill 337 contained pottery sherds of AD 125–200 along with a small number of unidentifiable animal bone fragments. A significant object from this deposit was the lower half of a glass bottle, datable to the mid-2nd/early 3rd century AD (Fig 16). 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, fill 331 sealed a number of wooden objects and contained several artefacts, including remains of five leather shoes (Fig 17) and a length of twisted hazel withy rope (Fig 18), 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 horncore from this fill suggest horn-working on the site.

The environmental evidence from lower fills 365 and 331 suggests that the well dried out seasonally (see below). Fill 331 was sealed by 364, probably formed by erosion, which 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 extended across the whole cut, and contained 42 sherds of pottery dating to AD 270–350 and a fragment of a badly corroded iron implement. 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.

Pit 256

A stratigraphically isolated posthole or small pit, 256, lay close to well 266. It was 0.55m in diameter and 0.53m 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 30m to the south of well 266, and was excavated to a depth of 3m. The dating evidence for the construction and fill sequence of the well was poor, with a single pottery sherd dated to AD 100–160 coming from one of the lower fills, 290, and no other

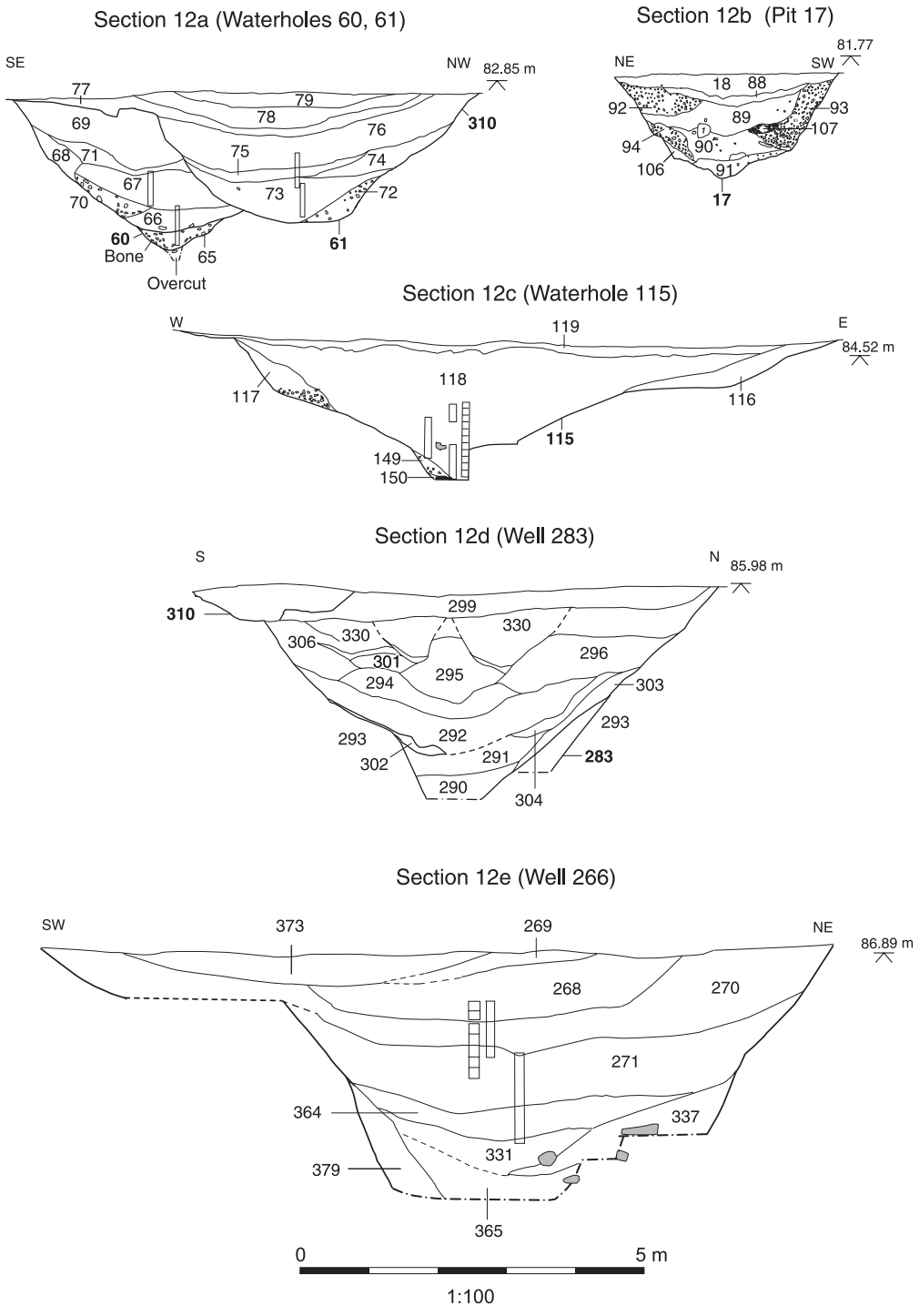

Fig 12. Brockley Hill former MoD site, sections through waterholes and pits

ceramic material being 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 edgewise, as they would have let much silt into the well water as a result, although the gaps may have been partially due to the decay of sapwood. It is unlikely that the well was used for very long, due to the curious, rather weak construction of the lining.

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 2m in diameter and 1.3m deep, with the primary fill containing 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 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 contained a high charcoal content and other burnt material, including grain, bone and nutshells, suggesting that it derived from a domestic hearth.

Waterhole 115 (Fig 12)

Waterhole 115, in the south of Area A, cut a short length of NS–SW-aligned ditch, 167 (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 8.92m across the top with quite a gradual eastern slope. The feature was excavated to a depth of 1.68m. Fills 116 and 117 probably represent collapse of the sides soon after the cutting of the feature. A large fragment of pottery dated to AD 50–200 and a fragment of cow radius were recovered from fill 149, which probably accumulated within standing water. A charcoal-flecked clayey silt, 118, filled the main body of the waterhole, darkening 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 (see Robinson below). The deposit yielded part of a horse femur along with fragments of an upper rotary quern in Millstone Grit (Fig 15), 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. Some of the chips were burnt as if they were fuel left-overs, and others were clearly from joint cutting. 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

A number of other pits lay distributed within Area A (109, 288, 195, 210, 160), most of which contained tile, slag and pottery of 2nd- to 4th-century date. They formed no obvious function.

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 2m across and was excavated to a depth of 1m but is likely to have been much deeper and, like well 283, almost certainly had a timber infrastructure. Timbers (158 and 159) recovered from the lowest 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 the 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, and was itself re-cut at a later date by 61. 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 dish. This fill probably formed in waterlogged conditions. Above this, fill 66 contained pottery of the same date in addition to a cow and a horse tooth. Two deposits followed (70 and 67), formed in waterlogged conditions, which were overlain by deposit 68, formed by natural in-filling and slumping action. Fill 71 represented an original water level in the pit, and above this, deposit 69 represents a long period of low energy silting of the main body of the pit.

Truncating pit 60 was pit 61, its earliest fill, 72, representing 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. The later fills contained pottery of 2nd- to 4th-century date.

Pit 17

Pit 17 lay close to the southern boundary of the enclosure defined by ditches 399 and 401 and dating evidence suggests that it was contemporary with it. An assemblage of 163 pottery sherds produced a broad date range of AD 200–400 for the early fills, 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 contained a total of 22 fragments of Roman tile and seven sherds of pottery, broadly dated to the 1st to 4th century AD.

Post-Roman activity

Two features provided evidence for limited activity 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.

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 was seen. A small amount of post-medieval pottery and a medieval peg tile suggest that the surface may not have been of Roman origin.

FINDS

Pottery

Edward Biddulph

A total of 1,382 sherds, weighing some 27.8kg, 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 also present. With an average sherd weight of 20g, 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.

Nature of the assemblage

Reduced wares are, as might be expected, predominant within the assemblage, taking a combined 31% share (Tables 6 and 7). Verulamium region grey ware (VRG) accounts for almost half of reduced wares by EVE. 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,

Table 6. Quantification of pottery fabrics from the former MoD site

Fabric	Description	Sherds	% Sherds	Weight (g)	% Weight	MV	% MV	EVE	% EVE
AHFA	Alice Holt/Farnham grey ware	8	1%	364	1%	1	1%	0.1	1%
AMPH	Unsourced amphora fabric	3	<1%	48	<1%				
BAET	S Spanish (Baetican) amphora	19	1%	5244	19%				
BB1	Black burnished ware, category 1	9	1%	78	<1%	2	2%	0.1	1%
BB2	Black burnished ware, category 2	4	<1%	78	<1%	1	1%	0.15	1%
BBS	Black burnished-style ware	12	1%	130	<1%	4	3%	0.29	2%
BHAD	Hadham reduced/ burnished ware	39	3%	972	4%	2	2%	0.13	1%
CALC	'Calcite-gritted' or late shell-tempered ware	2	<1%	12	<1%				
CC	Unsourced colour-coated wares	97	7%	933	3%	3	2%	0.76	4%
COLCC	Colchester colour-coated ware	2	<1%	3	<1%				
FINE	Unsourced fine grey wares	22	2%	56	<1%	1	1%	0.2	1%
GAUL	Gaulish amphora fabrics	36	3%	4512	16%				
GROG	Grog-tempered ware	101	7%	774	3%	11	9%	1.26	7%
GROGSH	Grog- and shell-tempered ware	1	<1%	16	<1%	1	1%	0.1	1%
HWC	Highgate Wood C reduced ware	4	<1%	32	<1%	1	1%	0.06	<1%
MHAD	Hadham oxidised ware (including white-slipped fabric)	41	3%	653	2%	3	2%	1.19	7%
NVCC	Nene Valley colour-coated ware	84	6%	658	2%	3	2%	0.5	3%
NVWW	Nene Valley white ware	4	<1%	290	1%	1	1%	0.12	1%
OXID	Unsourced oxidised wares	86	6%	1091	4%	9	7%	1	6%
OXIDF	Unsourced fine oxidised wares	1	<1%	4	<1%				
OXRC	Oxfordshire red colour-coated ware	40	3%	908	3%	8	6%	1.34	7%
OXWS	Oxfordshire white-slipped oxidised ware	2	<1%	54	<1%	1	1%	0.08	<1%
OXWW	Oxfordshire white ware	13	1%	402	1%	6	5%	0.49	3%
PKG	Pink grog-tempered ware	34	2%	1456	5%	2	2%	0.08	<1%
RDBK	Ring-and-dot beaker fabric	7	1%	16	<1%	1	1%	0.07	<1%
SAMCG	Central Gaulish samian ware, probably Lezoux	12	1%	164	1%	2	2%	0.16	1%
SAMEG	East Gaulish samian ware, unassigned to factory	8	1%	135	<1%	2	2%	0.21	1%
SAMSG	South Gaulish samian ware, probably La Graufesenque	8	1%	33	<1%	4	3%	0.24	1%

Fabric	Description	Sherds	% Sherds	Weight (g)	% Weight	MV	% MV	EVE	% EVE
SAND	Unsourced sand-tempered grey wares	204	15%	2440	9%	16	13%	2.53	14%
SHEL	Unsourced shell-tempered wares	4	<1%	17	<1%	1	1%	0.03	<1%
VRG	Verulamium region grey ware	171	12%	2237	8%	12	10%	2.8	16%
VRR	Verulamium region red ware	15	1%	540	2%				
VRW	Verulamium region white ware	270	20%	3117	11%	23	18%	3.68	20%
Med/PM	Medieval/post-medieval	19	1%	276	1%	4	3%	0.37	2%

in contexts of later date. Many of the remaining reduced wares were also of local origin (SAND and FINE), though they 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. These 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 in small quantities from contexts dated from the mid-3rd century onwards. 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 with certainty be identified as BB2. Late Iron Age or early Roman grog-tempered wares (GROG, GROGSH), contributing 8% to the assemblage by EVE, were residual in most deposits. Forms included cordoned jars and platters. Some occurrences in the early Roman period may more properly be identified as Highgate Wood B ware (HWB), although there is little support for this on the basis of the forms present. 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, and 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); a Verulamium source has been posited on fabric grounds (Davies *et al* 1994, 142). Verulamium products inevitably took the largest share of white wares (VRW), accounting for 20% of the entire assemblage

Table 7. Quantification of vessel class by EVE at the former MoD site.

Fabric	Vessel class								Total EVE
	1	2	3	4	5	6	7	9	
AHFA		0.1							0.1
BB1				0.05	0.05				0.1
BB2		0.15							0.15
BBS				0.15	0.14				0.29
BHAD		0.1	0.03						0.13
CC			0.76						0.76
FINE		0.15	0.05						0.2
GROG		0.56		0.15	0.35			0.2	1.26
GROGSH		0.1							0.1
HWC				0.06					0.06
MHAD	1		0.09	0.1					1.19
NVCC			0.5						0.5
NVWW							0.12		0.12
OXID		0.54	0.16	0.05	0.1		0.15		1
OXRC			0.13	0.39	0.75		0.07		1.34
OXWS							0.08		0.08
OXWW							0.49		0.49
PKG		0.08							0.08
RDBK			0.07						0.07
SAMCG				0.05	0.11				0.16
SAMEG						0.11	0.1		0.21
SAMSG				0.1		0.14			0.24
SAND		0.46	0.1	1.72	0.25				2.53
SHEL		0.03							0.03
VRG		2.06		0.64	0.1				2.8
VRW	0.11	3.08		0.49					3.68
Total EVE	1.11	7.41	1.89	3.95	1.85	0.25	1.01	0.2	17.67
% Total	6%	42%	11%	22%	10%	1%	6%	1%	-

Classes represented: flagons (1), jars (2), beakers (3), bowls (4), platters/dishes (6), mortaria (7), lids (9). Medieval/post-medieval pottery is excluded.

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 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 in the late 1st and 2nd centuries. 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, present as folded beakers, was reminiscent of oxidised Hadham ware, if a little coarser, and an east Hertfordshire source may be suggested. The former may be local, the quartz recalling the granular nature of Verulamium region wares. Folded beakers were also 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) 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 also recovered. 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 indication 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 (Davies *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. The assemblage from this period was evenly divided between 2nd-century groups — evidenced in part by the Verulamium region

Table 8. Chronological distribution of pottery fabrics from former MoD site.

Fabric	Early Roman	%	Mid-Roman	%	Late Roman	%	Total
AHFA					0.1	1%	0.1
BAET	0	0%	0	0%	0	0%	0
BB1					0.1	1%	0.1
BB2			0	0%	0.15	2%	0.15
BBS			0.05	1%	0.17	2%	0.22
BHAD			0.13	2%	0	0%	0.13
CALC					0	0%	0
CC			0.63	8%	0.13	2%	0.76
COLCC					0	0%	0
FINE	0	0%	0	0%	0.2	3%	0.2
GAUL			0	0%	0	0%	0
GROG	0.86	68%	0	0%	0.4	6%	1.26
GROGSH	0.1	8%					0.1
HWC	0	0%	0	0%	0.06	1%	0.06
MHAD			1.1	13%	0.09	1%	1.19
NVCC			0.23	3%	0.27	4%	0.5
NVWW					0.12	2%	0.12
OXID	0	0%	0.31	4%	0.43	6%	0.74
OXIDF					0	0%	0
OXRC					1.34	19%	1.34
OXWS					0.08	1%	0.08
OXWW					0.49	7%	0.49
PKG			0	0%	0.08	1%	0.08
RDBK	0.07	6%	0	0%			0.07
SAMCG			0.16	2%	0	0%	0.16
SAMEG			0.11	1%	0.1	1%	0.21
SAMSG	0.03	2%	0.1	1%	0.11	2%	0.24
SAND	0.1	8%	0.79	9%	1.44	21%	2.33
SHEL	0	0%					0
VRG	0	0%	2.38	28%	0.32	5%	2.7
VRR			0	0%	0	0%	0
VRW	0.11	9%	2.41	29%	0.81	12%	3.33
VRWM					0	0%	0
Total	1.27		8.4		6.99		16.66

Early Roman (c.AD 43–125), mid-Roman (c.AD 125–250), and late Roman (c.AD 250–410). Quantification by EVE. Fabrics recorded as '0' were present, but no rim survived.

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

Table 9. Chronological distribution of vessel class from the former MoD site.

Class	Early Roman	%	Mid-Roman	%	Late Roman	%	Total
Flagon (1)	0.11	9%	1	12%			1.11
Jar (2)	0.66	52%	4.04	48%	1.93	28%	6.63
Beaker (3)	0.07	6%	1.05	13%	0.62	9%	1.74
Bowl (4)	0.05	4%	1.84	22%	1.9	28%	3.79
Platter/dish (5)	0.35	28%	0.21	3%	1.22	18%	1.78
Cup (6)	0.03	2%	0.11	1%	0.11	2%	0.25
Mortarium (7)			0.15	2%	0.86	13%	1.01
Lid (9)					0.2	3%	0.2
Total	1.27		8.4		6.84		16.51

Early Roman (*c.*AD 43–125), mid-Roman (*c.*AD 125–250), and late Roman (*c.*AD 250–410). Quantification by EVE.

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 AD 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 AD — 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). The pottery from waterholes and open features was better preserved than

Table 10. Pottery condition and pattern of deposition.

Feature type	MSW (g)	Completeness (EVE/MV)	Brokenness (Sherds/EVE)	EVE	Mean wt (g) per context
Waterhole/well	58	0.42	43	4.67	1044
Layer	39	0.12	57	0.61	274
Pit	14	0.19	108	4.64	273
Hollow/natural	10	0.65	57	3.27	360
Posthole	10	0.02	100	0.06	15
Ditch	9	0.12	93	3.97	99
Gully	2	0	1	0	2

MSW = mean sherd weight (weight/sherds)

Table 11. Pottery from the waterholes

Waterhole 115			Waterhole 266		
Context	**MSW**	**Total wt (g)**	**Context**	**MSW**	**Total wt (g)**
118	51	1944	271	70	3450
149	110	110	364	216	1725
			331	43	2120
			337	95	572
			365	242	728
			371	12	12

Contexts are arranged in stratigraphic order, with lowest deposits at the base of the table.

that from ditches and pits. 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 the middle of the sequence of fills; the assemblage from context 118 in waterhole 115 was characterised by a high proportion of amphora 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. Interestingly, residual pottery did not deviate far from the mean sherd weight for each feature type. The reason may lie in the type of pottery represented. Residual pottery was dominated by late Iron Age/early Roman grog-tempered ware, and white and grey Verulamium region wares. The material was recovered from late 1st-century groups and potentially was residual for little more than a few years, 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 AD. Some of them too may have remained in use well into the 3rd century AD. Or, being very close to source, perhaps 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 AD, 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. 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 & 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. 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 with 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. 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.

Post-Roman pottery

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

Catalogue of illustrated vessels

The illustrated ceramic groups, presented in ceramic phase order in Figs 13 and 14, show the typological and chronological range of the assemblage. Pieces of intrinsic interest are also shown.

Ceramic building material

Grace Jones

A total of 1,303 fragments of ceramic building material, weighing 171.604kg, was recovered. The assemblage derived from 80 contexts and is quantified by type and feature in Tables 13 and 14. Despite a mean piece weight of 132g

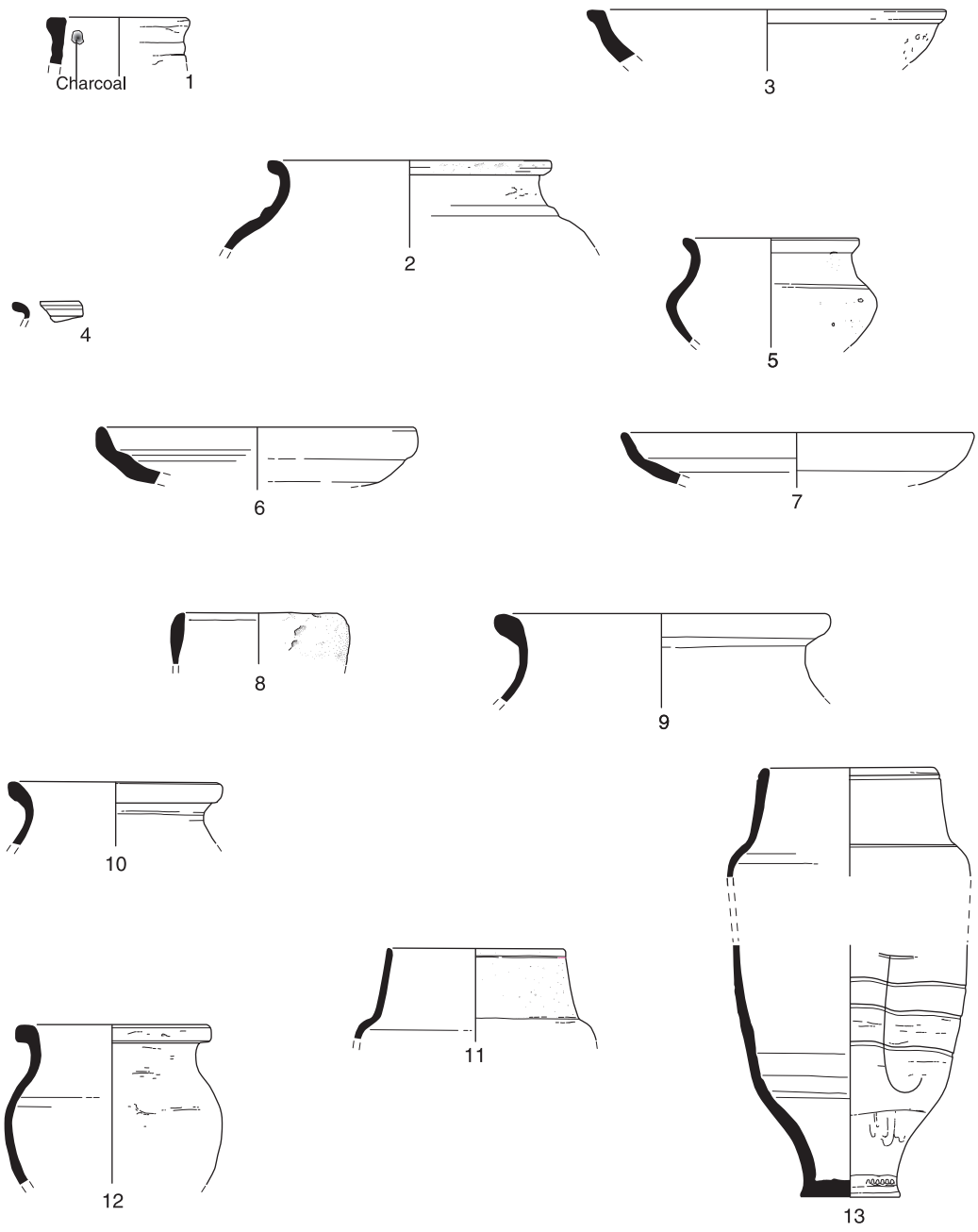

Fig 13. Brockley Hill former MoD site pottery (Nos 1–13). Scale 1:4.
Layer 327, eroded topsoil or fill of hollow (late 1st century AD)
1. Ring-necked flagon 1B2 (VRW); 2. High-shouldered jar Cam 220 (GROG); 3. Platter (GROG); 4. Globular beaker 3B (RDBK). The characteristic 'ring-and-dot' decoration is absent in this case; 5. Bowl Cam 44 (GROG); 6. Platter Cam 26 (GROG); 7. Platter 5A (GROG).
Pit 195, context 196 (mid to late 2nd century AD)
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.
Waterhole 266, context 331 (early to mid-3rd century AD)
12. Necked jar 2T (VRG); 13. Folded beaker (CC). Buff-grey sandy fabric with clear rounded quartz; ?a west Hertfordshire product.

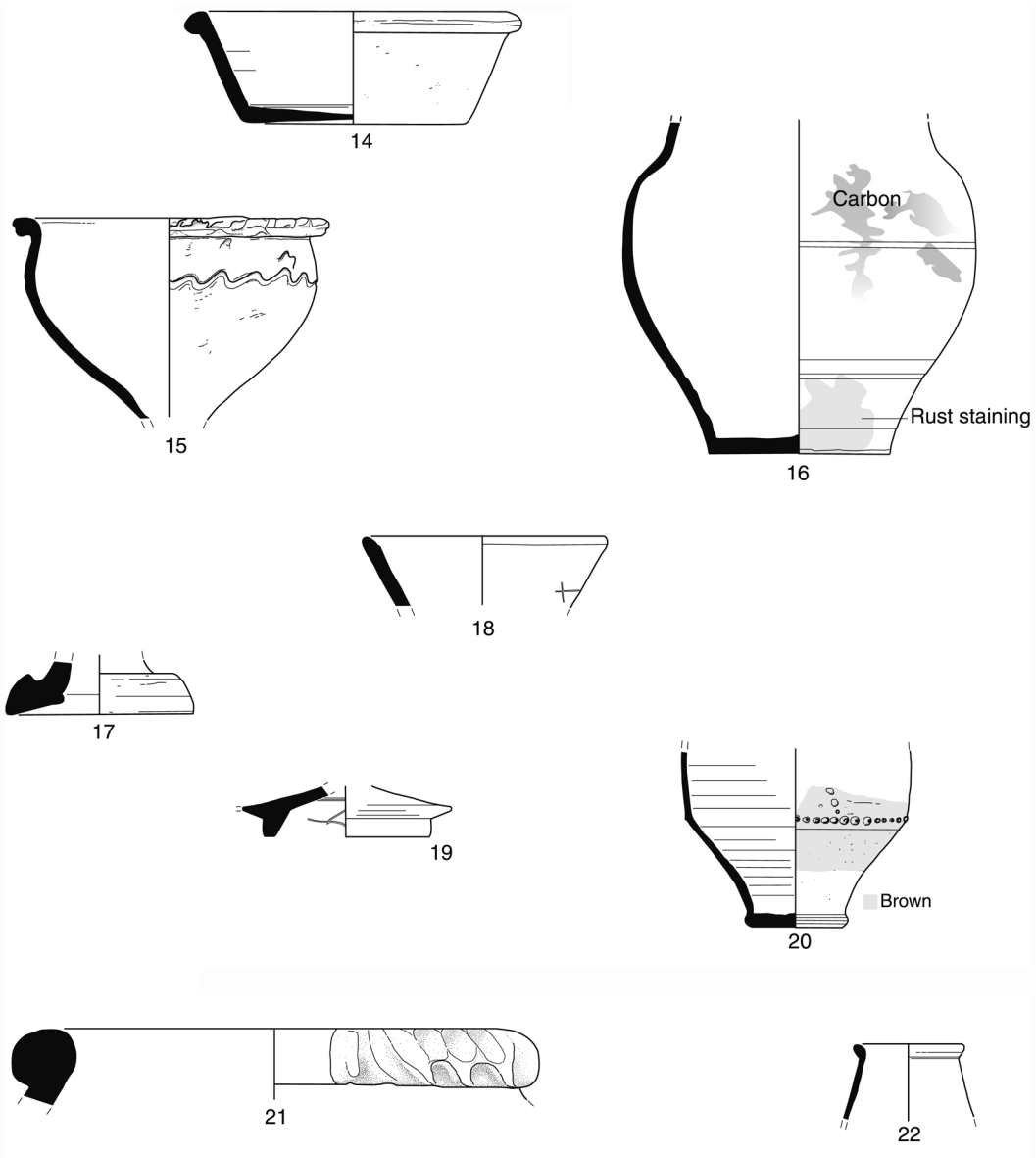

Fig 14. Brockley Hill former MoD site pottery (Nos 14–22). Scale 1:4
Waterhole 266, context 331 (cont.)
14. Bead-rimmed dish 4H (VRG); 15. Bowl with incised decoration on rim and body (SAND).
Waterhole 266, context 365 (Roman period)
16. A near-complete necked jar, rim lacking (SAND).
Pit 17, context 90 (early to mid-3rd century AD)
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.
Pit 60, context 65 (mid 3rd to late 4th century AD)
19. Dish (SAMCG). x-graffiti cut within footring and ?internally. Residual.
Pit 120, context 171 (late 3rd to early 4th century AD)
20. Funnel-necked globular beaker, sandy grey ware with red margins and black ?ironstone inclusions (CC).
Pit 203, context 218 (mid to late 4th century AD)
21. Cable-rimmed storage jar, Lyne & Jefferies, class 10 (AHFA); 22. Folded beaker (CC); a west Hertfordshire product.

the material was in poor condition, exhibiting highly abraded surfaces.

Fabrics and type

Six fabric types were identified amongst the 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).

Table 12. Summary of ceramic building material fabrics from the former MoD site

Fabric Type	Description
A	A soft and silty fabric with a clean clay matrix of silt-sized or very fine quartz grains.
B	Similar to A, containing silt to very fine-sized quartz grains, possibly same clay source. However, a greater quantity of coarse-sized, sub-angular quartz grains were also visible.
C	A hard and sandy fabric, characterised by hard firing and a cherry-red colour. The clay matrix is very similar to A
D	A soft and silty clean-looking fabric containing silt to very fine-sized grains of quartz and fine-sized black iron oxides.
E	Code allocated to ceramic fabrics other than building material, not analysed as part of this report.
F	A halfway point between A and C, demonstrating both the soft, orange appearance of A and the hard, cherry-red appearance of C, often on a single tile.
G	Allocated to a single tile from context 309. It is yellowish-white in colour and may therefore derive from an iron-free clay, alternatively this may be a firing effect.

Table 13. Quantification of the ceramic building material from the former MoD site by type

Tile type	Count	% of count	Weight (g)	% of weight	Mean piece weight
Tegula	54	4.1	16636	9.7	308.1
Imbrex	8	0.6	817	0.5	102.1
Box-flue tile	3	0.2	253	0.1	84.3
Plain tile	404	31.0	89051	51.9	220.4
Brick	102	7.8	39946	23.3	391.6
Miscellaneous	732	56.2	24901	14.5	34.0
Total	1303	100.0	171604	100.0	131.7

Table 14. Quantification of the ceramic building material from the former MoD site by feature

Feature type	Count	% of count	Weight (g)	% of weight
Ditch / gully	240	18.4	17019	9.9
Hollow	110	8.4	8599	5.0
Pit	530	40.7	63604	37.1
Posthole	8	0.6	1459	0.9
Waterhole	211	16.2	59886	34.9
Metalled surface	175	13.4	16534	9.6
Modern feature	3	0.2	4	0.0
General layers	26	2.0	4499	2.6
Total	1303	100	171604	100

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.

Cavity walling

Only three box-flue tiles were identified, in Fabrics A and B, displaying a thickness of 15–17mm. 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 40mm 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 since a hard-wearing fabric would have been desirable. The bricks ranged in thickness from 40mm to 60mm; the most commonly occurring bricks were *lydion* (often used in bonding courses), *bessalis* (frequently used in hypocaust *pilae*) or possibly *pedalis* (one Roman foot square, commonly seen as a capping for the *pilae*) (Brodribb 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 6mm to 39mm, with a clear peak in the 30–37mm 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 Fabric A (37% by weight) and Fabric C (33%).

Manufacturing

The *tegulae* often appear to be slightly warped and uneven, and many had been hard-fired, with some over-fired causing expansion in the clay. 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. 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). Three unusual forms of signature were also recorded. One example from context 90 (pit 17) is paralleled in Brodribb'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 Brodribb's fig 47:5 (1987). This last, an '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 is larger than those from two previous excavations in the vicinity. The WA excavations produced 109kg of material (Seager Smith 1998), and the excavations at Canons Corner recovered 26kg (Allen 2001). Nonetheless, the characteristics of all three assemblages are the same; each is dominated by abraded, fragmentary pieces of flat or undiagnostic brick and tile, and 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.

Slag

Graham Morgan

Ten pieces of iron slag were recovered. 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 worked stone assemblage comprised fragments from eight rotary querns, one saddle quern, and one small vessel. Most of the rotary querns are small fragments, although two retain very deep grooves suggesting they may be from millstones (contexts 328, 365). One more complete quern is of the typical flat-topped disc type (SF 5; Fig 15) and was found in a 4th-century waterhole (115) in Area A (context 118).

The rotary querns are made of either Millstone Grit (including the possible millstone fragments) or Niedermendig Lava. One of the lava querns is slightly larger than average (520mm diameter) but the remainder are small weathered fragments (contexts 118, 234, 365). Both lithologies were commonly used in this area and have been found during prior excavations at, or near, Brockley Hill (King 1986, 86; Shaffrey 2001, 35; Castle 1972). Lava querns also occur on the majority of Roman sites in London, including nearby sites such as Hampermill, Watford (King 1986, 106).

A Lower Greensand saddle quern fragment was recovered from the 4th-century fill (118) of waterhole 115 and is either residual or a reused rotary quern. It can be added to two probable Greensand 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 other examples in Middlesex, either of saddle or rotary querns (King 1986, 80), whilst numerous excavations at Verulamium appear to have produced only one Greensand rotary quern (Frere 1972, 158). This fragment is thus unusual.

A single piece of other worked stone is a vessel, possibly a mould fragment (context 18). It has a flat base internally and externally and has a raised rim along the one surviving edge, but is heavily weathered.

Catalogue of worked stone

1. Upper rotary quern (see Fig 15).
2. Probable rotary quern (not illus). Lava; very weathered fragment. (118). AD 325–400.
3. Upper rotary quern (not illus). Lava; heavily weathered. Fragment with grooved grinding surface. Measures *c.*35mm max thickness. (234). AD 100–200.
4. Rotary quern or possible millstone (not illus). Millstone Grit. Small, deeply grooved fragment. (328). AD 120–200.
5. Three small fragments of rotary quern (not illus). Millstone Grit. (364). AD 70–110.
6. Lower rotary quern (not illus). Lava; weathered and burnt. Disc type with rough base, vertically grooved edges and smoothed grinding surface. Measures *c.*520mm diameter by 32mm max thickness at edge. (365), SF 6. AD 40–400.
7. Rotary quern or possible millstone (not illus). Probable Millstone Grit: coarse grained, pale grey/pink, slightly feldspathic sandstone. Fragment with two very deep grooves, 20mm apart. Measures 40mm thick. (365), SF 7. AD 40–400.
8. Probable quern (not illus). Lava. One smoothed surface. (309). AD 240–300.
9. Possible mould (not illus). Fine grained grey sandstone; heavily weathered. Small fragment with rim along one side surviving to a height of about 10mm. Possibly it was some kind of mould. Measures 60 by 50 by 40mm to top of rim. (18), SF 3. AD 300–400.
10. Probable saddle quern (not illus). 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 by 110 by 65mm. (118). AD 325–400.

Metalwork

Leigh Allen

A total of 38 metal objects was recovered. The assemblage comprises 3 copper-alloy objects and 35 iron objects. The condition of the assemblage is very poor, the ironwork

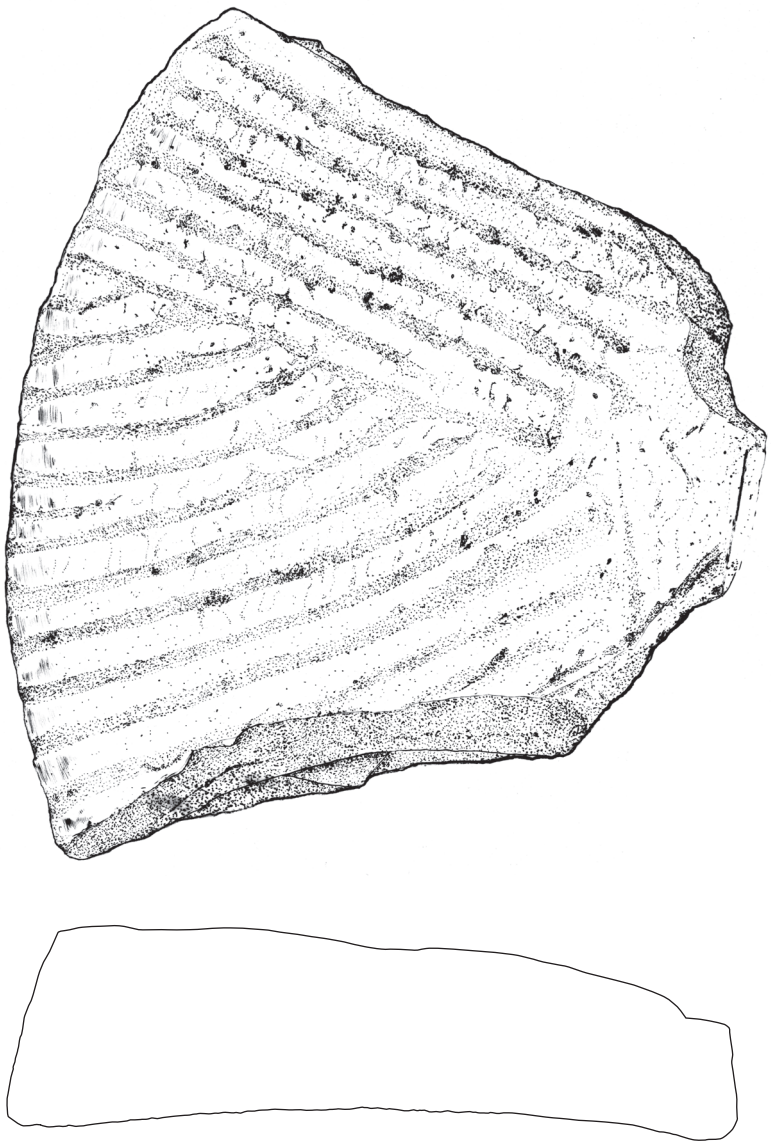

Fig 15. Brockley Hill former MoD site: upper rotary quern. Scale 1:2. Probable Millstone Grit; coarse-grained, pale grey feldspathic sandstone. Fragment of flat-topped type with slightly concave grinding surface dressed with segmented radial grooving. Ctx 118. SF 5. AD *325–400.*

in particular being quite corroded with little metal surviving. 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 hillwash 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, (u/s), diameter 22mm.
2. A slender, roughly cut strip with a rectangular section, possibly an off-cut. SF 14 (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, (271), length 395mm.

Iron objects

4–11. Eight nail shank fragments with rectangular sections, there are no heads surviving. SF-, (18), length 27–92mm.

12. Irregularly shaped fragment of sheet. SF -, (18), length 73mm.

13. A rectangular fragment with a slender triangular section, possibly a small fragment from a blade. SF -, (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 -, (200), length 37mm.

15. Very corroded nail with a head only a little wider than the shank. SF 7, (215), length 122mm.

16. Nail with an oval flat head and rectangular section shank. SF-, (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 -, (257), length 41–78mm.

19. Nine hobnails. SF -, (257), length 14mm.

20. Large crowbar with a rectangular section and an angled end. SF 12, (271), length 540mm.

29–30. Ten irregularly shaped fragments of iron sheet. SF-, (309), length 24–62mm.

31. A corroded nail shank with a rectangular section in three fragments. SF -, (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 AD (Price & Cottam 1998, 194). The dating of this example can be refined because it has a scar on the base from 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 interest for two reasons. 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 the vessel was included because of its contents, but its 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

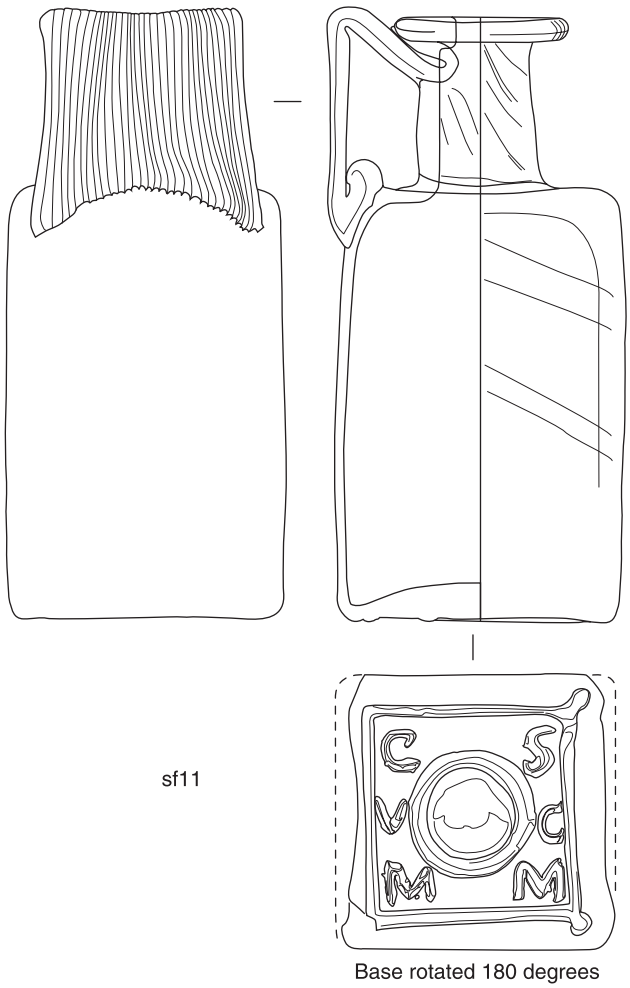

Fig 16. Brockley Hill former MoD site: glass bottle. Scale 1:2.
Square bottle (SF 11). Six joining fragments giving complete profile but lacking parts of body. Blue/green. Rim bent out, up, in and flattened; cylindrical neck with tooled constriction at base; angular, finely reeded handle applied to shoulder 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 160mm; rim diameter 48mm, base width 71mm, handle section 53mm by 4mm.

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 (Scatozza Höricht 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 himself, it presumably refers to the individual who 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 has been recovered from Britain and 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 item in its own right and, of course, its contents 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 also found with other complete or substantially complete glass and samian vessels in a large pit (Mahany 1994, 60; Cracknell & Mahany 1994, 106–10, 225 no. 25). At both sites the excavators preferred what might be thought of as utilitarian explanations. At Alchester, for example, it was suggested that this might have been a storage pit. In both cases, however, it seems more likely that this was 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 their rarity in normal bottle glass assemblages. Perhaps both at those sites and at Brockley Hill, the presence of letters on the base imbued the pieces, or their contents, with a special magic (see discussion below).

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. Two of the five shoes can be dated to the mid-3rd century AD onward, one having decoration that allows it to be more closely dated to the mid to late 3rd century and previously found on only a limited number of shoes in Britain. 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 to late third century are uncommon, hence, although the present assemblage 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 this type 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 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 sole 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 (SF 2, 4) have constructional thonging of type 2, two (SF 3, 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 (SF 6) 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 (SF 3, 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 a line down the centre with infilling at the tread and seat (Fig 17, 1). The others (SF 2, 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 (SF 2) with a gap at the waist (type 3B), the other (SF 4) with a line down the centre (type 3A). A single shoe (SF 13) 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 40–42mm in height.

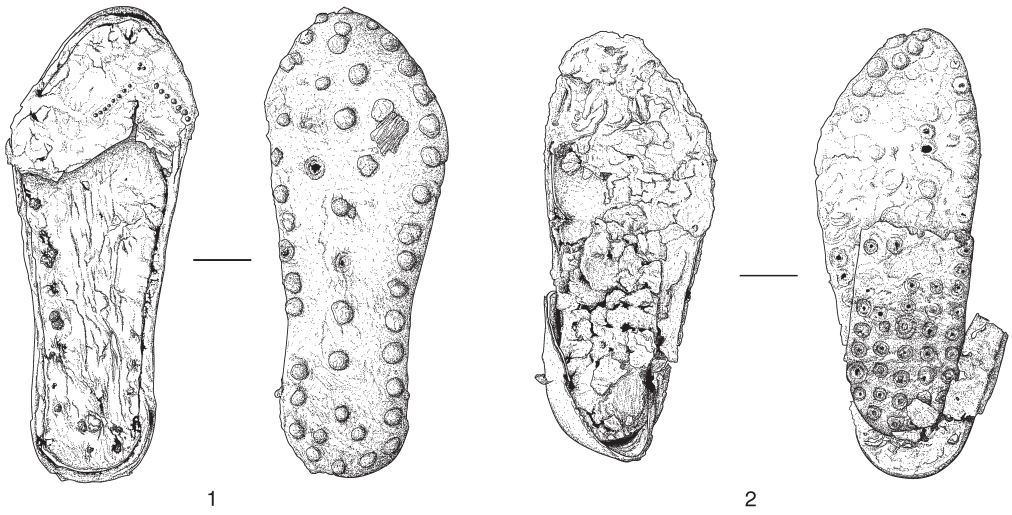

Fig 17. Brockley Hill former MoD site: leather shoes. Scale 1:4.
1. Nailed shoe bottom unit for left foot with oval toe, complete insole and sole present, the insole being slightly smaller than the sole. Constructional thonging type 1 or 2, forepart obscured by overlying toe area of upper, type 1A nailing. 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 calfskin1mm thick. Insole length 240mm, sole length 254mm. Adult size 4(37). SF3, 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 42mm. Upper leather is worn obscuring the grain pattern. Length 215mm. Adult size 1(33). SF13, context 331 (waist and seat area of insole shown displaced in illustration).

Two shoes (SF 3 and 13, Fig 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 determined, 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 AD. One shoe (SF 3) 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 1.5–2mm in diameter. Shoes with vamps decorated with small metal studs date from the mid to late 3rd century AD (van Driel-Murray 2001a, 342). Finds to date suggest that this form of decoration had gone out of fashion by the 4th century (van Driel-Murray, pers comm). Few shoes with this decoration have been found in Britain nor are they common in the rest of North-West 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, 187–91). There, two eyelet boots fastened with integral laces had decorative metal studs on the vamp (van Driel-Murray 2001a, 367, figs 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).

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 AD; as such they are likely to represent the latest items in the deposit (331). The greater part of a glass bottle (SF 11) (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 (SF 3), for the left foot, has decoration previously seen on only a very limited number of shoes in this country. 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 all have been placed in the well as part of the ceremony rather than as a result of domestic rubbish disposal (see discussion below).

THE ENVIRONMENTAL EVIDENCE

Worked wood

Damian Goodburn

The assemblage is predominantly of oak. No datable matches were found by the dendrochronologist, therefore, all the material has been dated by reference to the associated finds.

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 1m by 1.15m, with the timbers extending as much as 250mm 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 recently found in the Roman settlement at Shadwell (Goodburn, in prep a). Another broadly similar example made of cleft oak planks with sawn corner joints was found at Moor Hall Farm in outer east London. The Romanised version of this type of lining was normally made of sawn planks, or squared beams with fairly neatly sawn corner joints (Wilmot 1982), and the lining from well 283 is the crudest such feature of Roman date currently known to the 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 b).

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, *eg* at Swalecliffe and Heathrow Terminal 5, but are unknown in Roman wells in central London (Masefield 2003).

Withy rope

An unusual find in a Roman period context was a length of twisted withy rope (Fig 18), 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 centimetres at each obliquely cut end and its total length must have been about 3m with a butt diameter of *c.*25mm and top of 14mm. These features are

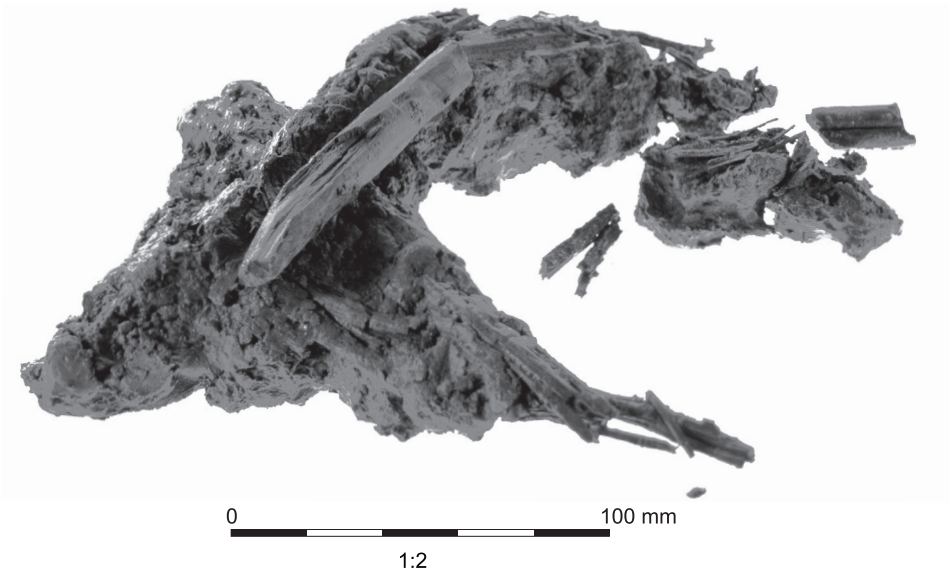

Fig 18. Brockley Hill former MoD site: withy rope from waterhole 266

characteristic of well-grown hazel or willow coppiced stems today, and 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.

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 or orchards. Both classes of small wooden debris are evidence of activities going on close by.

Discussion

Virtually all the worked wood found 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 17mm-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.*90mm 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 150mm (occasionally as much as 200mm wide, as found at the London amphitheatre, Goodburn 2008a). 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 2008b). Thus, the sizes of axes used by those who worked the Brockley Hill wood were 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.

The Brockley Hill material compares well with other outer suburban/hinterland assemblages of 'unofficial' material, 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

Animal bone

Jennifer Kitch

A total of 55 (1,420g) fragments of animal bone was recovered. 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 waterlogged with some splitting, cracking and vivianite concretions, which had affected the condition of the bone considerably. Cattle dominate the assemblage, with two additional fragments identified as horse. The remaining assemblage could not be identified further.

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. After assessment, three samples were analysed for charred plant remains, of which one was from pit 217 and two from pit 61 (Table 15). Six samples were analysed for waterlogged plant remains (Table 16), of which two were from the fills 365 and 331 of well/waterhole 266 and the remaining four from fill 118 of waterhole 115.

Table 15: Charred plant remains from the former MoD site

Context number	**216**	**73**	**73**
Sample number	**90**	**14**	**12/13/15/16**
Feature number	**217**	**61**	**61**
Feature	**Pit**	**Pit**	**Pit**
Date	**Late 3rd/4th C**	**3rd-4th C**	**3rd-4th C**
Sample size (l)	**32**	**1**	**4**
Charred remains			
Triticum dicoccum/ spelta - emmer/spelt wheat	8		
Triticum spelta - spelt wheat	1		
Cerealia indet - grain	3		
Corylus fragments - hazelnut	6		
Bromus sp. - Bromes		1	1
Carex trigynus	1		
Chenopodiaceae - goosefoot family	1		
Conium maculatum - hemlock	1		
legume sp.			1
<4mm legume - pulse	1		3
Polygonum undiff. - knotgrass	1		5
Potentilla type - cinquefoils	1		
Ranunculus sp. - buttercups	1		
indet	1	1	
fungal fruiting bodies			25

Table 16. Waterlogged plant remains from the former MoD site.

Context number	**118**	**118**	**118**	**118**	**118**	**365**	**331**
Sample number	**51**	**54**	**56**	**59**	**61**	**96**	**126**
Feature number	**115**	**115**	**115**	**115**	**115**	**266**	**266**
Depth from top of sequence (m)	**0.80-0.90**	**1.10-1.20**	**1.30-1.40**	**1.60-1.70**	**1.80-1.90**	**-**	**-**
Quantity analysed	**100%**	**12.5%**	**33%**	**100%**	**scanned**	**100%**	**100%**
Amorphous organic							
Wood			*		*		
Buds						+	+
Bryophyte				+	*		+
Daphnia ephippia - ?	+	++++	++++	++++	*	++	++++
Earthworm egg cases	++++	++	++	+			+
WATERLOGGED REMAINS							
Arable weeds							
Anagallis sp. - pimpernels							+
Aphanus - parsley-piert				+			
Chrysanthemum segetum - corn marigold						+	
Fallopia convolvulus - black bindweed						+	
Polygonum aviculare - knotweed				++		++	++
Sonchus asper - prickly sow-thistle			+	+		+	+
Solanum nigrum - black nightshade							+
Spergula arvensis - corn spurrey				+			
Stellaria media - common chickweed				++		+	++
Urtica urens - common nettle	+	+++	+++	++++		++++	++++
Grassland							
Leontodon saxatilis - lesser hawkbit						+	++
Poaceae <2mm - small grasses		+++	+++	+		+	+
Poaceae 2-4.mm - medium grasses	++	++					
Potentilla erecta type - tormentil						+	+
Prunella vulgaris - selfheal				+		+	+
Ranunculus sardous type - hairy buttercup						+	
Rumex acetosa - common sorrel		+++	+	+++		+	++++
Rumex acetosella - sheep's sorrel				+		++++	
Rumex obtusifolius type - broad-leaved dock				+		+	+
Stellaria graminea - lesser stitchwort						+	+
Ruderals							
Arctium minor - lesser burdock							+
Chenopodiaceae - goosefoot family						+	

Table 16 (cont.). Waterlogged plant remains from the former MoD site.

Context number	**118**	**118**	**118**	**118**	**118**	**365**	**331**
Sample number	**51**	**54**	**56**	**59**	**61**	**96**	**126**
Feature number	**115**	**115**	**115**	**115**	**115**	**266**	**266**
Depth from top of sequence (m)	**0.80-0.90**	**1.10-1.20**	**1.30-1.40**	**1.60-1.70**	**1.80-1.90**	**-**	**-**
Quantity analysed	**100%**	**12.5%**	**33%**	**100%**	**scanned**	**100%**	**100%**
Chenopodium album - goosefoot		+	+	++		+	++++
Chenopodium/ Atriplex						+	+
Conium maculatum - hemlock	+	+	+				+
Coronopus squamatus - swine-cress		+		+		++	
**Hyoscyamus* - henbane			+				
Malva sylvestris - common mallow						+	+
Persicaria lapathifolia - pale persicaria				+			
Urtica dioica - stinging nettle		+++	+++	++++		++++	++++
Wet ground							
Bidens tripartita - trifid bur-marigold				+			
Carex sp. - sedge			+				+
Carex lenticular - sedge				+		+	+
Carex trigynus - sedge				+			
Juncus - rush	++++	++	+	++			+
cf. *Lemna* - duckweeds		++++	++++	++			
Lycopus europaeus - gypsywort				+			
Ranuncukus batrachium type - crowfoot		++++	+++	++++			
Ranunculus sceleratus - celery-leaved buttercup							+
Rorippa microphylla - narrow-fruited watercress			+	+		++	++
Rorippa nasturtium-aquaticum - watercress		+	+				
Scirpus lacustris - common club-rush				+			
Typha sp. - bulrush	++						
Broad							
Cirsium sp. - thistles		+	+	++		+	+
Asteraceae - daisy family				++			+
Ranunculus repens type - buttercup				++		++	++
Solanum dulcamara - bittersweet				+		+	++
Urtica sp. - nettles	+				*		+
Food and economic taxa							
Rubus fruticosus - blackberry				+		+	
indet		+		+			+

+ = 1–5 items, ++ = 5–25 items, +++ = 25–100 items, ++++ = >100 items

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 pit 217. 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, which probably dates to the later 3rd or 4th century AD, 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

The results of the analysis of waterlogged plant remains are given in Table 16. A sequence of incremental samples was taken through fill 118 (see Fig 12c). 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 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 was the aquatics or plants of wet ground. The presence of gipsywort (*Lycopus europaeus*), which can grow in fens, suggests that the soil may have been base rich. The large number of seeds of the water crowfoots (*Ranunculus Batrachium*-type) and 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 was recorded in the fills of well/waterhole 266 but in addition corn marigold (*Chrysanthemum segetum*) and black bindweed (*Fallopia convolvulus*) were identified. Common mallow (*Malva sylvestris*), swine cress (*Coronopus squamatus*) and stinging nettle (*Urtica dioica*) were also present. Today common mallow is often found growing on waste, rough ground, by roadsides and railways. Aquatics and plants of wet ground were poorly represented in the fills of 266, although watercress and occasional sedge (*Carex* spp) seeds are recorded with *Daphnia* ephippia.

Discussion

Economic plants and native food plants are poorly represented, with only a few grains of cereal crops in pit 217 and sporadic records of blackberry pips (*Rubus fruticosus* agg) in waterhole 115 and well/waterhole 266. The fills from the latter two 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 suggest nearby cultivation (see Peglar below).

The remainder of the plant assemblages are indicative of ruderal (waste ground) communities, grassland, damp ground or shallow water. The identification of crowfoot, duckweed, and bulrush seeds with *Daphnia*

ephippia in fill 118 also corroborates the pollen analysis data of a shallow water body becoming overgrown as the fills accumulated.

Pelling (in Smith 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 Canons Corner (see Fig 1). 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.

The archaeobotanical record from this excavation confirms that domestic activity was not widespread within this area of the site. However, both the pollen analysis and the analysis of the waterlogged plant remains do suggest that some crops were being cultivated close by. 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

Eight samples were assessed for insect remains. 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 12e). 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, whereas *Agrilus angustulus* or *laticornis* is associated with deciduous trees, particularly *Quercus* sp. (oak). The presence of some domestic animals was suggested by the dung beetle *Aphodius* sp.

Table 17. Coleoptera from Waterhole 266 at the former MoD site

Sample	**96**	**126**
Context	**365**	**331**
Feature	**266**	**266**
Sample volume (litres)	**1.0**	**1.0**
Harpalus sp.	1	-
Helophorus aquaticus (L.) or *grandis* Ill.	1	1
Helophorus sp. (*brevipalpis* size)	6	2
Hydrobius fuscipes (L.)	1	1
Anacaena sp.	1	-
Ptenidium sp.	1	-
Platystethus cornutus gp.	1	-
Aphodius sp.	1	-
Oxyomus sylvestris (Scop.)	1	-
Agrilus angustulus (Ill.) or *laticornis* (Ill.)	1	-
Anobium punctatum (Deg.)	1	-
Cryptophagidae indet.	1	-
Corticariinae indet.	1	-
Longitarsus sp.	1	-
Apion sp.	1	-
Total	**20**	**4**

Charcoal

Rowena Gale

Six samples were selected for full analysis from the fills of pits 61 and 217 and well 283. The taxa identified are presented in Table 18. 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:

Table 18. Charcoal from the former MoD site

Sample	Cxt	Description	*Acer*	*Corylus*	*Corylus/ Alnus*	*Fraxinus*	*Ilex*	Pomoideae	*Prunus*	*Quercus*
125	355	Well 283	2	-	-	-	-	1	1	6h, 2s
66	75	4th fill of pit 61	-	-	5	-	-	2	-	21
67	74	3rd fill of pit 61	1	-	1	-	*cf.* 1	4	1	12h, 1s
69	72	Basal fill of pit 61	-	2	-	-	-	-	-	-
89	215	Fill of pit 217	2	-	-	2	-	1	1	24
90	216		10	22	-	3	-	3	1	12h +u, 4s

Key. h = heartwood; r = roundwood (diameter <20mm); s = sapwood (diameter unknown); u = maturity undetermined

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

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.

Pit 61

Charcoal and pottery were recorded from a number of the fills. 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; 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 fills 215 and 216 of pit 217 were the largest in the assemblage and included fragments measuring up to 10mm 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*).

Discussion

Associated pottery and other domestic debris suggest that charcoal from the fills of pits 61 and 217 represents discarded domestic hearth debris (*ie* firewood). 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 well 283 was less certain. 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. 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. Owing to the poor condition of the charcoal, there was no direct evidence of the use of coppiced wood but, in view of the prominent roadside position of the site 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 also 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.

Pollen

Sylvia Peglar

Monoliths from two waterholes were submitted for pollen analysis. The results are given in Table 19 as percentages of the total pollen sum. SumP (trees + shrubs + herbs + ferns).

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 was of variable quality and quantity, with high values of indeterminable pollen (up to 26.7% in Sample 92 (6cm)). 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 (10cm). Only one 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 feature.

The fill in both waterholes therefore indicates that when the sediments were laid

Table 19. Brockley Hill former MoD site: results of palynological analysis as percentages of total terrestrial pollen and spores

Sample		Waterhole 115						Waterhole 266					
		39 (10 cm)	38 (12 cm)	38 (28 cm)	38 (44 cm)	37 (24 cm)	37 (46 cm)	92 (6 cm)	92 (24 cm)	92 (40 cm)	93 (10 cm)	93 (26 cm)	93 (40 cm)
Trees & Shrubs													
Betula	Birch	0.3	-	-	0.6	0.4	0.4	2.3	0.6	-	-	-	-
Pirrus	Pine	-	0.7	0.5	-	-	-	1.1	-	-	-	0.7	0.7
Quercus	Oak	1.7	1.3	1.0	0.6	2.6	0.4	2.3	0.6	-	-	0.7	1.3
Ulmus	Elm	0.3	0.7	-	-	-	-	-	-	-	-	-	-
Alnus	Alder	-	1.3	-	1.3	0.4	0.4	-	-	-	0.8	-	1.3
Viburnum	Guelder Rose	-	-	-	-	-	-	-	-	-	-	0.7	-
Corvlus	Hazel	4.7	2.0	2.1	-	2.2	0.8	-	-	2.5	1.6	0.7	1.3
Salix	Willow	1.4	-	0.5	0.6	0.4	-	1.1	0.6	-	-	-	0.7
Herbs													
Gramineae	Grass family	67.5	70	65.5	69.4	62.4	70.9	78.4	77	76.9	77.4	72	68.2
Cerealia	Cereals	2.7	0.7	1.5	2.5	0.4	0.4	-	-	-	-	0.7	-
Cvperaceae	Sedge family	-	2	2	0.6	1.7	0.4	-	1.1	1.3	0.8	2.1	1.3
Solidago-type	Daisy-type	4.4	1.3	3	0.6	0.9	1.6	1.1	1.1	0.6	-	0.7	-
Achillea-type	Yarrow-type	0.3	0.7	0.5	1.9	0.4	2.5	-	1.1	-	-	1.4	1.3
Artemisia	Mugwort	0.3	-	0.5	-	-	0.4	-	-	-	-	-	-
Centaurea-type	Knapweed-type	-	-	1	1.3	2.2	0.4	-	-	-	1.6	0.7	0.7
Compositae	Dandelion-type	2.4	5.2	2.6	6.4	4.8	3.7	3.4	4.6	5	2.4	7	7.1
Caltha-type	Kingcup-type	0.3	-	-	-	-	-	-	-	-	-	-	-
Caryophyllaceae und.	Chickweed family	0.3	0.7	0.5	-	0.9	0.4	1.1	-	1.3	0.8	1.4	1.3
Chenopodiaceae	Goosefoot family	-	-	1.5	1.3	-	-	1.1	0.6	0.6	0.8	1.4	2.6
Cruciferae	Crucifers	1	-	-	1.3	0.9	0.4	-	-	-	0.8	-	-
Echium		0.3	-	-	-	-	-	-	-	-	-	-	-
Filipendula	Meadowsweet	0.3	-	-	-	-	-	-	-	-	-	-	-
Lotus-type	Trefoil-type	-	0.7	-	-	-	-	-	-	-	-	-	-

Table 19 (cont.). Brockley Hill former MoD site: results of palynological analysis as percentages of total terrestrial pollen and spores

Sample		Waterhole 115						Waterhole 266					
		39 (10 cm)	38 (12 cm)	38 (28 cm)	38 (44 cm)	37 (24 cm)	37 (46 cm)	92 (6 cm)	92 (24 cm)	92 (40 cm)	93 (10 cm)	93 (26 cm)	93 (40 cm)
Leguminosae und	Pea family	-	-	1.5	0.6	0.9	0.8	-	1.1	-	1.6	0.7	-
Vicia-type	Pea/Bean	-	0.7	0.5	0.6	-	-	-	-	-	-	0.7	-
Mentha-type	Mint-type	-	-	-	-	-	-	1.1	-	-	-	-	-
Plantago lanceolata	Ribwort plantain	1	1.3	2.6	1.3	0.9	3.3	1.1	2.9	-	0.8	0.7	3.2
Plantago major/P. media	Greater/ hoary plantain	0.3	-	-	-	-	-	-	-	-	-	-	-
Polygonum aviculare-type	Knotgrass-type	0.3	0.7	0.5	0.6	3.1	0.4	1.1	1.7	0.6	-	-	0.7
P.persicaria-type	Persicaria-type	-	-	-	-	0.4	-	-	-	-	-	-	-
Potenti11a-type	Tormentil-type	0.3	0.5	-	0.4	0.8	-	-	-	-	-	-	-
Ranunculus acris-type	Buttercup-type	1.4	0.7	1	-	3.1	0.8	-	1.1	1.3	1.6	1.4	1.3
Rhinanthus-type	Yellow rattle-type	0.3	-	-	-	-	-	-	-	-	-	-	-
Rosaceae und.	Rose family	-	0.7	0.5	-	-	-	-	-	-	-	-	-
Rum excrispus-type	Dock-type	-	1.3	0.5	1.9	3.1	3.3	1.1	1.7	-	0.8	0.7	1.3
Succisa	Scabious	-	0.7	-	-	-	-	1.1	-	-	-	-	-
Umbelliferae	Carrot family	3.4	0.7	2	3.2	1.3	3.3	1.1	1.1	0.6	0.8	0.7	-
Urtica	Nettle	3.4	3.3	1.5	0.6	2.6	3.3	-	0.6	1.3	0.8	-	0.7
Veronica-type	Speedwell-type	-	2	-	-	-	-	-	-	-	-	-	-
Ferns & fern allies													
Poipodium	Polypody fern	-	-	1	0.6	0.9	0.4	-	0.6	0.6	-	0.7	0.7

Sample		Waterhole 115						Waterhole 266					
		39 (10 cm)	38 (12 cm)	38 (28 cm)	38 (44 cm)	37 (24 cm)	37 (46 cm)	92 (6 cm)	92 (24 cm)	92 (40 cm)	93 (10 cm)	93 (26 cm)	93 (40 cm)
Pteridium	Bracken	1.7	0.7	3.6	1.3	0.9	2.5	1.1	1.1	6.3	6.5	2.8	4.5
Dryopteris-type	Und. Ferns	-	0.7	1	-	1.3	0.4	-	0.6	-	-	1.4	-
Aquatics													
Potamogeton	Waterweed	-	0.6	-	-	-	0.4	-	-	-	-	-	-
Lemna	Duckweed	10	1.3	1.5	-	1.3	3.2	1.1	-	-	-	-	-
Nymphaea	waterlily	0.6	-	-	-	-	-	-	-	-	-	-	-
Typha angustifolia-type	Bulrush	2.6	-	-	-	-	-	-	-	-	-	-	-
Sphagnurn	Bog moss	-	-	-	-	-	-	-	-	0.6	-	-	-
Indeterminable		2.6	7.8	7.2	6	5	3.2	26.7	12.6	21.2	24.4	10.6	18.9
Sum Trees & Shrubs		8.4	6	4.1	3.1	6	2	6.8	1.8	2.5	2.4	2.8	5.3
Sum Herbs		90.2	93.4	89.7	94.1	90.4	94.6	91.7	95.7	89.5	91	92.3	89.7
Sum Ferns		1.7	1.4	5.6	1.9	3.1	3.3	1.1	2.3	6.9	6.5	4.9	5.2
No. of grains in pollen sum		295	153	194	157	229	244	88	174	160	124	143	154

SumP = sum of trees + shrubs + herbs + ferns.
Aquatics, Sphagnum, and indeterminable, are given as percentages of SumP + sum aquatics, SumP + Sphagnum, & SumP + sum indeterminable, respectively.
und.= undifferentiated

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 ten years there has been a considerable amount of archaeological investigation around the base of Brockley Hill in the immediate vicinity of Watling Street (Bowsher 1995; McKinley 1998; Smith 2001). This work has revealed evidence for extensive Romano-British activity in the area and yet the exact nature of this activity remains somewhat uncertain. The excavations at the former MoD site have added 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, but none that would seem to have been pre-Conquest in date. The first enclosure system was possibly established in the mid- to late 1st century AD, and may be contemporary with the initial construction of Watling Street, 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 as piecemeal development is uncertain. The function of these enclosures (which were probably delineated by 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 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 edge of Watling Street and were possibly located to meet the needs of human, animal and wheeled traffic travelling along that busy road from *Londinium* to *Verulamium*. The waterholes do not appear to have functioned in any major industrial or domestic capacity and so may also have been for the use of road traffic, including drovers herding their stock, as suggested for the WA site to the south (McKinley 1998, 65); the presence of dung beetles in one of the waterholes supports this suggestion. Thus it is possible that the enclosures (or some of them at least) acted as stock pens, while the ditches also served in a drainage capacity.

One of the waterholes (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, a 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 material was probably deposited when the well was going out of use in the mid-3rd century AD, and the assemblage could therefore represent a rite of termination. It is increasingly realised that ritual practice in Roman Britain was not confined to formal places of worship, but was an integral part of everyday existence, with ceremonies carried out in many different locations, perhaps in response to a particular event or occasion (Fulford 2001; Black 2008). The symbolism of objects may not always be apparent and could have been quite diverse, although in this instance the shoes in particular would seem to be of some significance. These were thought to preserve the imprint of the soul, and their deposition in ritual contexts was an established practice throughout the prehistoric and Roman period across Europe (van Driel-Murray 1999, 135). Their deposition in a waterhole adjacent to Watling Street may also be significant in terms of a possible association with travellers — perhaps they were intended to promote safe passage along the busy highway?

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 late 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 other excavated sites in the vicinity.

The sites 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 (Bowsher 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 the OA excavations, and it is 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 Canons 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 to 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 vicinity, and this is quite likely to be that of *Sulloniacis*, which could lie on the eastern side of the road, to the north of the cremation burials (Fig 1), or else further south. 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 time as roadside activity commenced at the base. Although this is an area which has 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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THE ARCHIVES

The site archives have been deposited with the Museum of London's Archaeological Archive and Research Centre (LAARC).

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