

EXCAVATIONS OF A ROMANO-BRITISH ROADSIDE SITE AT BROCKLEY HILL, STANMORE, MIDDLESEX, 1995-7

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SUMMARY

Excavations at the base of Brockley Hill, on the west side of Watling Street, revealed evidence of sporadic Romano-British activity, of a varied, but somewhat enigmatic nature. There was no evidence of any domestic occupation of the site and no obvious link with the Brockley Hill kilns to the north. Discrete deposits of gravel and concentrations of fragmentary and abraded Roman masonry and ceramics were found adjacent to the road in the south of the site, and this area may have served as a road-maintenance depot. Evidence of industrial activity was recovered in the north of the site, but its precise nature is unclear. The presence of a series of large ponds or wells may be linked with the industrial use of the site or indicate that it also served as a watering place for drovers travelling between London and Verulamium. Evidence from the verge of the current A5 suggests that the original route of the Roman road did not swing across to the east at the base of the hill as was previously thought but may have continued a straight course on the west side of the current road.

INTRODUCTION

Between January and March 1997, Wessex Archaeology conducted an archaeological excavation (Site Code LRS 95) within and adjacent to former Ministry of Defence (MoD) land situated between London Road (A410) and the A5 at Brockley Hill, Stanmore, in the London

Borough of Harrow (Area 1: TQ 182 928, Area 2: TQ 181 929; Fig 1). The investigations were required in advance of housing development by Barratt North London. The proposed development site was situated on the west side of the major Roman routeway of Watling Street (the current A5) and 1.5km south of the early Roman pottery kilns at Brockley Hill. The overall area of proposed development had been subject to an archaeological evaluation in December 1995 (Wessex Archaeology 1995) and, on the basis of the results, two discrete areas had been specified for full excavation in agreement with English Heritage London Division (Areas 1 and 2; Fig 1). In addition, two small trenches (Areas 3 and 4) were to be excavated across the Brockley Hill roadside verge, along the proposed course of sewer and storm drains.

The areas of excavation were located on relatively flat ground between the 75m and 80m contours towards the base of Brockley Hill. The natural contours of the land show a very gradual incline northwards from the London Road, and a slight increase from east (76.99m aOD) to west (80.60m aOD) at the north end of the site. The underlying geology is predominantly London Clay with patches of Stanmore Gravels (British Geological Survey, Geological Map 256). To the NW of the site, around Brockley Hill, there is an outcrop of the Claygate Beds overlain by Pebble

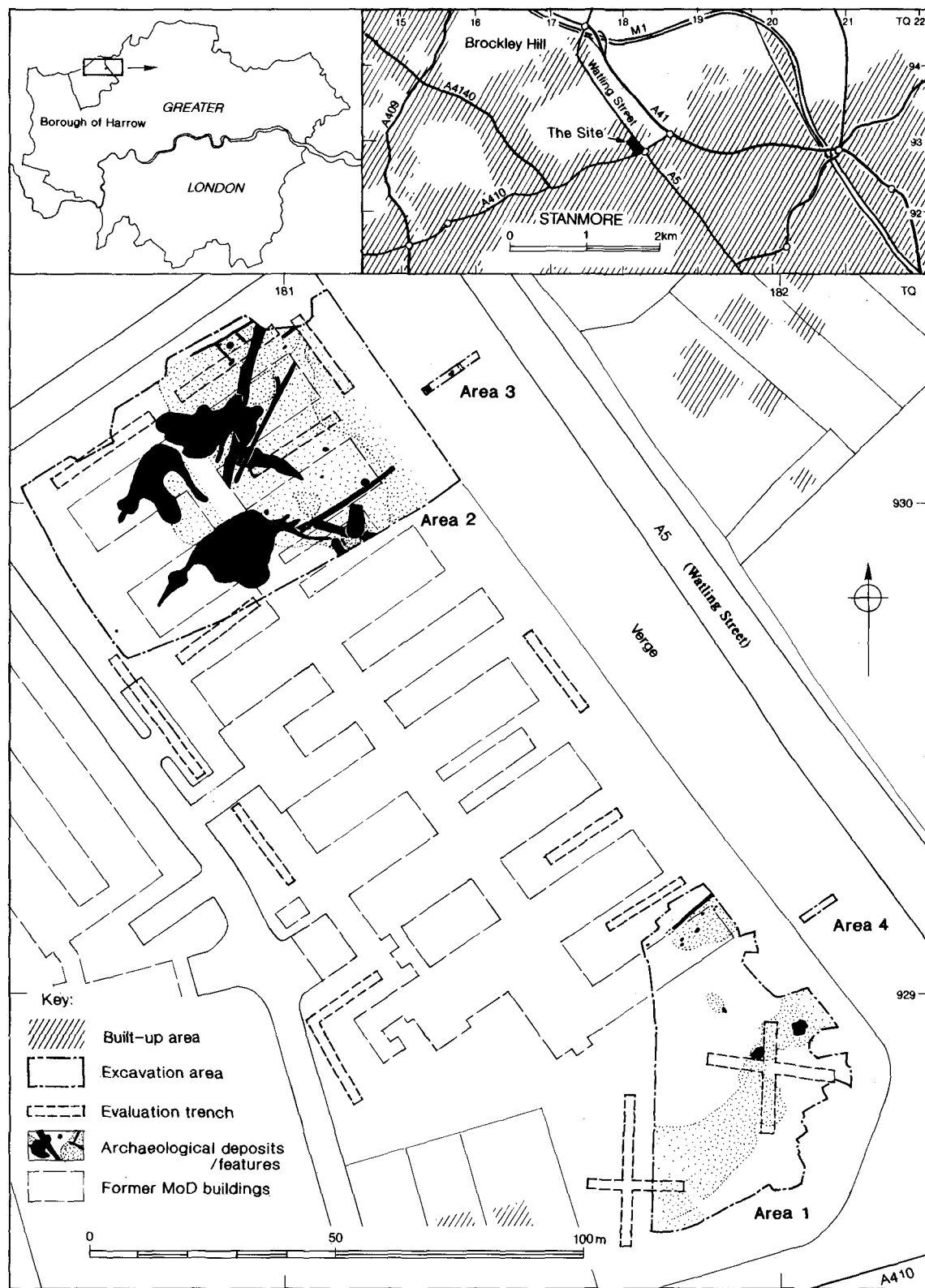


Fig 1. Site location; showing the evaluation trenches and excavation Areas with main features/deposits

Gravels. The nearest water-course is at Newlands, 0.5km NW of the site, where a spring-line pond drains south-eastwards to form the Edgware Brook. At the time of the investigations, Areas 1 and 2 had largely been cleared of the, mostly single storey, MoD buildings which occupied much of the site, though demolition was continued elsewhere. It was apparent that varying degrees of terracing had occurred, predominantly in the vicinity of Area 2 to the north, associated with construction of the MoD buildings and service roads.

ARCHAEOLOGICAL BACKGROUND

Small numbers of Mesolithic and Neolithic flint artefacts have been recovered during fieldwalking to the NE of London Road. Fragments of pottery and flintwork recovered from around Brockley Hill indicate Bronze Age activity within the vicinity. Earthworks and Belgic pottery recovered within the area also suggest some Late Iron Age presence (Chadwick 1995). However, the archaeological evidence from the immediate vicinity is predominantly of Romano-British date.

The eastern boundaries of the main areas of excavation were situated 24m west of the A5, which follows the course of the Roman road, Watling Street. The latter, laid out c.AD 43-49, formed one of the principal routeways, running between *Londinium* (London) and *Verulamium* (St Albans) and thence to the Midlands, Wales and the North-West (Codrington 1919; Roucoux 1984). Excavations conducted on Brockley Hill between 1937 and 1974 (Castle 1976, fig 1) indicated that the course of the road may have been slightly to the west of that followed by the current A5 as it descends Brockley Hill, certainly to within c.310m north of the site. Recent evaluation in the southern part of the area investigated by Castle (Bowsher 1995) found further evidence for the Roman road, confirming its course on the west side of the A5 (*ibid*, fig 3). This latest evidence suggests that the embankment in the front gardens of the houses fronting the east side of the A5 at Newlands noted by O'Neil (1950), is unlikely to have represented the *agger* of the Roman road, unless the course of the road shifted over time (Fig 2).

Brockley Hill was an extensive pottery manufacturing centre in the early Romano-British period. Castle (1976, 224) describes a 'vast industrial complex' strung-out along the sides of

the road, consisting of pottery kilns, more than a dozen of which have been excavated, workshops, dwellings, clay pits and puddling holes. Occupation of the site is postulated to have been of a seasonal nature, the local clays apparently being unworkable in either frosty or dry conditions. The earliest kilns were established c.AD 50-60 and manufacture reached its peak in the late first-early second centuries (Castle 1976, 223-4). Production had declined by AD 120-130, possibly because of the scarcity of suitable clays. Area 2 lies c.1.3km south of the nearest known kiln (kiln 8, in use during the peak period of production).

There is a belief that the Roman road station between *Londinium* and *Verulamium* (St Albans), named *Sulloniacis*, was adjacent to the road where it crossed the high ground of Brockley Hill, 1.5km north of the site (Castle 1976; Sheldon 1996). However, no convincing evidence has yet been recovered. The various excavations have provided no evidence for a civil settlement, substantial buildings or a posting station (Castle 1976; Bowsher 1995).

The 1995 archaeological evaluation (Wessex Archaeology 1995; Fig 1) indicated two areas of Romano-British activity, one in the SE corner (subsequently Area 1) and one in the NE corner (subsequently Area 2). The evidence from the NE suggested activity spanning much of the Romano-British period. The features observed, including two late Romano-British ditches, and the nature of the artefactual and environmental evidence, did not suggest domestic occupation but rather the possibility of some form of industrial activity. Evidence from the SE appeared confined to the latter part of the Romano-British period, with ditches and deposits of faced and dressed limestone.

The location of the development site adjacent to Watling Street, potentially within the known vicinity of the road station of *Sulloniacis* and the relative proximity of the manufacturing complex at Brockley Hill, rendered it important to investigate. Understanding the date and range of activities which took place along such an important routeway and the potential links between settlements, manufacturing and industrial areas, were primary objectives within the archaeological investigations.

METHODS

Two areas of the development site had been targeted for excavation (Wessex Archaeology

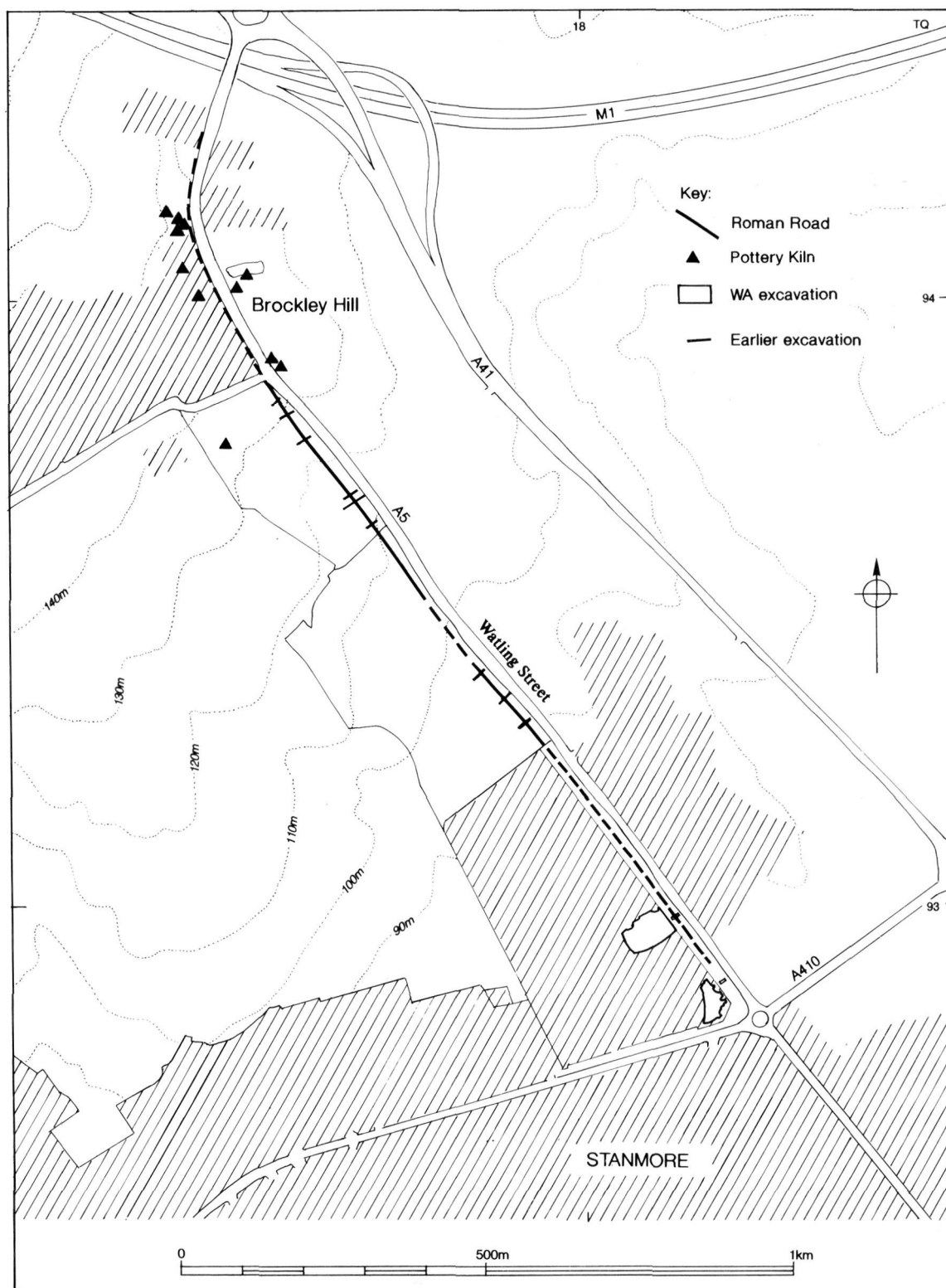


Fig 2. The known position of the Roman road (Watling Street) as excavated by Castle (1976, fig 1) and Bowsheer (1995, fig 3) with the projected line along the current roadside verge

1995). Archaeological features and deposits had occurred in four of the 29 trial trenches excavated in the evaluation, in the NE and SE corners of the site (Fig 1). Area 1, in the SE, adjacent to the junction between the A410 London Road and the A5, comprised an irregular-shaped area $c.40 \times 70\text{m}$ (Figs 1 and 3). Area 2, in the N corner, adjacent to the A5 just below its increased ascent of the ridge, was a rectangular trench $c.70 \times 50\text{m}$. Two 1.60m-wide trenches were also excavated across the roadside verge between the A5 and the perimeter fence around the development site, following the routes of the storm drain and foul sewer pipe that were to be inserted as part of the development (Fig 1).

In the two main areas of excavation, the former MoD buildings and associated services had caused substantial disturbance to both the archaeological and underlying natural deposits (Figs 3 and 4). The modern overburden was removed by machine to the top of the archaeological or natural deposits, but some of the deeper modern intrusions were left *in situ* since their removal would have had a detrimental affect on the archaeological remains. The size and shape of Area 1 (Fig 1 and 3) was affected by the presence of several trees and the course of live electricity cables. The length of the trenches in Areas 3 and 4 was similarly affected by the presence of services in the roadside verge.

Much of the eastern portion of Area 2 (Figs 1 and 4) was found to be covered by a series of archaeological layers or spreads which were believed to seal earlier features. Hand excavation of these spreads, to ascertain their relationships, form and nature, was carried out via a series of 17 slots (A–Q), covering a $c.16\%$ sample (Fig 5). Individual slots were 1.5–2.0m wide and 3–12m in length and were distributed at intervals across the spreads, each one crossing at least one boundary between apparently different contexts. Each spread was examined with at least two slots in order to monitor finds distribution within the layers. Following hand excavation, the remainder of the spreads were machine excavated under constant archaeological supervision, ensuring further artefact recovery, to reveal any underlying features.

All archaeological features were investigated by hand. However, the depth of feature 279 (3.18m) necessitated machine excavation to provide a safety step after each 1.20m-deep stage of hand excavation. A minimum 10% sample of linear features was excavated, together with all

intersections and terminals. Non-linear features were generally 50% excavated. All excavated deposits containing carbonised remains were bulk sampled for environmental data. Soil monoliths and snail columns were taken from appropriate features.

The full archive is presently held at the offices of Wessex Archaeology at Salisbury under the archive code LRS 95, to be deposited with the Museum of London in due course.

RESULTS

Introduction

Archaeological deposits in Area 1 lay immediately below a 'buried' topsoil, up to 0.60m thick, which survived as a complete layer in the south and as truncated islands in the north. The central section of the site had been badly disturbed by the insertion of the MoD structures (Fig 3), and the apparent lack of archaeological features/deposits within this part of the site may therefore be misleading.

The depth of the topsoil and subsoil in Area 2 showed a gradual increase from $c.0.30\text{m}$ in the east to $c.0.85\text{m}$ at the west end of the site. This increase was largely the result of two levels of terracing before construction of the MoD buildings, there being a slight natural increase in the level of the land to the west. Along the north-eastern side of the site, a $c.9\text{m}$ wide area had been cut to a minimum depth of 0.20m to the natural clay to accommodate the perimeter road and main sewer pipe. Most of the western half of the site had also been terraced down to the natural clay to create a level area for construction. The maximum extent of the terracing was along the west side, where the clay natural had been removed to a depth of $c.0.36\text{m}$. There were extensive modern intrusions across the whole of Area 2 (Fig 4) in the form of wall foundations, square footings and pipe trenches. A $c.10\text{m}$ -wide NW-SE strip across the centre of the site had sustained substantial damage from deep foundations and dumps of rubble over the soft clay natural.

In Area 1 and the adjacent Area 4 archaeological deposits overlay London Clay. In Area 2 there was, in addition, an outcrop of natural gravel containing pockets of clay (Stanmore Gravels) along the eastern 12m strip, extending into Area 3.

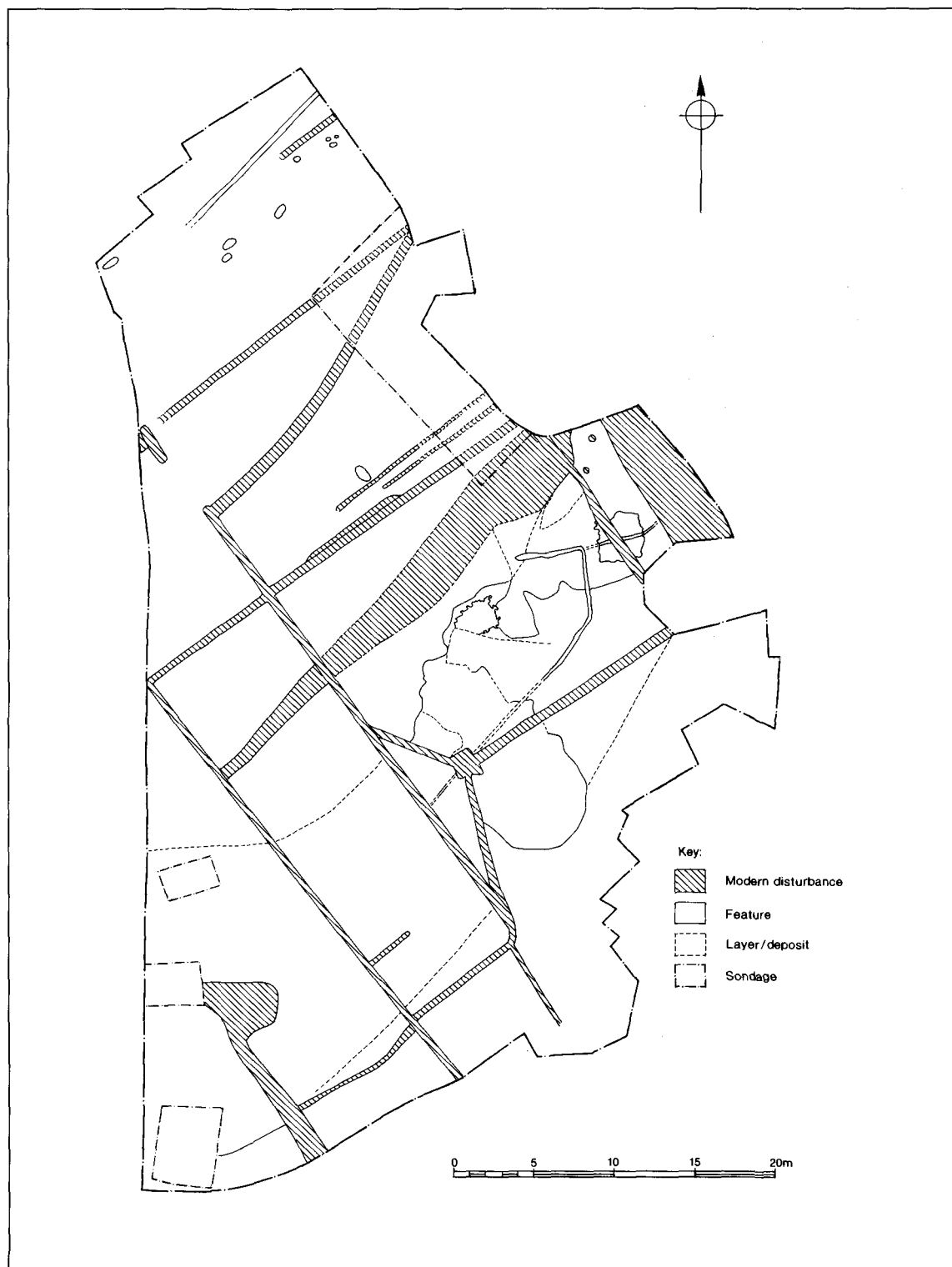


Fig 3. Area 1: all features/deposits

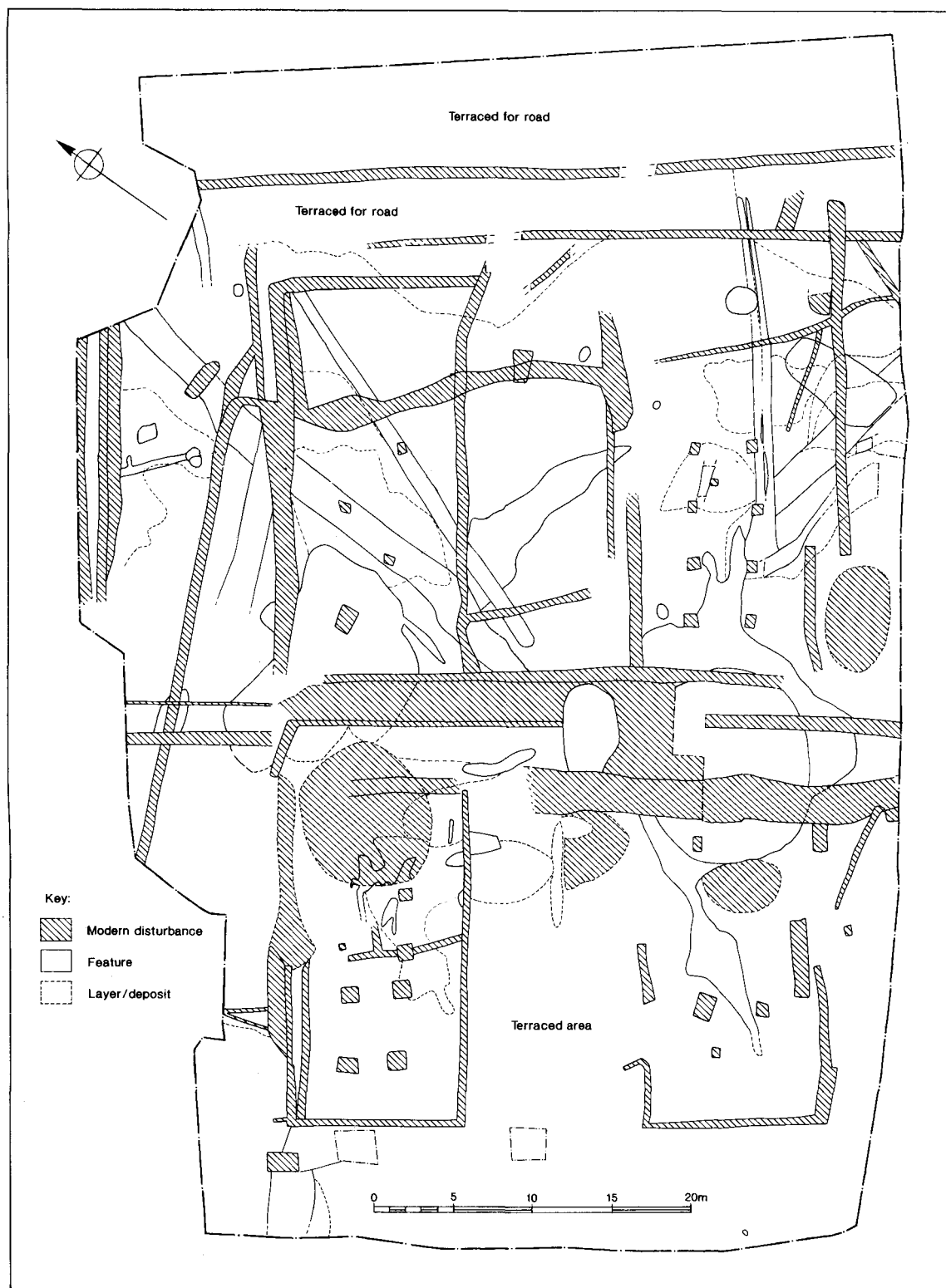


Fig 4. Area 2: all features/deposits

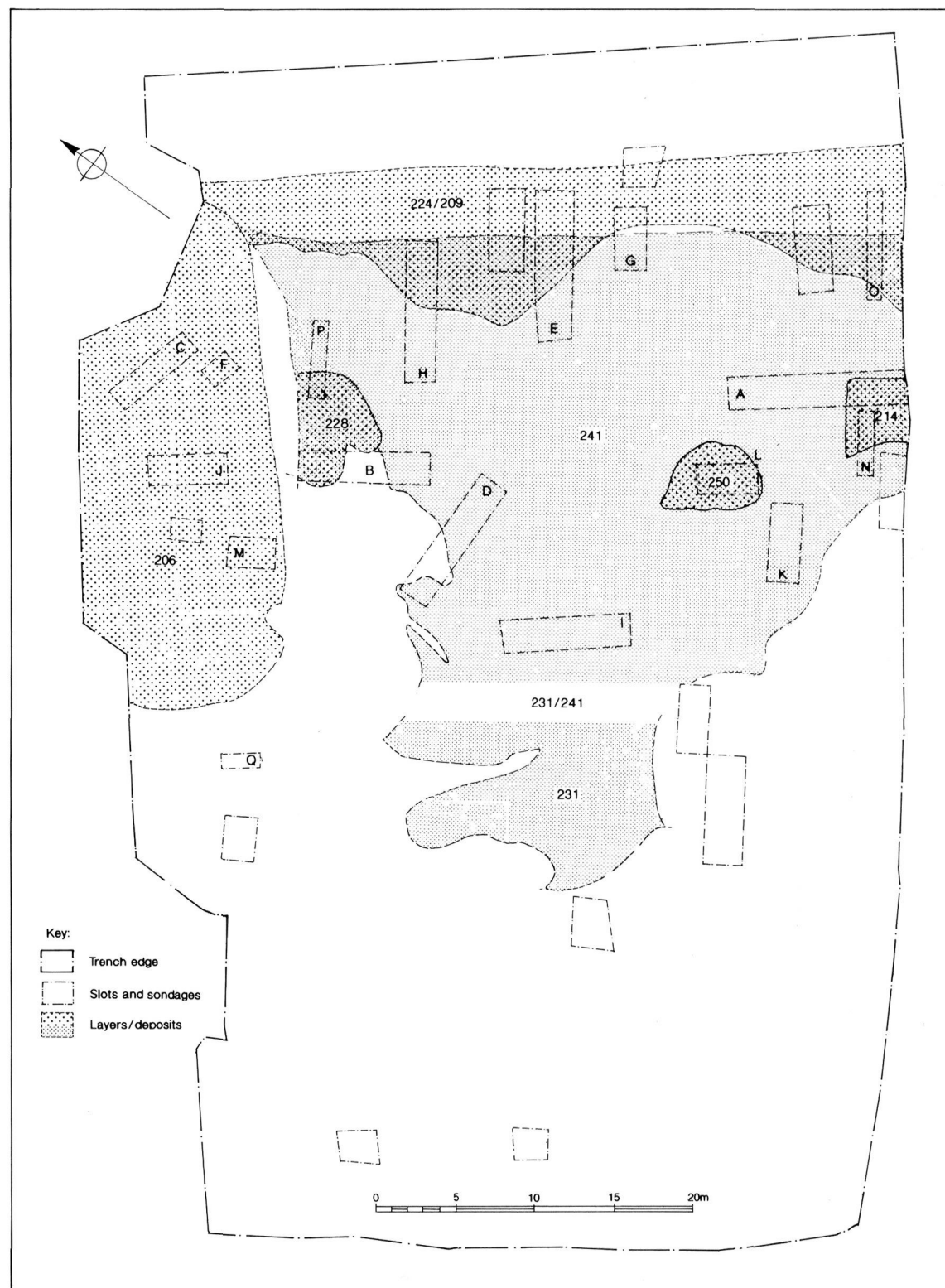


Fig 5. Area 2: main Romano-British spreads and location of excavated slots

The archaeological evidence from the two main areas of excavation differed substantially in form and nature, though the artefactual evidence consistently indicates predominantly late Romano-British activity (AD 240-400). Deposits in Area 1 were dominated by an extensive gravel spread in a NE-SW swathe across the south of the site, accompanied by discrete deposits of worked limestone (Fig 1, 3 and 5). A small group of shallow slots, postholes and a linear feature were excavated in the northern part of the Area, cutting through a shallow layer of silty clay overlying the clay. In Area 2, a series of spreads or layers containing varying quantities of residual Romano-British ceramic building material (CBM) and pottery covered the eastern part of the site. The western limits of these spreads was partly defined by two ditches set at right-angles to each other and $c.45^\circ$ to Watling Street (Fig 4). Most other archaeological features were confined to the eastern side of these ditches, towards Watling Street. The area to the west was largely devoid of any apparent activity other than the three large ponds/wells and their associated feeder channels. The other archaeological features, including a number of ditches/gullies, pits and slots, were largely sealed by the spreads, though most were of late Romano-British date. An alluvial episode, possibly medieval, survived in the central-western part of Area 1. Colluvial deposits, apparently both pre- and post-Roman in date, survive on the northern edge of Area 2. A number of other spreads, ditches/gullies and postholes in both Areas were of post-medieval origin. Features of Romano-British date were also noted in the Area 3 trench. No archaeological deposits were found in the trench in Area 4 and this Area is not discussed further.

Area I

Early Romano-British (ERB)

No features of this date were definitely identified although it is possible, on stratigraphic grounds, that the spread of mottled silty clay [112] in the northern part of the site may be early in date (Fig 6). The layer was clearly cut by several late Romano-British features, including ditch [124]. The spread survived to a maximum depth of only 0.06m and its full extent is uncertain.

Late Romano-British (LRB): I

Modern disturbance effectively divided the archaeological features and deposits into two groups which cannot be stratigraphically related (Fig 3). Only in the south of the site can the LRB deposits be split into two distinct phases. For the purposes of this description, all the features in the northern group have been placed in this primary phase, though there is no evidence that they are strictly contemporary with the deposits to the south or to each other, and no indication as to how long they remained in use.

The phase was represented by a gravel spread (group no. 556), three or four slots, four postholes and a narrow ditch [124] (Fig 6). The gravel spread, with a silty clay matrix, lay directly over the natural clay and extended in a broad curve of 5-16m-width and $c.44$ m long NE-SW beyond the limits of the trench. It was excavated as a series of contexts which varied in depth and quantity of archaeological components. It was thickest in the north (0.2-0.29m), thinning to less than 0.1m in the SE and consistently towards its edges. The density of finds also decreased from NE to SW (*ie* away from the road). The slots [105, 107, 113, ?103] and postholes [110, 125, 129, 134] clustered within a 5m-wide strip at the north end of the site, south of ditch [124], and appeared to cut the earlier spread [112]. All survived as only shallow features (0.07-0.27m) and contained mottled, slightly silty clay. The slots (0.85-1.60m long, 0.4-0.52m wide) had shallow sloping sides and flat bases; the postholes were subcircular with flat bases (0.11-0.30m diameter). Although lying roughly parallel to ditch [124], no obvious spatial patterning was apparent for this group. A similar slot [135], in the central part of the Area, survived to a depth of only 0.12m and was sealed by medieval deposit [141/168]. It contained fragments of LRB pottery. The narrow (0.44m wide) ditch, [124], produced 3rd-century pottery and may have marked the northern extent of LRB I features in this area.

Late Romano-British: II

Two discrete, roughly square, deposits ($c.3 \times 3$ m in extent and 0.12-0.22m thick) of worked oolitic limestone [100/101] and [102] overlay gravel spread [556] in the NW (Figs 1, 3 and 6), infilling shallow 'dips' in its surface. The worked stone

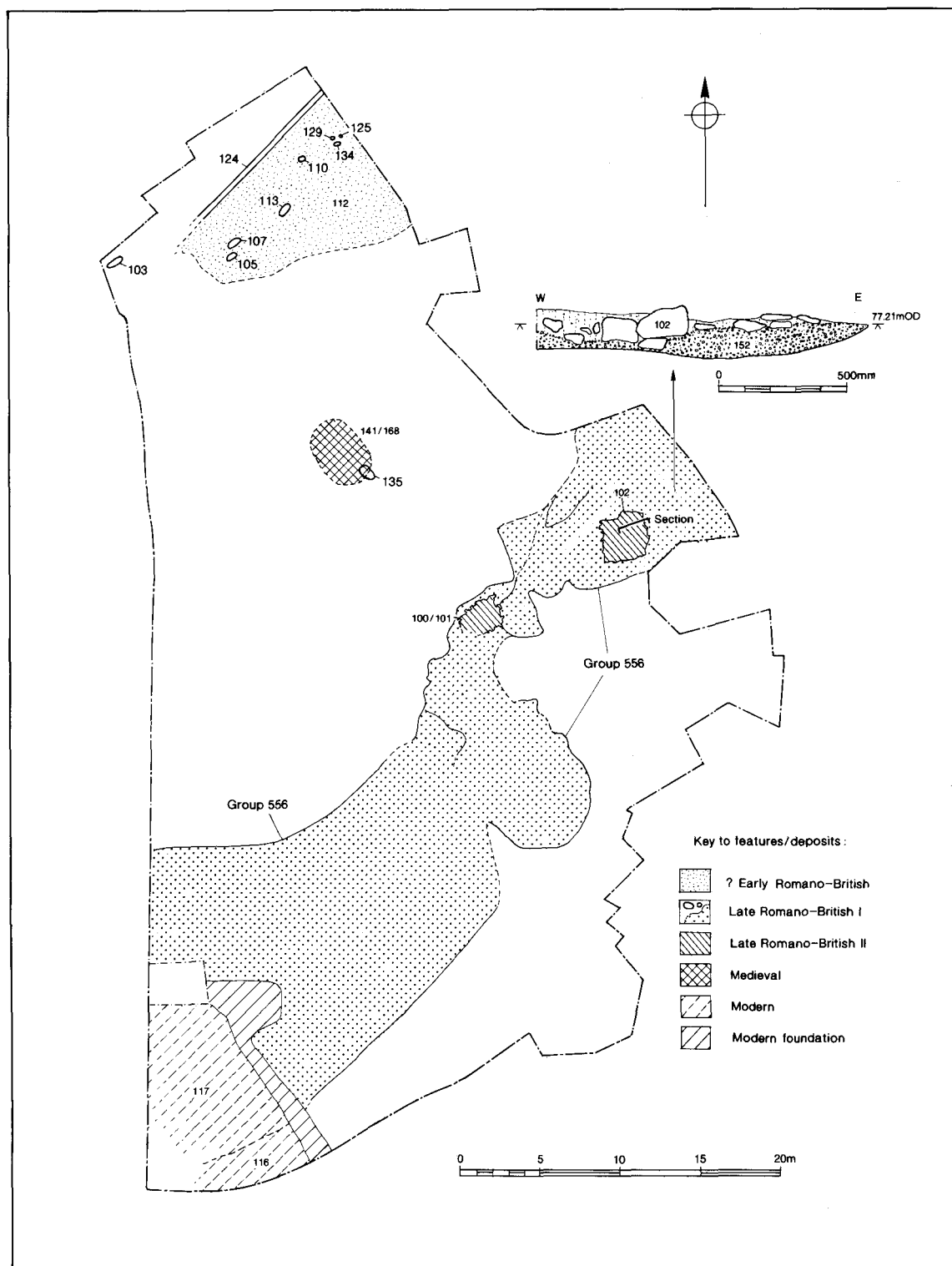


Fig 6. Area 1: archaeological features, all phases

included fragments of possible columns and other architectural components, representing demolition debris from Romano-British structures.

Medieval and later

Fragments of residual Romano-British and medieval pottery were recovered from an ambiguous fluvial deposit [141/168] in the central area of the site. Although only $c.5 \times 3\text{m}$ in extent at the time of excavation and a maximum of 0.15m deep, it is likely that this mottled grey clay was originally more extensive, but had been removed by MoD buildings.

Area 2

Early Romano-British

Evidence for activity within this early phase is limited to three features and one spread (Fig 7). Stratigraphically these are the earliest archaeological features in this area but their suggested date is based on the recovery of exclusively ERB pottery throughout or within the lower fills. This pottery is likely to be residual ($c.39\%$ of the Romano-British pottery from Area 2 was early) but there was no accompanying LRB pottery.

Three features [279, 215/545 and 554], each containing a varying number of layers and lenses of varying silty blue/grey clay, seem to have been ponds. Feature [279] was the least disturbed by modern building. It was roughly subcircular, $c.1.2\text{m}$ across with an outer 'ledge' $c.1.2\text{m}$ wide and $c.0.6\text{m}$ deep and a deeper, central area of $c.9\text{m}$ diameter sloping steeply to a concave base of $c.1.65\text{m}$ diameter at a maximum depth of 3.18m. Three general episodes of accumulation are apparent in its 17 fills (Fig 8), extending from the ERB to LRB (IV) (below). The full profile was sampled for snails, with negative results, and by a series of five monoliths for soil descriptive purposes, providing a palaeo-environmental interpretation of the sedimentation of the pond (see below).

The earliest three fills ([459–457]; 0.45m) were distinctive grey, heavily gleyed clays with coarse laminations, typical of mud settling in standing water which dried out seasonally, though the horizons remained waterlogged. They were sealed by 0.51m of slightly silty clay [355] containing a fragment of Verulamium Region

White ware, CBM, a few fragments of fuel ash slag and several fragments of animal bone (large mammal). A profusion of organic material (leaf mould) was noted in the lower part of this layer and fragments of a possible plank and a stake were excavated from the upper levels. Above this was a series of slumped layers of fine-grained silty clays, probably resulting from a single, rapid event. However, many of the horizons were distinctly structured, possibly indicating some stabilisation and hiatuses within the sediment accretion history (especially [352]). Numerous fragments of timber, representing the remains of stakes and planks, one of them mortised (see below), were recovered from the central-lower fills, together with one LRB sherd, a few fragments of CBM and animal bone (large mammal).

Other features assigned to this phase were an irregular feature [501], $c.14\text{m}$ long, 4m wide and 0.14m deep containing charcoal flecks, Romano-British CBM and 24 ERB sherds including Verulamium Region White ware ($c.AD$ 50–160) in a mottled silt clay fill; the scant remains of a ditch [553], the earliest of three cut along the same line (subsequently [190] and [552]), of which only the lower $c.0.20\text{m}$ was evident in section (Fig 9) at 0.77m below ground level (78.86m aOD) and a spread of mottled silty clay $7 \times 5\text{m}$ in extent and $c.0.25\text{m}$ deep containing frequent charcoal flecks, some CBM and a Verulamium Region White ware sherd. The ditch was noted in the evaluation (Wessex Archaeology 1995, fig 6) but probably terminated somewhere in the 5m between the evaluation trench and slot B of the excavation (Fig 5).

Late Romano-British

It was not possible to divide the LRB into separate phases on the basis of artefactual evidence but clear stratigraphic divisions were evident and this criteria was used to split the period into four general phases with subdivisions (a–c) in Phase I. Only the relative phasing, not the actual dates of these divisions could be ascertained and there may have been only weeks or months between the formation of some features/deposits, with years or decades between others. Features from earlier phases may still have been evident or in use into later ones, as with the pond [279]. Features from LRB: Ic may still have been extant in LRB II, but the major

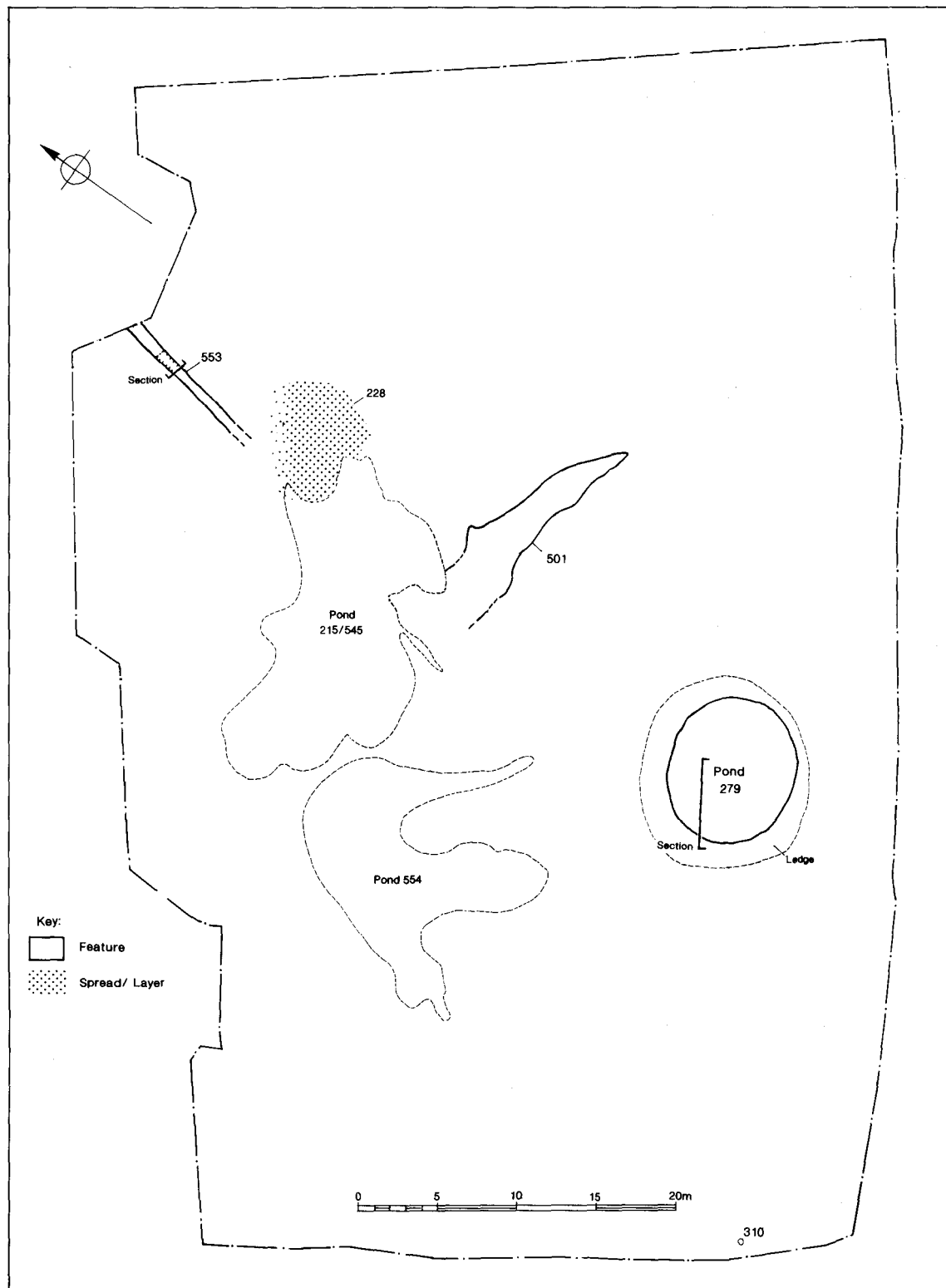


Fig 7. Area 2: Early Romano-British features

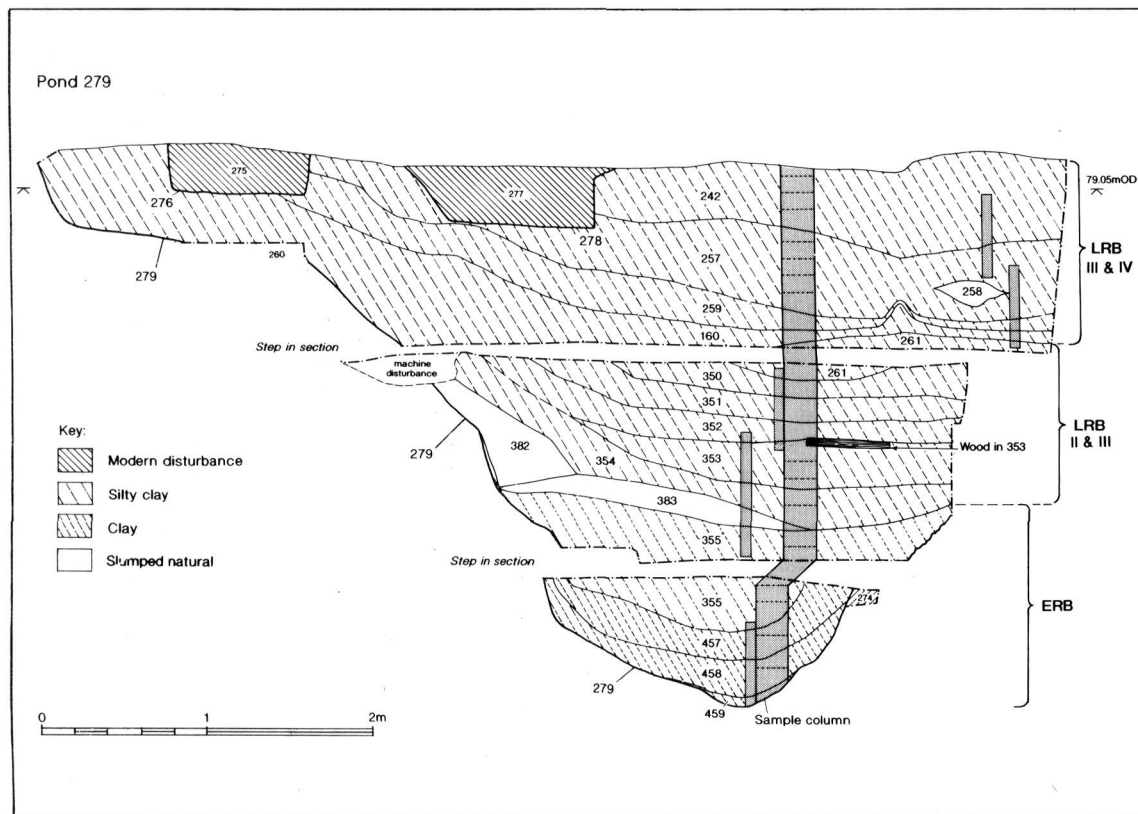


Fig 8. Area 2: section through pond [279] showing position of snail column and monoliths

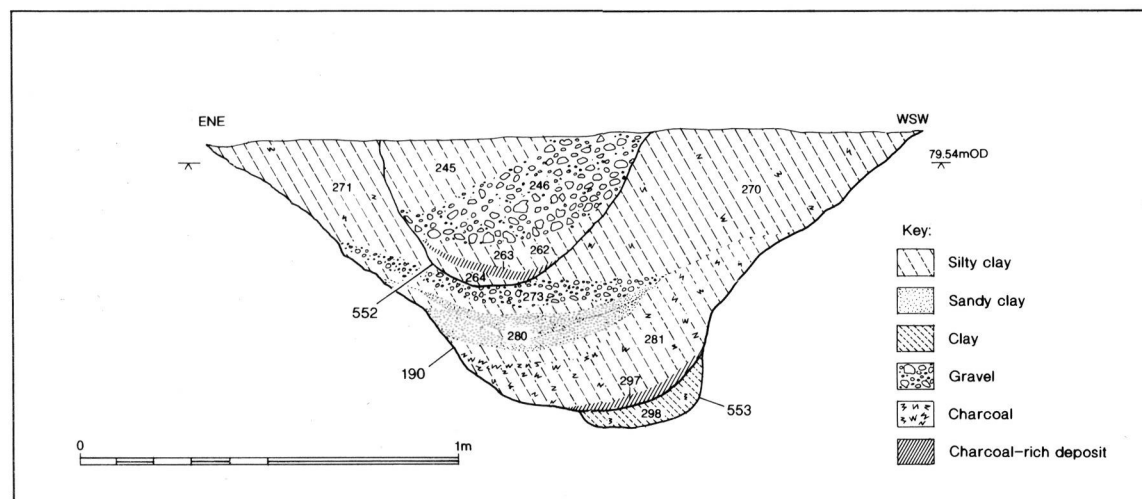


Fig 9. Area 2: section through Early Romano-British linear feature [553], with Late Romano-British recuts [190] and [246]

spread deposited over the site in LRB III clearly signalled the end of use for most features.

Late Romano-British: I

Two groups of features, at the north and south end of the site, were attributed to this phase, though the precise stratigraphic relationship of the groups to one another is unknown. The intercutting of features within the groups led to further division into subphases Ia-Ic.

Late Romano-British: Ia was represented by an east-west ditch [483] with two associated gullies [538 and 536]; small segments of three shallow ditches or gullies [338, 349, 460]; three subcircular pits, ([516] incorporating a stakehole, [533], [547]) all of similar dimensions (0.8–1.2m) lay close together in the north of the Area; and a posthole cut through the base of pit [533]. The flat based, E-W ditch [483] extended beyond the limits of the site to the east and probably originally extended beyond the later ditches [370] and [427] (Fig 10). It survived to a depth of 0.28m and was 1.39m wide. Shallow gullies [538] and [536], 0.06m deep, were cut into its base at either side, probably forming an integral part of the main ditch cut, the single, clay fill of [538] extending partly across the ditch base. Pit [516], 0.45m deep contained a few fragments of CBM, pottery and, notably, cattle bone (animal bone was recovered from only one other feature in Area 2 – pond [279]).

Late Romano-British: Ib was represented by pit [546] (0.8 × 0.6m), the base of which showed evidence of *in situ* burning although the 0.50m silty clay fill included only occasional flecks of charcoal; a NW-SE ditch/gully [548] which terminated in the upper fill of the phase Ia pit [547] and joined (in an unclear stratigraphic relationship) E-W ditch [513]; two parallel NE-SW ditches ([370] and [427]) and a shallow, sub-rounded feature [480], only discernable in section. Ditches [370] and [427] had an uncertain stratigraphic relationship, following the same line and being of similar dimensions (0.56–0.70m wide, max 0.31m deep) and fill. Fragments of Romano-British pottery, including some LRB, CBM and occasional charcoal flecks were recovered from the single fills of each.

Late Romano-British: Ic was characterised in the northern part of the site by a colluvial deposit [206], which partially or completely sealed most of the earlier phase I features shown in Fig 10.

Fragments of mid-late Romano-British pottery (c.AD 150 onwards) and CBM were recovered from the mottled, firm sandy clay layer.

Romano-British pottery of mixed date was recovered from the single fill (0.29m deep) Rectangular feature [505] (7.8 × 3.4 × 0.29m) produced Roman pottery of mixed date together with fragments of CBM and occasional flecks of charcoal. A rather amorphous linear feature ([435]; 0.3–1.6m wide, 0.17m deep) cut the western ends of the earlier ditches [370] and [427] but petered out at either end. The earliest of a number of solitary pits [487] contained an almost complete wall-sided bowl (c.AD 240–400), which, in contrast to the highly abraded state of most of the pottery, was in good condition. The oval pit, 1.0 × 0.65m, had steep sides and a concave base, the single fill also containing fragments of CBM and charcoal flecks.

Late Romano-British: II

In the northern part of the site, the ERB ditch [553] was recut by a slightly shallower (0.70m) but wider (1.75m) ditch, [190], which was visible over a 34m length from the NE corner of the site, aligned directly towards pond [279] in the south (Figs 9 and 11). It was cut through the colluvial deposit [206], which presumably still covered most of the northern part of the site. In the segments excavated at the north end (one in the evaluation stage) the primary fills were angled from the west side and comprised a charcoal rich deposit (0.03m), incorporating a wide range of taxa and a few fragments of fuel ash slag, together with a fragment of charred grain and a hazelnut shell, and a 0.21m deep layer of mottled clay silt with charcoal flecking. Subsequent layers were angled-in from the other side and mostly comprised lenses of sandy clay (0.15m) sealed by a 0.06m deep layer of gravel. Finds of ERB date were recovered from layers [281] and [270] (Fig 9), ERB and LRB pottery being recovered from layers equivalent to [270] in the segment excavated further south. The LRB phasing is also attributable on stratigraphic grounds.

In addition, a narrow ditch/gully ([227]; 0.8m wide) and a substantial, dark grey, silty clay spread [224/209] are attributed to this phase. The clay spread was deposited directly on the natural gravel along the eastern side of the site, sealing some of the phase I features in the south.

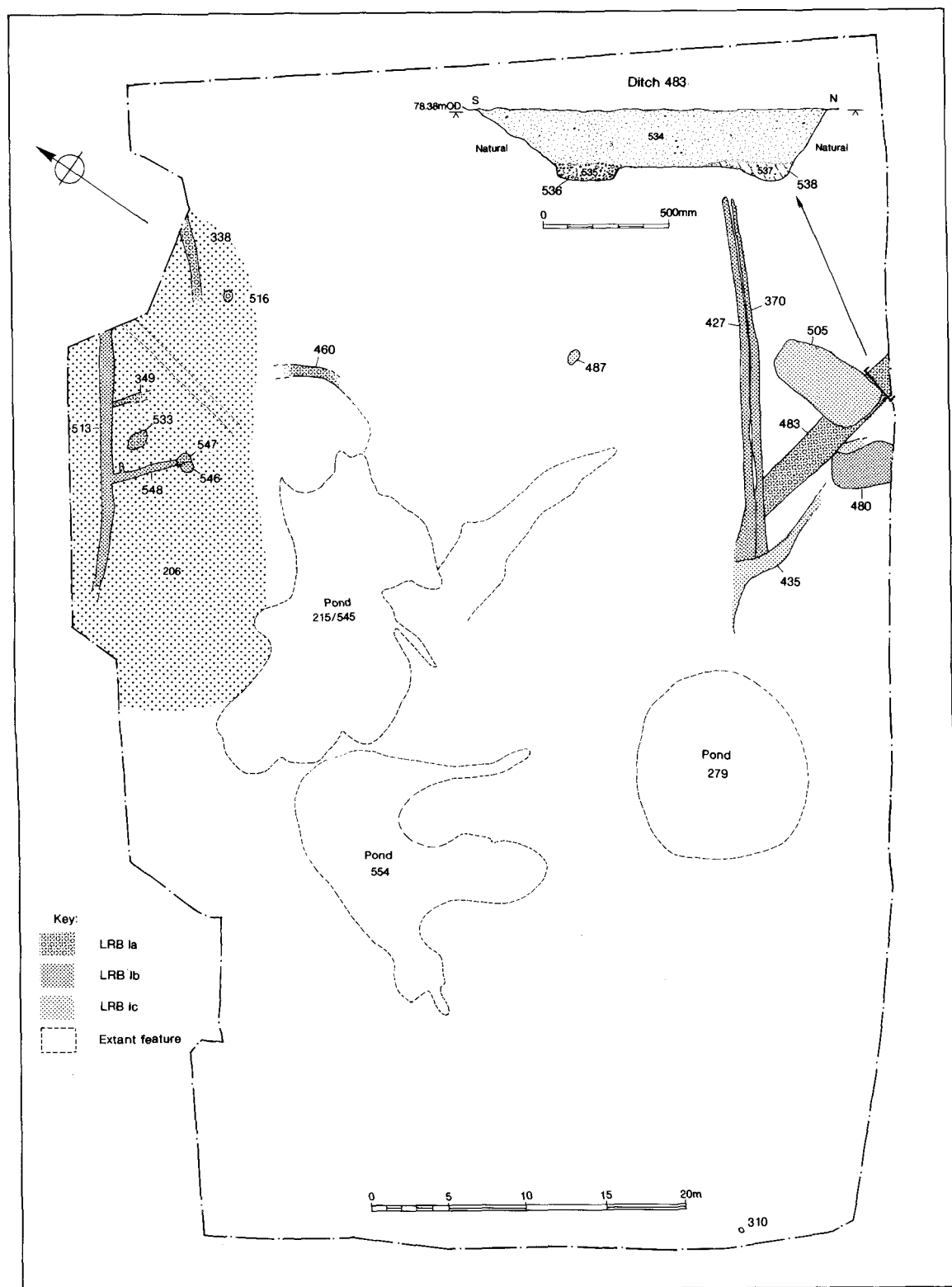


Fig 10. Area 2: Late Romano-British Phase I features and deposits with inset of section through linear feature [483]

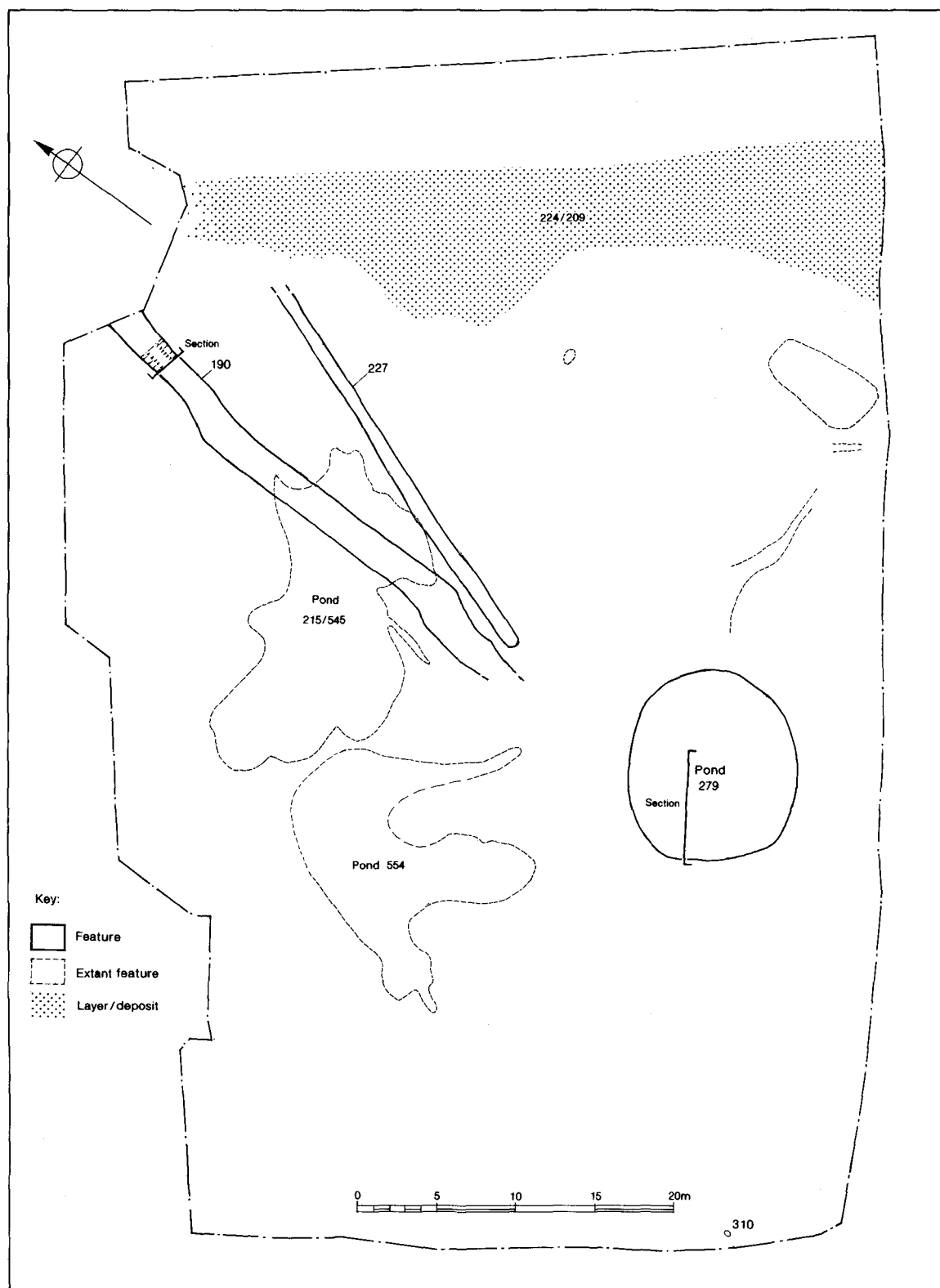


Fig 11. Area 2: Late Romano-British Phase II features and deposits

It varied in thickness from 0.03–0.21m over natural undulations in the surface. The spread clearly continued eastwards towards Watling Street but had been removed during MoD terracing. Large quantities of mostly LRB pottery and CBM were recovered, representing 25% of all the CBM recovered from Area 2 and 24% of all the pottery, with 54% of the fired clay being collected from [209] (the SW 10m of the spread). The pottery from [209] represents one of the latest groups on the site, with very little residual earlier sherds. In contrast, 37.5% of the sherds from [224] represented residual ERB pottery. Within this layer, ([381], slot G; Fig 5), a discrete area of burnt soil and charcoal is believed to represent the remains of a small bonfire for the burning of general wood debris (see below).

Late Romano-British: III

An extensive spread of mottled silty clay, [231/241], was deposited over much of the site, completely or partially covering all of the features remaining from the previous phases with the exception of the ponds (Fig 12). Dispersed fragments of Romano-British pottery (mixed date) and CBM were recovered. It sealed the SW end of ditch [190] which had probably been backfilled by this stage. The latest recut to ditch [552] was observed only in the most northerly of the excavated segments (Figs 9 and 12). Of concave profile, the 0.70m wide and 0.39m deep recut contained five fills which appeared to be angled primarily from the east and then from the west side. Initial silting was followed by a thin, charcoal rich deposit – similar in character and taxa to that from the earlier cut [190] – sealed by a layer of coarse sand [262] below 0.25m of gravel and a tertiary fill of silty clay. All except the primary silting contained fragments of LRB pottery (layer [262]) and CBM.

Late Romano-British: IV

The predominant feature of this phase was the extension of the feeder streams to the ponds and puddling associated with their final backfilling. Although clearly extant features throughout the LRB, the ponds probably ceased to function as such well before the end of the period and were left to slowly silt-up.

Three pits [235, 239, 251] were cut through the spread [231/241] in the south of the site. These were circular or sub-circular with dimensions of 0.4–1.8m and were all less than 0.5m deep. LRB sherds and CBM were recovered, together with two joiners dogs/staples and a fragment of copper alloy from pit [251]. The final recut of the N-S ditch [552] may have continued in use into this phase of the site (Fig 13).

In addition two discrete spreads of material ([250], a thin gravel spread producing LRB pottery and [214], clay), overlay spread [231/241] in the south.

Undated features

A posthole [310], 0.45 × 0.36m, was cut into the unterraced natural clay on the SW margin of the site, at 80.06m aOD. The single fill (0.07m) contained charcoal flecking but no dating evidence. The feature cannot be linked stratigraphically to any others on the site.

Area 3

All the features recorded in the trench were sealed below 0.45m of subsoil and topsoil and cut into the natural gravel. The only feature containing any dating evidence was a probable tree-bowl ([446]; c.0.90m diameter and 0.06m deep) from which a fragment of Romano-British pottery was recovered (Fig 14). The potential level of truncation along the roadside verge in this area is indicated by comparison with the levels taken on the main site. The LRB spreads [224] and [209] were at 79.38m and 78.82m aOD respectively, directly overlying the undisturbed natural gravel at 78.46m aOD. Terracing of the gravel by the MoD for the perimeter road had lowered the level of the undisturbed gravel to c.78.20m aOD. The top of the archaeological deposits in the Area 3 trench, only 3–4m to the east, was at 77.69m, suggesting up to c.0.51m of truncation of the deposits in the roadside verge.

A shallow ditch [444], of NNW-SSE orientation, roughly parallel with Watling Street, was situated at the west end of the trench. It was 1.50m wide and 0.35m deep, with obtuse, slightly concave sides and a fairly flat base (Fig 14). The four fills (respectively silty clay with gravel, clay, sand, and silty clay) were angled in from the east side. All except the primary fill [474] were

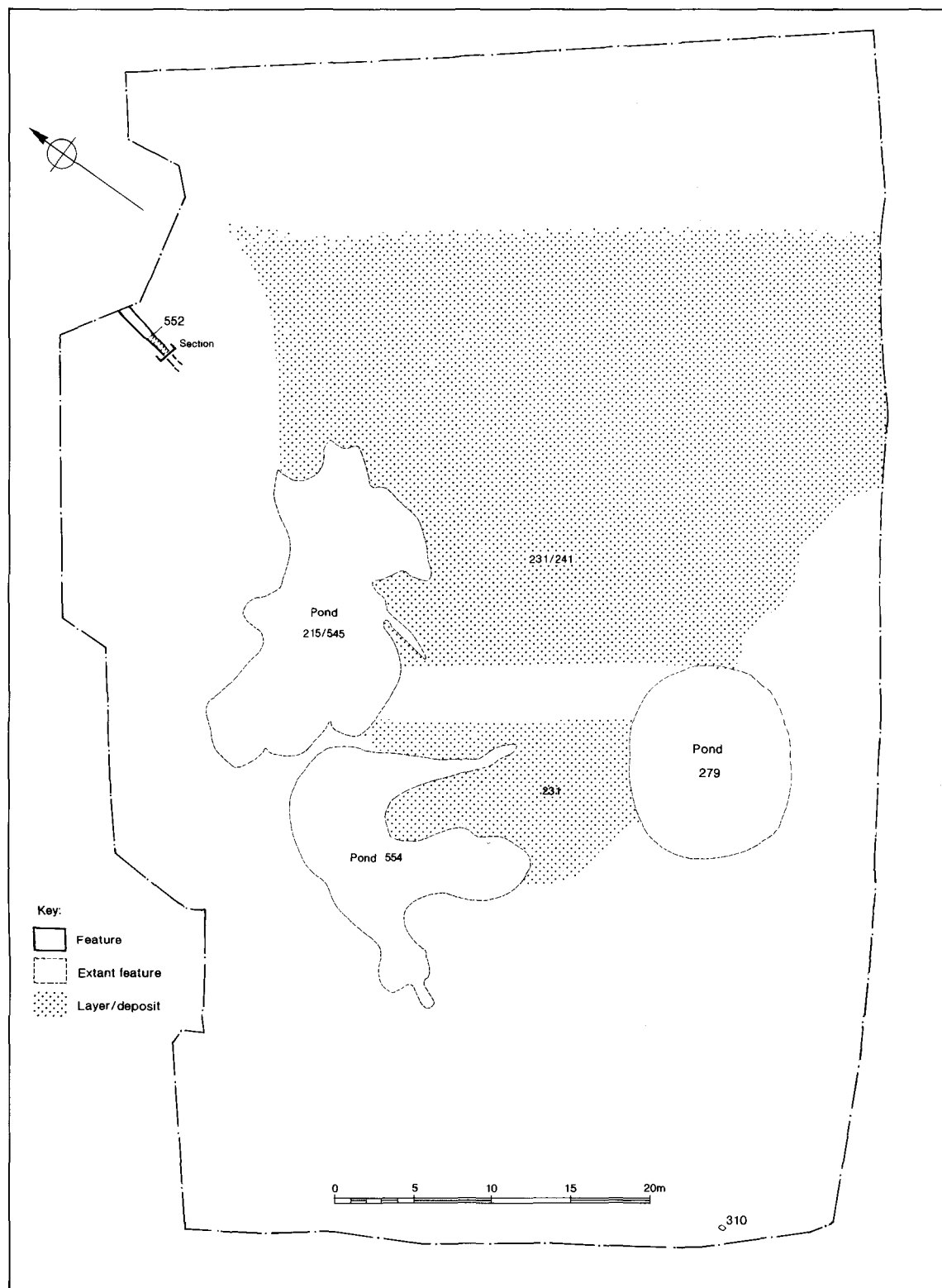


Fig 12. Area 2: Late Romano-British Phase III features and deposits

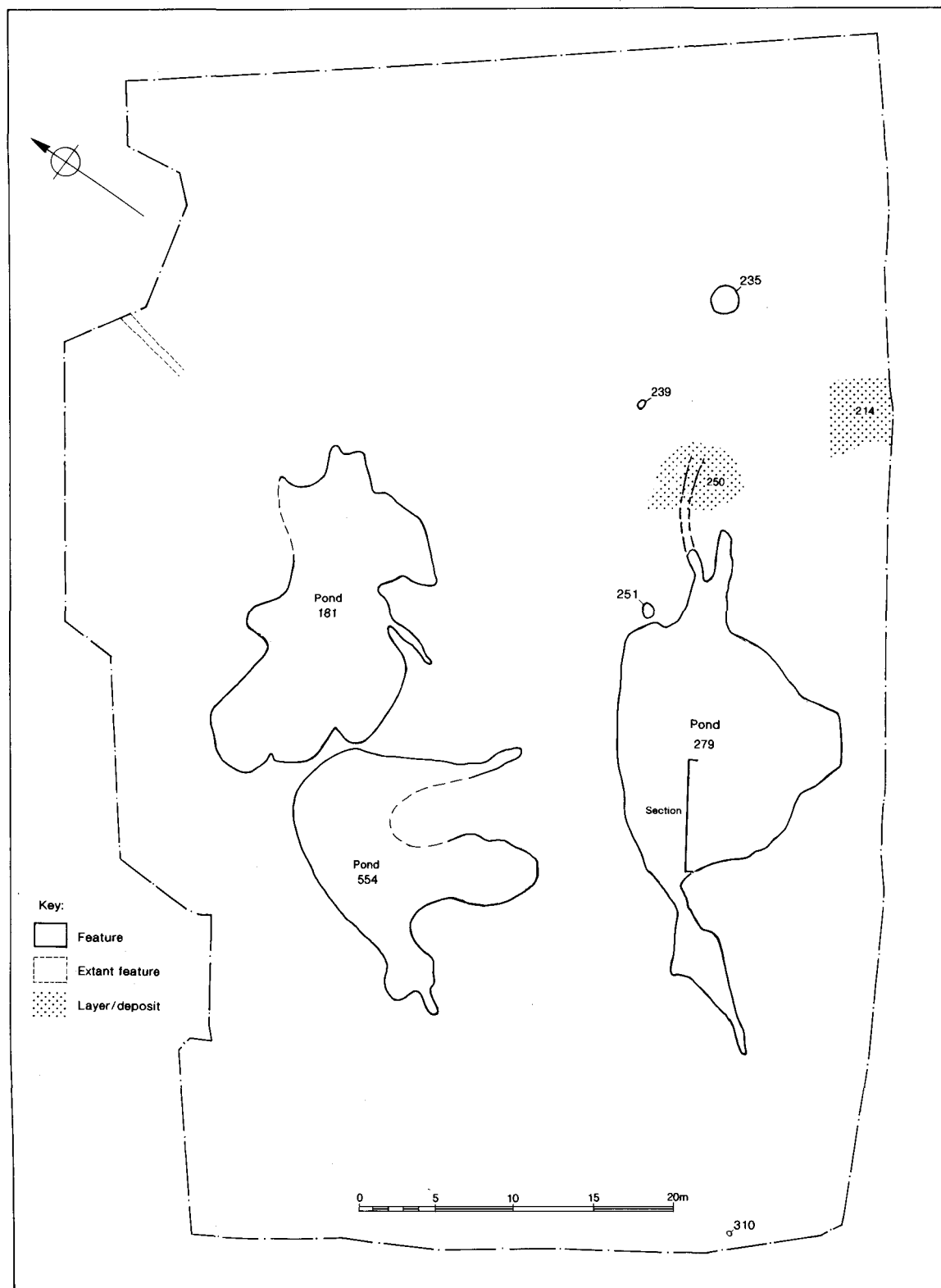


Fig 13. Area 2: Late Romano-British Phase IV features and deposits

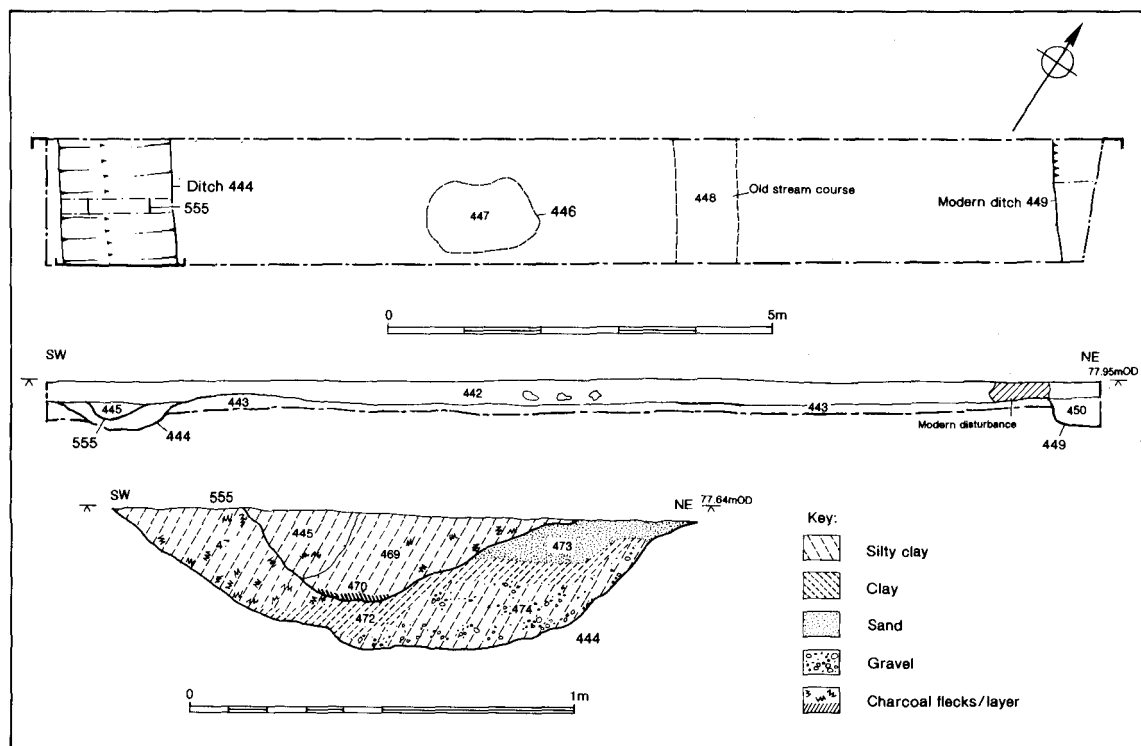


Fig 14. Area 3: plan of all features, with main trench section and section through Romano-British ditch [444] and recut [555]

truncated by a later recut, [555], narrower (0.85m wide) and shallower (0.23m deep) than the original ditch and apparently cut along its centre. The primary fill of the recut comprised a thin layer of charred material [470], representing a mix of damp soil and charcoal indicative of burning on damp, muddy ground. The remaining two layers of silty clay with charcoal flecks also appeared to be tipped from the east. No dating evidence was recovered.

THE FINDS

Metalwork

Emma Loader

Nineteen iron objects, an unidentified piece of copper alloy and a fragment of lead sheet were recovered. All items were x-radiographed. Eleven metal objects were recovered from Romano-British contexts.

Seven nails include three post-medieval types from unstratified contexts (two from Area 1, one

from Area 2) and four Romano-British (all Area 1). One is possibly a Manning type 6 (1985, fig 32) and is probably a masonry, rather than a timber nail. A large, square headed nail was decorative rather than functional and may have been used as a stud on a wooden object. Two nails (Manning type 1B, Manning Type 1A; 1985, fig 32) would have been used for timber. All the Romano-British nails, with the exception of the Type 6, are common on sites of this period.

Four horseshoes and a fragment of a horseshoe heel were found; one modern (from Area 2), the others (from Area 1) of later medieval (14th-16th century) types (Clark, 1986, fig 8).

The other iron objects consist of a swivel from a swivel and loop chain for suspending a cauldron (Manning 1985, pl 64: S4); two joiners dogs or staples with stout stems for joining timbers from the lower fill of LRB:IV pit [251] in Area 2 (Manning 1985, pl 61: R52); an unusually large (193mm long), complete needle from a modern feature in Area 2 (identified by x-ray), similar in size to Manning's type D33 (1985, pl 15) although it differs in form, designed for working heavy or thick material, probably packing or a

mattress; an incomplete, possible needle shank or heckle from a wool comb; and a flat, unidentified object from ditch [501] in Area 2.

The flat, probably waste, fragment of lead sheet was from a modern feature [336] in Area 2, and the small, unidentified fragment of copper alloy was from the upper fill of LRB:IV pit [251] in Area 2.

Pottery

Rachael Seager Smith

The pottery assemblage comprised 781 sherds (10313g). Most were Romano-British in date with small quantities of medieval (15 sherds, 184g) and post-medieval pottery (32 sherds, 461g).

Analyses followed the standard Wessex Archaeology pottery recording system and terminology (Morris and Mephram 1994). The Oxfordshire wares were recorded using the published corpus (Young 1977) but otherwise a site-specific vessel form series was created and a selection illustrated (Fig 15). After consultation with the Museum of London, the fabrics and forms were, where appropriate, placed within the framework of the existing type series for the London area (*ie* Marsh and Tyers 1979; Symonds and Tomber 1992). The pottery was quantified using the number and weight of sherds by fabric type for each context. Pottery fabric totals are given in Table 1 and Table 2 summarises the vessel forms present in each fabric type.

The average sherd weight was 13.24g. The condition of the sherds was extremely poor with many fragments appearing heavily eroded. To provide a relative assessment of the degree of abrasion, 'condition' was scored on a scale of 1–5 (Table 3). All the fresh sherds were of post-medieval date while, of the 41 with only slight ware, 12 were post-medieval and two medieval. The condition and average sherd weight of each fabric type, and from different areas of the site, were compared. The spatial patterning is discussed below. In general, the softer, less well-fired fabrics were in even poorer condition than the harder fabrics. Among the Romano-British sherds, the oxidised wares were smaller (only 7.9g compared with 16.6g) and less well preserved than the non-oxidised fabrics. No other significant patterning was apparent (*eg* local fabrics had not survived particularly better or worse than 'imported' ones). Sandy, iron-rich concretions

were noted on 62 sherds (8%), derived from post-depositional iron panning.

The condition of the sherds had a significant effect on the level of detail attainable in recording and on the reliability of the analysis. The absence of surfaces made precise fabric identification impossible, hence the use of broad, generalised fabric groups based on predominant inclusion type and containing products of more than one source. Some sherds may have been wrongly assigned, *eg* the Oxfordshire red/brown colour-coated wares and the coarse sandy oxidised wares may both include Much Hadham products. Estimated vessel equivalents were not used in quantification given the relatively small size and highly fragmentary nature of the assemblage.

Romano-British

The assemblage (734 sherds, 9668g) spans the entire Roman period with an emphasis on the later Roman (3rd–4th centuries AD). Most of the early Roman (1st–2nd century AD) material was residual in later contexts.

The only Continental finewares recognised were 12 sherds of extremely abraded (category 5) samian. The Southern Gaulish samian included sherds from a Drag 18 platter and sherds from two Drag 33 cups were the only forms recognised from Central Gaul. The only other 1st–2nd-century fineware was the hard, fine white ware; one sherd possibly from a ring and dot beaker. The only other Continental imports were the amphorae. One sherd of a Southern Gaulish wine amphora was identified; the others were from Dressel 20 vessels from Southern Spain. Sherds of both the earlier (*c.*AD 50–170) and later (*c.*mid 2nd-century AD onwards) fabrics (Symonds and Tomber 1992, 94–5) were recognised.

Other early Roman fabrics include local white wares (181 sherds) and white slipped red wares (seven sherds) produced from *c.*AD 50–160 in the Verulamium region. There are many kilns in the Verulamium region and it is not presently possible to distinguish between the products of different centres, which include Brockley Hill, Radlett, Little Munden and St Albans (Tyers, 1996, 201). Most sherds were residual and generally in very poor condition (93% condition classes 4 and 5). Vessels included ring-necked flagons (Fig 15, No.18) in both fabrics, and S-necked flagons (Fig 15, No.12), a range of jar

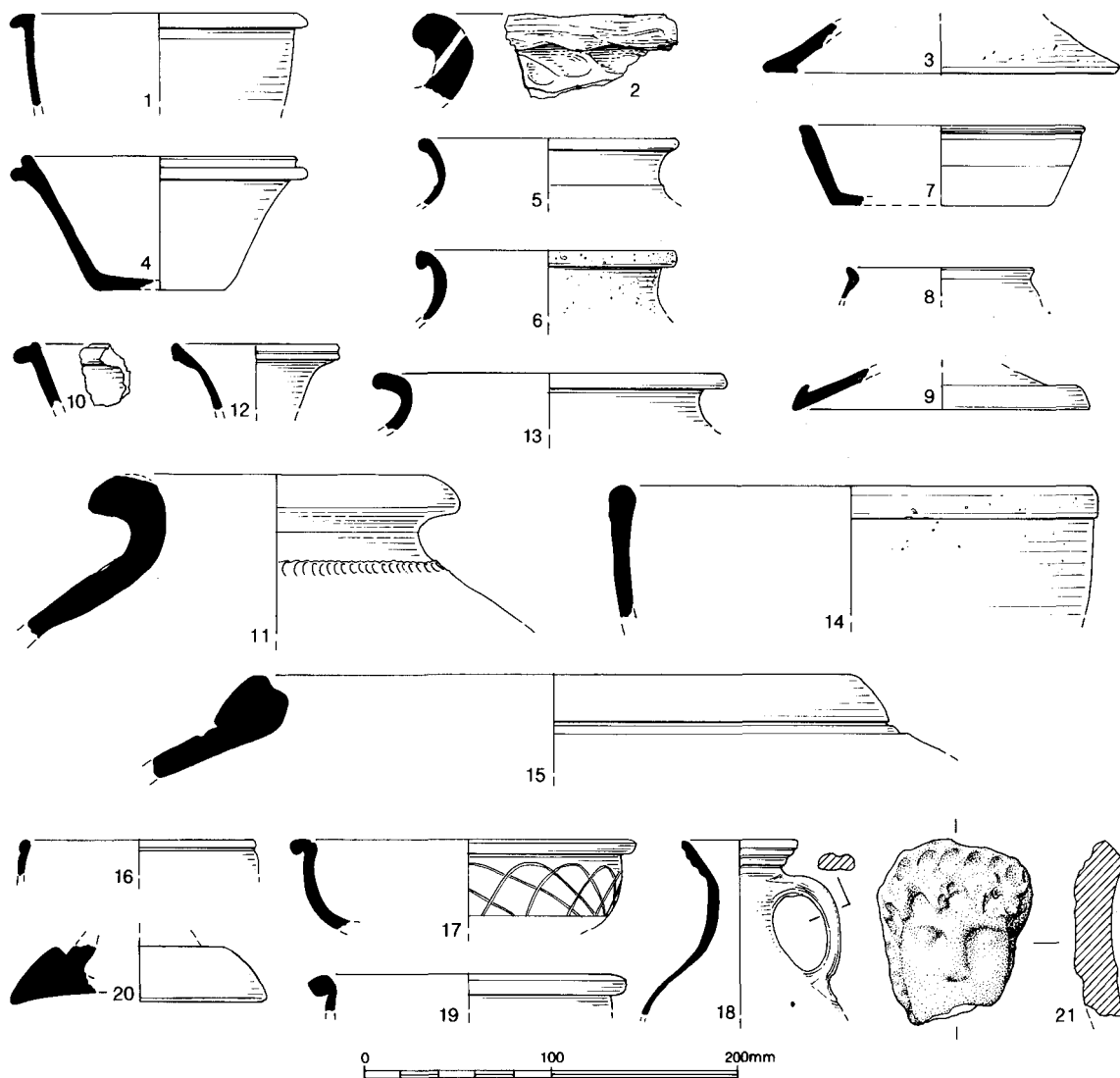


Fig 15. *Romano-British pottery*

forms (Fig 15, No.13) and a lid (Fig 15, No.9) in the white ware fabric only. These fabrics dominate the oxidised ware group, the Verulamium Region White wares alone accounting for almost 25% of the entire Roman assemblage.

The difficulties of recognising specific fabric types among coarse grey sandy wares are well known and were exacerbated by the condition of the material. Eight sherds of Highgate C ware (c.AD 70–160) were recognised, including a rounded bowl with a small out-turned, lid-seated rim (Fig 15, No.17). Sherds of an imitation Black-burnished ware fabric present in London from

c.AD 250 onwards (fabric BBS; Symonds and Tomber 1992, 94), included a dog-dish (Fig 15, No.7) and parts of two dropped flange bowls. Vessels from the Alice Holt/Farnham region represented 28% of the greywares with one or two sherds from Alice Holt/Surrey. The forms predominantly belong to the later industry (Lyne and Jefferies 1979, 34–50) and included 'beehive' (Fig 15, No.2) and other large storage jars (Fig 15, No.15), dropped flange bowls/dishes and necked jars (types 104 and 105 respectively). Unusually, the Cam 306 bowl (Fig 15, No.14), found in ditch [237] (Area 2), also seems to be made from

Table 1. Overall number and weight of sherds by fabric

Fabric	Total No.	Total Wt. (g)	Ave wt. (g)	% of R-B No.
Samian				
South Gaul	5	22	4.40	0.68
Central Gaul	7	67	9.57	0.95
British finewares				
Unass. Brit. colour-coat	6	100	16.67	0.82
Hard, fine white ware	2	6	3.00	0.27
Oxf. red/brown colour coat	51	359	7.04	6.95
Nene Valley colour coat	36	489	13.58	4.90
Oxidised wares				
Verulamium white ware	181	1086	6.00	24.66
Unass. sandy oxid. wares	70	339	4.84	9.54
Verulamium white slipped	7	123	17.57	0.95
Oxf. white colour-coated red	7	29	4.14	0.95
Oxf. parchment ware	21	636	30.29	2.86
Oxf. oxidised wares	3	95	31.67	0.41
Coarsewares				
Black-burnished ware	7	36	5.14	0.95
Porchester D type ware	2	14	7.00	0.27
Much Hadham ware	4	34	8.50	0.54
Grog-tempered wares	56	1679	29.98	7.63
Fine sandy grey wares	32	321	10.03	4.36
Coarse sandy grey wares	150	2277	15.18	20.44
Coarse, gritty grey ware	6	101	16.83	0.82
Calcareous wares (voids)	40	455	11.38	5.45
Mortaria				
Oxf. white ware	5	150	30.00	0.68
Oxf. white colour-coat	1	113	113.00	0.14
Oxf. red/brown colour-coat	15	307	20.47	2.04
Nene Valley white ware	4	153	38.25	0.54
Amphora				
Dressel 20	15	662	44.13	2.04
Pélichet 47/Gauloise 4	1	15	15.00	0.14
Total	734	9668	19.7	99.98
Medieval				
Sand and sparse flint	13	130	10.00	1.66
Coarse sandy glazed ware	1	3	3.00	0.13
Coarse sandy, white-slip	1	51	51.00	0.13
Total	15	184	5.6	1.91
Post-medieval				
Red wares	11	331	30.09	1.41
Unass. slip wares	1	16	16.00	0.13
Staffs. type slip ware	1	17	17.00	0.13
Fine white wares	12	45	3.75	1.53
Unass. stonewares	3	39	13.00	0.38
Porcelain	4	13	3.25	0.51
Total	32	461	14.40	4.09
TOTAL	782	10354	13.24	

an Alice Holt/Farnham fabric. These vessels are relatively common in London from the early to mid 3rd-century AD onwards (Symonds and Tomber 1992, 70, fig 8, 53-6) but are not part of the normal repertoire of the Alice Holt potters.

One sherd (from a large storage jar) of Highgate Wood B ware (c. AD 40-100) was recognised among the grog-tempered wares. Twenty-one sherds (2.7% of total) of a distinctive pink-grogged fabric (Marney 1989, 64-9; Booth

and Green 1989) from the Towcester/Milton Keynes region and dating from the mid 2nd-century AD onwards, were also recognised. Most were from large storage jars (Fig 15, No. 11), the most characteristic and widely traded (as specialist containers) form in this fabric, although the presence of thin-walled body sherds suggests that other forms may have been present.

The sherds that originally contained calcareous tempering materials were all in extremely poor

Table 2. Vessel forms from the site-specific type series, giving number of occurrences

	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124
British finewares																								
Unass. Brit.																								
colour-coat																								
Nene Valley																				1				
colour-coat																								
Oxidised wares																								
Verulamium																								
Region white																								
ware																								
Unass.																								
oxidised																								
wares																								
Verulamium																								
Region white-																								
slipped red																								
Coarsewares																								
Black																								
burnished																								
ware																								
Porchester D																								
type																								
Grog-																								
tempered																								
wares																								
Fine sandy																								
grey																								
Coarse sandy																								
grey																								
Coarse gritty																								
grey																								
Calcareous																								
wares																								
Mortaria																								
Nene Valley																								
white ware																								
mortaria																								

KEY TO VESSEL FORM:

101 = flat-flange bowl/dish, Fig. 15, 1; 102 = 'beehive' type storage jar, Fig. 15, 2; 103 = lid, internally bevelled, Fig. 15, 3; 104 = dropped flange bowl/dish, Fig. 15, 4; 105 = necked jar, Fig. 15, 5; 106 = necked jar with collared or hooked rim, Fig. 15, 6; 107 = dog-dish, Fig. 15, 7; 108 = beaker with sloping shoulder, Fig. 15, 8; 109 = lid, Fig. 15, 9; 110 = bowl/dish with a grooved flange, Fig. 15, 10; 111 = square rim storage jar, Fig. 15, 11; 112 = flagon with rim, neck and body in a continuous curve, Fig. 15, 12; 113 = necked jar/bowl with flat, out-turned rim, Fig. 15, 13; 114 = storage jar with wedge-shaped rim, not illustrated; 115 = Cam. 306 bowl, Fig. 15, 14; 116 = storage jar with a lid-seated rim, Fig. 15, 15; 117 = bead rim jar/beaker, Fig. 15, 16; 118 = bowl with out-turned, lid-seated rim, Fig. 15, 17; 119 = ring-necked flagons, Fig. 15, 18; 120 = bowl with a thickened rim, Fig. 15, 19; 121 = round shouldered necked jar, not illustrated; 122 = beaker rim, not illustrated; 123 = necked jar with everted D-shaped rim, not illustrated; 124 = mortaria with upstanding rim and wide, unbent flange, not illustrated.

Table 3. Condition of sherds

Condition category	Definition	No. of sherds	% total no. of sherds
1	Very severe abrasion; no surviving surfaces & rounded edges	331	42%
2	Well-worn but with some surface & edge definition surviving	283	36%
3	Average	120	15%
4	Slight ware	41	6%
5	Fresh, crisp condition	7	<1%

condition and badly leached. At least four sherds were of the 4th-century CALC fabric (Symonds and Tomber 1992, 94) while one other was similar to the late Roman Kentish shelly wares (Pollard 1988, 213). Together with the Porchester D sherds, which post-date AD 350 in London, these wares represent the latest Roman coarse-wares present. Both fabrics were represented by necked jars with hooked or collared rims (Fig 15, No.6).

One of the major suppliers of the pottery recovered from the site was the Oxfordshire industry (*c.*AD 240–400+); its products represent 14% of all sherds. The red/brown colour-coated wares were in very poor condition but a range of common, widely distributed beaker and bowl types (Young 1977, types C22, C45, C51, C75 and C81) and one mortarium (type C97) were recognised. The facemask (Fig 15, No.21) found in the Area 2 spread [224], was derived from a very uncommon flagon form dated to the second half of the 4th century AD (Type 150). Similar vessels were also made at Much Hadham, although the quantity of biotite mica in this example confirms its Oxfordshire origin. The Parchment-ware sherds were all from wall-sided bowls, a common type throughout the life of the industry but especially during the 4th century AD (Young 1977, 173, type P24). Sherds from a single, near-complete example were found in pit [487] (Area 2) with one sherd of Much Hadham ware. The vessel had been partially burnt but was otherwise in relatively good condition suggesting it was deposited under different circumstances to the rest of the assemblage, perhaps closer to the point of initial discard. The heavy base (Fig 15, No.20) from tree bowl [132] (Area 1), was identified as Oxfordshire oxidised ware but the form is not illustrated by Young (1977) and no parallels have yet been found. Only body sherds of the white colour-coated red ware were noted.

Nene Valley colour coated wares and mortaria were present in small quantities. Dated from *c.*AD

150 onwards, the forms included a wide mouthed jar or bowl (Fig 15, No.19) and a round shouldered necked jar (type R122, not illustrated). Sherds from a 3rd-century necked and folded beaker and part of the lid of a Caistor box were also recognised.

The remaining fabrics, *ie* Black-burnished ware and Much Hadham ware, represent only minor components of the assemblage or 'catch-all' groups for otherwise unassigned sherds. The largest of these contains 70 very fragmentary oxidised sherds (average 4.84g) in extremely poor condition (91% in condition categories 4 and 5). This group contains the products of more than one source, probably spanning a wide date range. Six sherds of colour-coated ware, probably from beakers, also remain unassigned and undated due to the poor condition of the sherds.

Medieval and post-medieval

Three fabrics were identified, of 12th–13th-century sand and sand with flint tempered coarsewares from Areas 1 and 2, and one sherd from a 13th–14th-century white-slipped, glazed jug from Area 2. The post-medieval wares comprise glazed and unglazed redwares, fine white wares, slip wares, stone wares and porcelain from linear 109 (Area 1) and topsoil, make-up layers and ploughmarks in both areas.

Discussion

The assemblage from Area 1 (80 sherds, 1159g) represented only 10% of the overall number of sherds (11% by weight) and contained no positively identifiable early Roman fabrics or forms. A Black-burnished ware dog-dish rim was the only sherd from Area 3. The remaining sherds were all from Area 2. The recognition of specific patterns of deposition or distribution was hampered by the relatively small size of the

assemblage but those present are discussed below. All the fabrics and forms are encompassed by the range of products expected in this area (Fiona Sealey pers comm), but the exceedingly poor condition of the assemblage makes it exceptional. While this may be due in part to the harsh soil conditions, the high degree of residuality in the assemblage suggests that much of the material was exposed for some time prior to its incorporation in the deposits in which it was found. With the possible exception of the almost complete Oxfordshire Parchment-ware bowl, most of the sherds, regardless of date, were probably derived from activity in areas remote from the site, although the processes by which they arrived are unclear. There is no evidence from the pottery assemblage for domestic occupation of the site, a suggestion supported by both the nature of the excavated features and the environmental evidence. The presence of a number of large storage vessels is notable.

Ceramic building material

Rachael Seager Smith

The ceramic building material was predominantly of Romano-British date but medieval and post-medieval/modern fragments were also identified. A total of 1143 pieces, weighing 116.412kg was recovered. Details can be found in the archive.

The Romano-British material (1010 pieces, 109.477g) was divided into types (*tegulae*, flue tiles, flat fragments *etc.*). Fabrics were defined by the predominant inclusion type and recorded using the standard Wessex Archaeology terminology for pottery analysis (Morris and Mephram 1994). The number and weight of fragments of each tile type were recorded by fabric for each context, together with variables such as the thickness and presence of signatures, stamps and tally marks.

The assemblage was very fragmentary, no complete lengths or widths were recovered and flat or undiagnostic pieces dominated in all periods. The softer fabrics were often very abraded. The mean fragment weight for the Romano-British pieces was 108.4g.

Six Romano-British fabric groups were identified. The most numerous group was a moderately hard, sandy fabric (42% of pieces) and a soft, fine micaceous fabric (39%). A very hard, often overfired, cherry-red fabric (14%), flint (4%) and

grog (1.5%) tempered fabrics completed the assemblage.

Forty *tegula*, 25 *imbrex* and three box flue tiles were recognised. All the other pieces were flat or undiagnostic fragments, three of the former were combed on one surface. Where measurable, the *tegulae* ranged between 11mm and 31mm thick, with most between 16mm and 26mm. The *imbrices* were generally between 13mm and 18mm thick. The flat fragments, identified as Romano-British by their fabric type, varied from 13mm and 50mm thick, with a clustering between 32mm and 42mm. While some of the flat fragments may derive from *tegulae*, the greater thickness suggests that the majority were from bricks. These were produced in a variety of sizes to serve specific purposes, but based on the figures given by Brodribb (1987, 34–62) it is possible that *bessales*, *pedales*, and *lydion* are represented here. *Bessales* and *pedales* were primarily used for hypocaust pillars, although they were also used in floors, arches and in bonding. The *lydion* was most suitable for use in the bonding or lacing courses in walls (Brodribb 1987, 34–7).

Roof tiles were comparatively poorly represented. The predominance of brick fragments is of interest concerning the origin of the material, the poor condition of the assemblage and absence of structures indicate that it has been redeposited. None of the fragments bore any traces of mortar or other bonding agents. The often very overfired fabric may suggest the presence of production waste although the evidence is far from conclusive.

Sixteen fragments had deliberate marks on them, including incised tally marks (three fragments) and 'signatures' (12 fragments), all occurring on flat or unidentified fragments which could not be assigned to a specific brick/tile type. However, while 'signatures' are most common on *tegulae*, tally marks are perhaps most frequently found on bricks (Brodribb 1987, 99–135). None of the 'signatures' was complete but most are probably part of alpha marks (Brodribb 1987, fig 47, 5), others consisted of a finger smeared X (context [140], Area 1) and a smeared wavy line (unstratified, Area 2), both on flat fragments. The tally marks were on the narrow edges of the fragments – single vertical lines on two pieces (unstratified) and an incised V on one piece (context [209]) from Area 2. A carefully executed open-diamond lattice was preserved on a flat fragment (context [181], Area

2). This design may have served as keying for mortar, but the care with which it was undertaken might suggest that it was intended to be visible. This piece was 27mm thick and may have been used as a gaming board.

Worked stone

Rachael Seager Smith

Four fragments of probable rotary quern were recovered, two of Greensand (contexts [1214 and 224], Area 2), one of a coarse-grained sandstone ([140], Area 1) and one of a conglomerate rock, probably Hertfordshire Puddingstone ([112], Area 1). Parallel tool-marks were visible on the unworn grinding surface of one Greensand fragment.

All the building stone, recovered from two discrete deposits in Area 1 (Fig 5), was oolitic limestone, the petrological analysis of which showed it to originate from the Ancaster area of Lincolnshire (David Williams, pers comm). A total of 340 fragments (c.416.5kg) was retained as a sample, including 293 pieces from [100/102] and 17 pieces from [102]. The remaining 30 pieces were from slot [109], a post-medieval/modern feature cutting through [102].

The stone was divided into three basic categories as shown in Table 4. 72% of the assemblage (246 pieces) was clearly worked, the remainder being either heavily fragmented or severely weathered with none of the original surfaces surviving. Tooling was noted on 62 pieces (18%), varying from roughly scabbled facings to fairly fine, smooth surfaces with narrow, diagonal chisel marks.

Most fragments were from roughly square or rectangular blocks. No complete lengths or widths were preserved and none bore any traces of mortar. Two polygonal stones c.0.1m and 0.14m in diameter respectively were possibly derived from columns or pillars, and 13 other

fragments may be from columns between 0.14m and 0.5m in diameter. Four pieces have at least one fairly smooth, regular face with an upstanding border, while the worked surface of one other fragment was stepped at the edge to provide an upstanding face. One very badly weathered, roughly tooled fragment has a rectilinear perforation. Two fragments of decorative architectural mouldings, possibly from around windows or doors, were also noted.

The form and weathered condition of the stone suggests it once formed part of substantial structures, possibly public buildings, demolished or dismantled during the Roman period. The fragments recovered here would have been deemed unsuitable for re-use being too small and abraded.

Approximately half a small, plain, lathe-turned shale armlet was found in [1115] (Area 1). The internal surface is sharply chamfered, leaving a 'ledge' on the inside. The interior diameter was 50mm. Shale armlets were made from the Iron Age until at least the end of the Roman period but within this range, individual examples are not closely datable.

Worked wood

Moirá Laidlaw

A small quantity of worked timber was excavated from pond/well [279]. Most of the wood was in poor condition and fragmentary, with fissured surfaces and edges. Each timber fragment was allocated an object number in excavation and fully recorded. After lifting, which proved difficult because of the poor condition of the wood, the timbers were carefully washed and recorded. Each numbered fragment was sketched and details of condition, form, dimensions and evidence of tool marks were noted. Small samples were taken for species identification before the timbers were wrapped in polythene.

Table 4. Quantification of building stone categories by context

Context	Total No.	Total Wt.	1 worked face	2+ worked faces at 90°	2+ worked faces at other than 90°	No. of tooled pieces
100/101	293	342.195kg	89	112	22	60
102	17	49.225kg	6	10	1	2
109	30	25kg	3	3	—	—
Total	340	416.420kg	89	125	23	62

The worked timber may be divided into two main forms, stakes and planks. Stakes are any conversion form which has been shaped to form a point and planks are any radial split (with the grain) or tangential split (across the grain). Because of the poor condition of the surfaces it was often difficult to attribute fragments to a particular form and conversion type.

Fragments from four possible stakes (Object nos 2016, 2017, 2019 and 2021) were recovered laying at steep angles within layers [355] and [285] (equivalent to [261]) in pond [279]. The fragments are roundwoods with a diameter range of 0.05m to 0.08m and are 0.61m to 1.4m in length. No point fragments were recovered but the fragments are slightly tapered. No facets are visible as the surfaces are very fissured. One fragment of roundwood from [285], c.40mm in diameter (in its collapsed state), was assessed for type. Identification was difficult but characters similar to hazel (*Corylus*) or alder (*Alnus*) were noted.

Four fragments of timber have been identified as planks. One from layer [355] was laying horizontally, as was one of the two from layer [353] (Fig 7), the other of which was at a very slight angle. The fourth fragment, from layer [261/285] was at a 45° angle. All are split timbers with mainly rectangular cross-sections and are tentatively identified as having been split tangentially. The surfaces are flat and fissured, often with squared edges. The plank fragments range in length from 0.55m to 2.42m and from 0.10m to 0.20 in width, and are generally 0.05m thick. One (no.2014) has a possible mortise hole, 0.045m x 0.02m and another (no.2026) is notched along one side which may represent a joinery feature. The notch is 0.06m by 0.01m. The remainder of the timber fragments are possibly derived from planks as they tend to be thin with flat surfaces and were found laying horizontally within the pond.

Spatial patterning of finds

Quantitative and qualitative analysis of the spatial distribution of pottery and CBM within the spreads was undertaken. Variations in overall density of the two groups of artefacts was assessed, together with the form and fabric types, and the degree of fragmentation and abrasion. The groups of material were assessed within the associated LRB: II (Fig 11) and LRB: III (Fig 12)

spreads, and comparison was made between the two phases.

Pottery

The spreads contained 41% of the Romano-British pot fragments from Area 2 (33% by weight); 17% (20% by weight) within the phase II spread [224/209] and 24% (12%) in the more widely dispersed phase III spread [231/241]. The average weight per fragment in phase II was just over twice that of the fragments in the later spread, and the density of pottery per unit area was slightly more than double in the earlier phase compared with the later, though neither was particularly great. Analysis also showed a slight, but gradual increase in the density of pottery towards the south-east within both phases, and there was a noticeable decrease in the density of sherds towards the west.

Fragments of 37 different Romano-British vessel forms were recovered from Area 2, but most sherds comprised plain bodies and fragments of base and handle (all forms undistinguished). A slightly greater variety of forms was noted in the earlier spread than in the later one, and in phase III there was a slightly greater variety of forms in units to the SW.

Twenty-seven Romano-British fabric types were identified from Area 2, most commonly Verulamium Region White wares (25%) and grey coarse wares (21%). A larger variety of fabric types were recovered from the phase II spread compared with phase III. There was a higher frequency of different fabrics from the southern 10m of the phase II spread [209], than from the rest of the deposit (14 compared with eight) and there appeared to be a similar north-south variation in phase III. The material from the southern end of the phase II spread was predominantly late in date, whilst the rest was more mixed (37% ERB sherds).

There was some slight variation in fragment size between the machine and hand excavated sections of the individual spreads, but the lower fragment sizes could not be directly linked with the mode of recovery. Overall, pottery abrasion was high (Table 3), though in general, the pottery from phase II was slightly less abraded than that from phase III.

Ceramic building material

The two spreads contained 45% of the fragments of CBM from Area 2 (39% by weight). Most came from the phase II spread, 31%, compared with 14% from phase III. In both phases, the greatest density of CBM, and more diagnostic forms, were recovered from the southern portions of the spreads.

Discussion

One characteristic of relatively small pottery assemblages is the presence of a few examples of many different pot forms, and this factor renders the detailed analysis of spatial distribution unfeasible: the small size of the sample being statistically unviable. However, there are a number of general observations which may be made with respect to the assemblage of both pottery and CBM from the phase II and phase III spreads which may be indicative of their formation processes.

There was a noticeable increase in density, and a slightly greater variety of forms and recognisable fabric types towards the SE of the spreads in both phases (though the increase in recognisable fabric types may have been affected by the greater ease with which late fabrics may be recognised). There was also some variation between the phases, with a slightly greater density of pot sherds, and more variety in form and fabric types in the earlier phase. The material from the later phase appeared slightly more abraded than that from phase II. Similar patterns were also noted amongst the CBM, both with respect to location and phase.

These observations suggest that the material incorporated within the spreads was derived from a concentration to the SE, outside the area of excavation, probably nearer Watling Street if not directly beside it (see Fig 1). The lack of homogeneity in distribution, together with the lack of other 'domestic type' debris, may be indicative that this does not represent a normal 'midden' type deposit, spread across fields in the course of manuring, though the London Clays and Gravels are known to encourage poor preservation of bone (M.J. Allen, pers comm). The highly abraded nature of both the pot and CBM assemblages implies that it has been 'reworked' and it is likely that the material was subject to a series of deposition episodes prior to

its arrival beside the road at Brockley Hill. The lower density of material, decrease in variety, smaller fragment size and greater degree of abrasion seen in the phase III material, may indicate that this spread, which does not extend to the east of the earlier spread but does slightly overlap and therefore post-date it, may itself have been derived from the earlier assemblage; material from the phase II spread being reworked across to the west.

The predominance of LRB pottery in the south of the phase II spread compared with the more mixed nature of the material to the north and west is more difficult to explain. The most likely reason is that rather than being the product of a single 'roadside' deposition from one place of origin, the material was derived from successive dumps of debris, possibly from different places. So, although the material within the spreads may all have been deposited by the roadside roughly contemporaneously, they may first have accumulated elsewhere, some deposits becoming more mixed than others.

ENVIRONMENTAL EVIDENCE

Charcoal

Rowena Gale

Species identification of 10 samples of charcoal (nine from Area 2, one from Area 3) from Romano-British pits, ditches, layers and miscellaneous features was undertaken to assess the type and character of the fuel deposits. Bulk soil samples were processed by flotation using standard methods. The charcoal was separated from the seed and plant macro-fossils by Sarah Wyles.

Charcoal was abundant in many of the contexts and fragments measuring $>5.6\text{mm}$ were common. Ten samples of charcoal from the larger fractions were selected for identification. Although plentiful, much of the charcoal was poorly preserved and some appeared partially vitrified (indicative of charring at temperatures $>800^{\circ}\text{C}$). The charcoal was prepared for examination using standard techniques. The fragments from each sample were fractured to expose fresh transverse surfaces and sorted into groups based on the anatomical features observed using a $\times 20$ hand lens. Representative fragments from each group were selected for further

examination under high magnification. Freshly fractured surfaces were prepared in the transverse, tangential and radial planes. The fragments were supported in sand and examined using a Nikon Labophot incident-light microscope at magnifications of up to $\times 400$. The anatomical structure was matched to reference material. The dried wood was hard and structurally collapsed; it was prepared for examination using the method described above.

Where appropriate the maturity (sapwood/heartwood) of the wood was assessed and the number of growth rings recorded. It should be noted that the measurements of stem diameters are from charred material; when living, these stems may have been up to 40% wider.

The results are summarised in Table 5. The anatomical structure of the charcoal was consistent with the taxa (or groups of taxa) given below. It is not usually possible to identify to species level. The anatomical similarity of some related species and/or genera makes it difficult to distinguish between them with any certainty, *eg* members of the Pomoideae and Salicaceae. Classification is according to *Flora Europaea* (Tutin, Heywood *et al* 1964–80).

Species represented are: Aceraceae: *Acer* sp., maple; Aquifoliaceae: *Ilex* sp. holly; Betulaceae: cf *Alnus* sp, alder; Corylaceae: *Corylus* sp, hazel; Fagaceae: *Quercus* sp, oak; Oleaceae: *Fraxinus* sp, ash; Rosaceae; Pomoideae: *Crataegus* sp, hawthorn, *Malus* sp, apple, *Pyrus* sp, pear, *Sorbus* spp, rowan, service tree and whitebeam (these genera are anatomically similar); Prunoideae: *Prunus* spp,

P. avium, wild cherry, *P. padus*, bird cherry, *P. spinosa*, blackthorn (it is sometimes difficult or impossible to differentiate between these species but in this instance the charcoal was more characteristic of blackthorn); Salicaceae., *Salix* sp, willow, *Populus* sp, poplar (these genera are anatomically similar).

Area 2

Samples were examined from the LRB ditch [190] and a later recut, [552] (Figs 9, 11 and 12) in Area 2. The samples were collected from two of the excavated segments, including one from the evaluation (linear feature [1189], equivalent to [190]). A charcoal rich lens in the base of ditch [190] [297] was mimicked by a similar lens towards the base of the recut layer [263] where it overlay a thin primary deposit of sand (Fig 9). The samples were composed of large fragments of charcoal (mostly >5.6 mm), some of which were too poorly preserved or too highly carbonised (partially vitrified) to identify. A wide range of taxa was common to both samples (Table 5) including maple (*Acer*), hazel (*Corylus*), ash (*Fraxinus*), holly (*Ilex*), hawthorn type (*Pomoideae*), blackthorn (*Prunus spinosa*), oak (*Quercus*), and willow/poplar (*Salicaceae*). Oak predominated in both samples and consisted mainly of heartwood, with fragments indicating periods of both slow and fast growth. The early growth rings of some roundwood fragments of oak and hazel were wide and indicative of rapid

Table 5. Charcoal; number of fragments identified is indicated

Sample	Acer	Corylus	Fraxinus	Ilex	Pomoideae	Prunus	Quercus	Salic
AREA 2								
Linears 190 and 552								
263 1003	1	—	1	2	8	3	63sh	3
297 1006	1	3r	2	—	6r	2	17sh	—
1202 e706	3	—	1	—	6	1	114sh	3
1209 e707	3	6r	6r	—	10r	6r	175rh	—
Pits 533 and 544								
532 1061	—	—	—	—	—	—	3h	—
544 1062	—	3r	—	—	—	1r	4h	—
Spread 224/209								
381 1012	3	—	—	—	—	2	8rh	—
Misc. feature 501								
492 1056	—	2	—	—	—	cf.1	34h	—
499 1057	2	—	1	—	—	1	24sh	2
AREA 3								
Linear 555								
470 1055	1	1	4r	—	4	3	37sh	1

Key: Salic = Salicaceae; r: roundwood (diameter <2 mm); s: sapwood; h: heartwood

growth of the stems, whereas the Pomoideae type roundwood appeared to be of consistently slow growth, eg charred diameter of 14mm with 21 narrow growth rings. The samples from the ditch segment excavated in the evaluation (Wessex Archaeology 1995) also produced abundant charcoal. Sample 707, from the equivalent layer to [281] (Fig 9), contained a lens of clayey sand with charcoal and a few fragments of fuel ash slag. A few fragments of fuel ash slag were also recovered from sample 706 from [1202] (equivalent to [280], Fig 9). The character of the wood and range of taxa identified was similar in both segments of the ditch (Table 5).

Charcoal was examined from the fills of two adjacent pits on the NE margin of Area 2 (Fig 10), the fragments were reasonably large but comparatively sparse. Oak (*Quercus*) heartwood was identified from the fill of pit [533] (fill [532]). The sample from the fill of pit [546] [544] included oak roundwood (diameter 75mm), sapwood and heartwood, and roundwood from blackthorn (*Prunus spinosa*; diameter 3mm) and hazel (*Corylus*; diameter 20mm).

Burnt soil and charcoal were present in the coarse fraction of the sample from context [381] (slot G), part of the spread [224/209] (Figs 5 and 11). The charcoal consisted of roundwood from oak (*Quercus*) and blackthorn (*P. spinosa*), with wide early rings in the oak, and oak heartwood and maple (*Acer*). Charcoal from two excavated segments of the ERB feature [501] (Fig 7) was also examined. Sample 1056 (Table 5) was composed mainly of oak (*Quercus*) heartwood plus some sapwood, with a small quantity of hazel (*Corylus*) and possibly *Prunus*, although the latter was too poorly preserved to verify. Sample 1057 also included mostly oak (*Quercus*) heartwood with some sapwood but also some maple (*Acer*), ash (*Fraxinus*), blackthorn (*P. spinosa*), and willow/poplar (*Populus*).

Area 3

The shallow ditch [555], a recut of ditch [444] (Fig 13), contained charcoal and burnt soil which appeared to have resulted from a fire in a damp muddy area. The sample, from the primary fill of the recut [470], was predominantly oak (*Quercus*) heartwood, with a small amount of sapwood, together with small quantities from ash (*Fraxinus*) roundwood (diameter 12mm), maple (*Acer*), hazel (*Corylus*), blackthorn (*P. spinosa*),

hawthorn type (Pomoideae), and willow/poplar (*Salix/Populus*).

Discussion

Oak (*Quercus*) was dominant in all contexts, particularly the heartwood. Charcoal from the ditches in Area 2 included the widest diversity of taxa: oak (*Quercus*), maple (*Acer*), hazel (*Corylus*), ash (*Fraxinus*), holly (*Ilex*), hawthorn type (Pomoideae), blackthorn (*Prunus spinosa*), and willow/poplar (*Salix/Populus*), although it should be noted that these samples also included the greatest volume of charcoal. Such a mixture of taxa suggests that the charcoal was more likely to have derived from, for example, deposition of fuel debris than from structural origins such as boundary fences. Taxa identified from the pits and the spread were more sporadic (Table 5) although oak heartwood was common to all.

The mixture of charcoal and burnt soil in the spread [381], equivalent to [224/209], (Fig 11) was characteristic of burning *in situ* and may have been the result of a bonfire, possibly on open land. The remains of oak heartwood amongst other debris of maple and blackthorn suggests a scene of general burning of debris rather than, for example, trimmings from brushwood.

The sample from the shallow ditch in Area 3 [555] identified similar taxa to those used in the Romano-British contexts in Area 2, and a similar preference for the use of oak heartwood was also evident.

The abundant deposits of charcoal from ditches and pits, assumed to have been fuel residues, included relatively large fragments of material. With the exception of willow/poplar, the taxa identified produce dense, high-calorie wood fuel. The large dimensions of some charcoal fragments suggests that a high proportion of the wood was probably composed of billets of oak, mature enough to have produced heartwood. There were also much narrower pieces of roundwood from a range of taxa. This combination of roundwood from high-energy wood fuel, and oak billets, giving longer-lasting heat, would have had the capacity to provide an intense heat source.

The charcoal frequently appeared to have been subjected to temperatures high enough (>800°C) to have caused vitrification, a process whereby the tissues 'melt' and fuse together,

producing a glassy effect. This is more likely to have occurred in an industrial context than in a domestic hearth and suggests that the charcoal was probably waste from kilns or furnaces (although probably not from bread ovens or other cooking apparatus since food residues were absent). Activities which require high temperature heat-sources should therefore be considered as the most likely point of origin.

The requisites for charcoal-making appear to have been to hand (wood, and water from the ponds), and also easy access to routes for dispatch. Charcoal production has, however, a tradition of careful control (Edlin 1949) and it seems improbable that charcoal clamps would have been consistently subjected to temperatures likely to have damaged the quality of the product; it is doubtful that the charcoal originated from spoil directly associated with charcoal-making. The traditional method of charcoal-making, however, used billets of wood (Edlin 1949) and the charcoal from this site was certainly composed of fragments large enough for billets. The possibility that charcoal fuel was used, particularly with the overtones of industrial use, can not be ruled out.

The environment

The range of taxa identified suggests that the local heavy clay soils probably supported mixed oak woodland. Evidence of the use of coppiced/pollarded wood was sparse and inconclusive. The innermost growth rings of some pieces of oak and hazel roundwood (from ditch [190] and the spread) indicated the use of fast-grown stems, but other material was slow-grown.

Local woodlands probably provided the fuel source for the large-scale pottery unit established on Brockley Hill (see above). The excavated kilns were operating in the early Romano-British period, whereas activity at this site was within the later phases of this period. If the kilns were operating fairly continuously throughout this time fuel demands would have been high, and unless some system of woodland management operated, demand may have outstripped supply fairly quickly. Woodland may, therefore, have been coppiced to provide faggots and wider poles. Here, the fuel residues probably consisted of a mixture of 'managed' and 'unmanaged' wood, and possibly even charcoal. The position of the site, close to the main road would also

have allowed faggots and other fuel to have been brought into the area relatively easily.

Conclusions

Relatively large quantities of charcoal associated with a small number of possible industrial features, dated to – or suggested to be – late Romano-British, indicated the use of firewood (or possibly charcoal) from various species, but predominantly composed of oak (*Quercus*) billets or logs. The condition of the charcoal was consistent with high-temperature combustion and this fact, together with the absence of domestic artefacts on the site, endorsed the suggestion that the charcoal residues originated from some type of industrial activity. Consideration was given to possible sources but the lack of conclusive supportive evidence renders any suggestions conjectural. Environmental data from the charcoal analysis suggested that mixed deciduous oak woodland predominated on the heavy clay soils of the region. By implication, it is likely that woodlands were managed, but insufficient evidence was available to support this suggestion.

DISCUSSION

The nature of Romano-British activity on this site is somewhat enigmatic, it is perhaps easier to say what it was not, rather than what it was. Several of the features were of an undiagnostic form which offered no obvious interpretation, whilst the nature of the various linear features and pits was not always clearly defined. An additional problem in interpreting the site as a whole was posed by the high levels of modern disturbance in all areas, particularly the central portion of Area 1, and the west and east sides of Area 2. The substantial truncation which had clearly occurred along the eastern margins of Area 2 and the verge of the A5 (Areas 3 and 4), estimated at between 0.51m and 0.75m, will have removed archaeological evidence in this key, Roman roadside area (c.12m wide).

No real link can be made between the activity at the base of Brockley Hill and that known to have taken place along the southern slopes and towards the top of the ridge (Fig 2), in the areas excavated by Castle (1976). Production at these pottery kilns was well in decline (AD 120–130) before the main era of activity at this lower

roadside location apparently commenced. Although c.25% of the Romano-British pottery recovered comprised Verulamium Region White wares, which may include pottery from the Brockley Hill kilns, there are many kilns within this region and currently it is not possible to distinguish between the products of the different centres (Tyers 1996, 201). In addition to which, most of the sherds were in very poor condition and clearly residual. The nearest known kiln is c.1.3km north of Area 2 (Fig 2) and none of the features excavated could be interpreted as indicative of activity connected with pottery production.

As in the previous excavations in the vicinity (Castle 1976; Bowsher 1995), there was no evidence of the illusive *Sulloniacis* posting station. Given the purpose of such establishments – *mansiones*, providing accommodation for authorised persons, with changes of horses and vehicles, and *mutationes*, which functioned as changing stations for remounts and replacement draught animals (Smith, 1987, 11) – one would expect substantial, masonry buildings and stabling facilities, probable examples of which have been found at various points along Roman roads at, for instance, Chelmsford, Godmanchester and Wanborough (Smith, 1987, 11–19).

There is, in fact, no evidence for domestic occupation of any sort on the site, either in the form of structural, artefactual or environmental remains. No *in situ* structures were observed and there was nothing to indicate the presence of buildings constructed from organic materials (eg beam slots). The postholes and slots at the north end of Area 1, while apparently orientated in relation (perpendicular) to the road, do not, as excavated, appear to have related to a building and are more likely to have formed a fence line. However, the possible existence of structures constructed of wood, daub, etc cannot be entirely ruled out. The negative features left by such structures are not of the most robust nature and the level of modern disturbance in both Areas was such that it is not impossible that relevant evidence may have been totally destroyed in some parts of the site. However, the presence of the LRB spreads in Area 2, which would have sealed evidence of earlier features or been cut by any features post-dating them, suggests that here, at least, no such structures could have existed. It may, of course, be that buildings were constructed closer to the road, to the east of the area of excavation (Fig 1). Here, on the western verge of

the current A5, the level of modern truncation (estimated to be a minimum of 0.51m) is such that no traces of anything other than substantial structures are likely to survive.

In addition to the lack of structural evidence, is the absence of artefactual or environmental material indicative of domestic occupation within the confines or the immediate vicinity of the site. The Romano-British CBM from both Areas represents heavily abraded demolition debris which, together with the pottery assemblage, appears to have been redeposited several times over. The discrete deposits of worked stone from Area 1 (also abraded), although derived from what must have been a substantial Romano-British structure(s), represents fragments of the type remaining once stone fit for re-use had been removed. No structure of the form implied – eg a public building, villa, shrine etc – has yet been located in the immediate vicinity of the site.

The Roman road

Although no dating evidence was recovered from the ditch at the west end of the Area 3 trench (Figs 1 and 14), there is compelling circumstantial evidence to suggest it is Romano-British in date and may represent the remnants of the western roadside ditch. The course of the Roman road as it descended Brockley Hill was first plotted by Castle via a series of slot trenches excavated in the 1950s and 1960s (Castle 1976, fig 1: Fig 2). Castle's projected line to the south was confirmed during investigations by MoLAS in 1995 (Bowsher 1995, figs 3 and 4) to within 335m north of the site (Fig 2). Thereafter, Bowsher's figure 3 depicts the line reconverging with the current A5, but there is no evidence that it actually does so. If the line of the road was projected south in a straighter line, it would run along the western verge of the A5 adjacent to the site, ditch [444] being in appropriate alignment with the western roadside ditch (Fig 2). The form and width of [444] (Fig 14) corresponds closely with that of the western roadside ditch in Bowsher's trench 10 (1.60m wide, 0.80m deep); both ditches have later, smaller recuts and both were predominately silted from the east side (Bowsher 1995, fig 6b). The shallow depth of ditch [444] is the result of truncation, the ground level along the roadside verge adjacent to Area 2 having been reduced by an estimated minimum of 0.51m (see above). Assuming the base of the

ditch to have been at the same level below the road surface as that in Bowsher's figure 6b, this degree of truncation would have removed all traces of the road surface and the *agger*. No indication of an eastern roadside ditch was noted, but this may be due to a modern ditch cut [449] at the eastern end of the trench (Fig 14). The intervening area between ditches [444] and [449] was c.10m; the width of the Roman road surface excavated by Bowsher was 9.40m.

No features were noted in the Area 4 trench through which the projected line of the Roman road may also have been expected to pass (Fig 2). The level of the undisturbed natural clay in Area 1 compared with that in the Area 4 trench shows an estimated minimum of 0.75m truncation, which could have removed any traces of archaeology associated with the road.

Gravel metalling

The LRB gravel spread in Area 1 was not compacted, had no associated features and did not have the appearance of a structural foundation deposit or formal 'surface'. The gravel had simply been deposited on the ground surface, adjacent to the Roman road, with odd dumps of worked limestone over the top of it. It was noted that the clay surface below the gravel had a 'trampled' appearance in places and the implication is that the original topsoil was thin and unworked.

The deposits suggest one of two possible functions. Some form of activity may have been undertaken in the vicinity which required a stable, dry ground surface. The ground being clay based, therefore prone to holding water and puddling, gravel was spread across it to give a better surface, the limestone being deposited as hardcore.

Alternatively, the area may have been used as a 'depot' for road metalling material, either on a temporary basis for the adjacent stretch of road (in which case what remains may have been surplus to requirements) or longer-term storage for material intended to serve a larger area. Parts of Watling Street excavated to the north (Castle and Warbis 1973; Bowsher 1995) and to the south in Edgware (Codrington 1919, 60) demonstrated that rammed gravel was used as metalling over the built-up clay base of the road surface. Certainly in the latter location, gravel was not available in the immediate vicinity and must

have been brought in – the nearest natural outcrop probably being the Stanmore Gravels at Brockley Hill. Roman road surfaces were commonly subject to one or more episode of resurfacing (*eg* Bowsher 1995; Adam *et al* 1992) and patching (Margary 1949, 18; Castle and Warbis 1973, 89). Metalling and mending material not infrequently incorporated fragments of pottery and CBM, and occasionally other archaeological material, including in this instance unwanted worked stone. Bowsher (1995) also encountered dumps of gravel in several of the evaluation trenches excavated to the north of the site, which he felt may have been related to construction of the road. The location of this material at the base of a substantial hill on a heavily used road may be indicative of its significance.

Industrial activity

The taxa and form of the charcoal recovered from several pits and ditches at the north end of Area 2 and in the adjacent Area 3, represent a combination of high-energy and long-lasting fuel, capable of providing an intensive heat source of the type associated with some form of industrial activity. However, in the absence of any supportive evidence, the nature of any such 'industry' remains unknown; a few fragments of fuel ash slag were recovered with some of the charcoal, but this general slag may form in any type of fire which produces sufficient heat for its formation (c.1000°C). There is some suggestion that the debris may have been associated with charcoal production but the evidence is inconclusive. All except one of the charcoal samples were derived from non-contemporaneous features in the northern corner of the site, indicating a discrete area of activity subject to more than a single episode of usage.

The pond

The deep, central area (base at c.76.0m aOD) of feature [279] (Fig 8) was surrounded by a ledge which appears to have supported, at least in parts, a timber platform of planks possibly secured in position by stakes. This would have provided a firm footing on the clay surface, which would have been hazardous to walk on, especially when wet. The sedimentary evidence

indicates that the lower fills were formed under almost permanent water, supporting the archaeological evidence for this representing the functioning period of the pond/well. The secondary fills accumulated after the pond had gone out of use, fragments of the timber platform as well as other LRB artefacts accumulating within the largely dried-up feature. The presence of some animal bone within the layers suggests that at least a modicum of 'domestic' type refuse was originally present in the vicinity, but has not survived other than in damp conditions. The sedimentary analysis indicates that the upper stratum of fills, again as suggested by the archaeological evidence, represented a broader phase of deposition extending beyond the immediate boundaries of the cut feature and related to the 'puddling' stage.

The feature differs in size and form from the clay pits excavated by Castle on Brockley Hill (Castle 1972; 1976; Castle and Warbis 1973). The latter features were generally found adjacent to kilns, smaller in plan and substantially shallower than [279], with a gentler concave profile, and the fills incorporated quantities of pot sherds and other material, but no timbers.

The absence of a water source in the immediate vicinity was noted by Chadwick (1995) and the ponds may have been excavated to rectify the omission. A small well, 2.13m diameter, was partially excavated adjacent to the Roman road towards the summit of Brockley Hill (Castle and Warbis 1973, fig 2), in association with the kiln sites. The roadside settlement at Hibaldstow had an early Romano-British pond covered by a later building (Smith 1987, 67). Ponds and wells in association with Roman settlements are not unusual features, but in this instance, the nature of the associated activity is not clear.

The spreads

The main ditches [190, 483, 552, 553] in Area 2 appear to have formed a crude 'boundary' to the western and northern extension of the phase II and, possibly the phase III spreads. Both spreads directly overlay natural indicating, as in Area 1, the existence of only a thin topsoil/subsoil. While the general existence of the spreads within this confined area suggests manuring, the lack of homogeneity in distribution and the absence of other 'domestic-type' debris indicates the

pottery and CBM probably did not originate from a normal 'midden'-type deposit. All the material within the spreads appears to have been derived from a concentration to the SE, adjacent to the road and outside the area of excavation (truncated by the MoD). The material within the spreads probably originated from some location outside the immediate vicinity and was subject to a series of deposition episodes prior to being dispersed across Area 2. The later phase III spread is likely to have been derived directly from its earlier counterpart, forming a western extension to the worked soil. If these spreads do represent manuring of the area for agricultural purposes, the location of the farmstead they pertain to is not known – there is no indication of such a settlement, or any other, on the west side of the road. Perhaps something exists on the east side? Alternatively, if, as appears to be the case, a growing mound of ceramic material was being dumped on the side of the road, the spreads may indicate an attempt at levelling.

CONCLUSION

The site does not fall into any of the categories of 'roadside settlement' discussed by Smith (1987), indeed it cannot be said to constitute a 'settlement' as such, representing more an area of roadside 'activity', possibly sporadic and taking a variety of forms.

The deposits in Area 1 appear to represent road-metalling material, and the area may have served as a general depot or repair yard, the northern limits of which were bounded by the possible fence-line. Area 2 appears to have had a more varied usage. The several large ponds or wells may have been associated with whatever form of industrial activity was being undertaken in the northern part of the site. The location, at a half-way stage between London and the next major Roman town of *Verulamium*, and at the base of a relatively substantial rise, may have led to the site serving as resting place on the journey, giving a short break prior to continuing up the hill. It may have been where cattle/sheep drovers stopped to water their animals at the ponds/wells before continuing on to London or *Verulamium*. In the later Roman period, it seems to have served, in part, as a roadside dumping ground for broken pottery and CBM, possibly also originally intended to be used in road mending, but subsequently subject to levelling being

unwanted and possibly posing something of a nuisance as a large mound.

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