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# THE ROMANO-BRITISH SMALL TOWN AT NEATHAM: EXCAVATION AT THE DEPOT SITE, LONDON ROAD, HOLYBOURNE, 2008

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## ABSTRACT

*An excavation in Holybourne, near Alton, revealed two Romano-British ditches and a timber building falling within the Roman small town at Neatham, to the west of areas previously excavated by Millett and Graham. The site lay on the south side of the line of the suggested Roman road from Neatham to Winchester, although the orientation of the ditches may indicate that the course of the road differed from that previously assumed. The pottery and coins date activity to between the late 3rd and the late 4th, possibly early 5th, centuries, the finds and environmental evidence indicating both domestic activity and possible malting and brewing, perhaps supplying the* mansio *in the town.*

## INTRODUCTION

A programme of archaeological fieldwork, comprising evaluation and excavation, was undertaken on the site of a former agricultural engineering depot adjacent to London Road, Holybourne, Alton, in 2006–8 (Wessex Archaeology 2009a). The site (referred to here as 'the Depot site') contained features relating to the Roman small town at Neatham which had been subject to extensive excavations by Martin Millett and David Graham between 1969 and 1979 (Millett & Graham 1986), and two areas of which are now Scheduled Monuments (HA489 and HA584) (Fig. 1).

The town, on the north side of the River Wey, lies on the Roman road between Silchester (*Calleva Atrebatum*) and Chichester (*Noviomagus Regnensium*), at a point where it intersects with at least two other roads. One branches off to the east, towards the pottery production centre in the Alice Holt Forest. Perhaps more significant for understanding the status of the town, however, was a road aligned west-south-west to east-north-east, that crossed the Silchester-Chichester road immediately in front of a large, double-ditched enclosure probably enclosing a posting station or *mansio* (roadside accommodation provided for official travellers). The likelihood that this road ran from Winchester (*Venta Belgarum*) in the direction of London (*Londinium*) (Weston 2008) places the town at a significant crossroads, lending some weight to its suggested identification as the town of *Vindomi*, listed in *Iter XV* of the Antonine Itinerary between Silchester and Chichester (Millett & Graham 1986, 158–9). Other suggested locations for *Vindomi* include East Anton near Andover (*ibid.*, 158) and North Waltham near Basingstoke (Rivet & Smith 1979).

The original excavations revealed developments mainly along the Silchester–Chichester road, but the recent fieldwork, which culminated in the excavation of *c.* 0.13ha of land centred on NGR 473895 141110 (SU 738411), was well placed to examine any developments along the road towards Winchester, being located 100–140m south-west of the Roman crossroads and within 30m of the earlier excavations (Millett and Graham's Area A).

The site lies *c.* 100m above Ordnance Datum on a gentle slope on the north side of the Wey valley, some 2km north of the river. It lies on River and Valley Gravel surrounded by grey marly Lower Chalk (Geological Survey of Great Britain 1957). The main area of excavation had lain below the slab foundation of the former depot, and had consequently not been accessible during the evaluation.

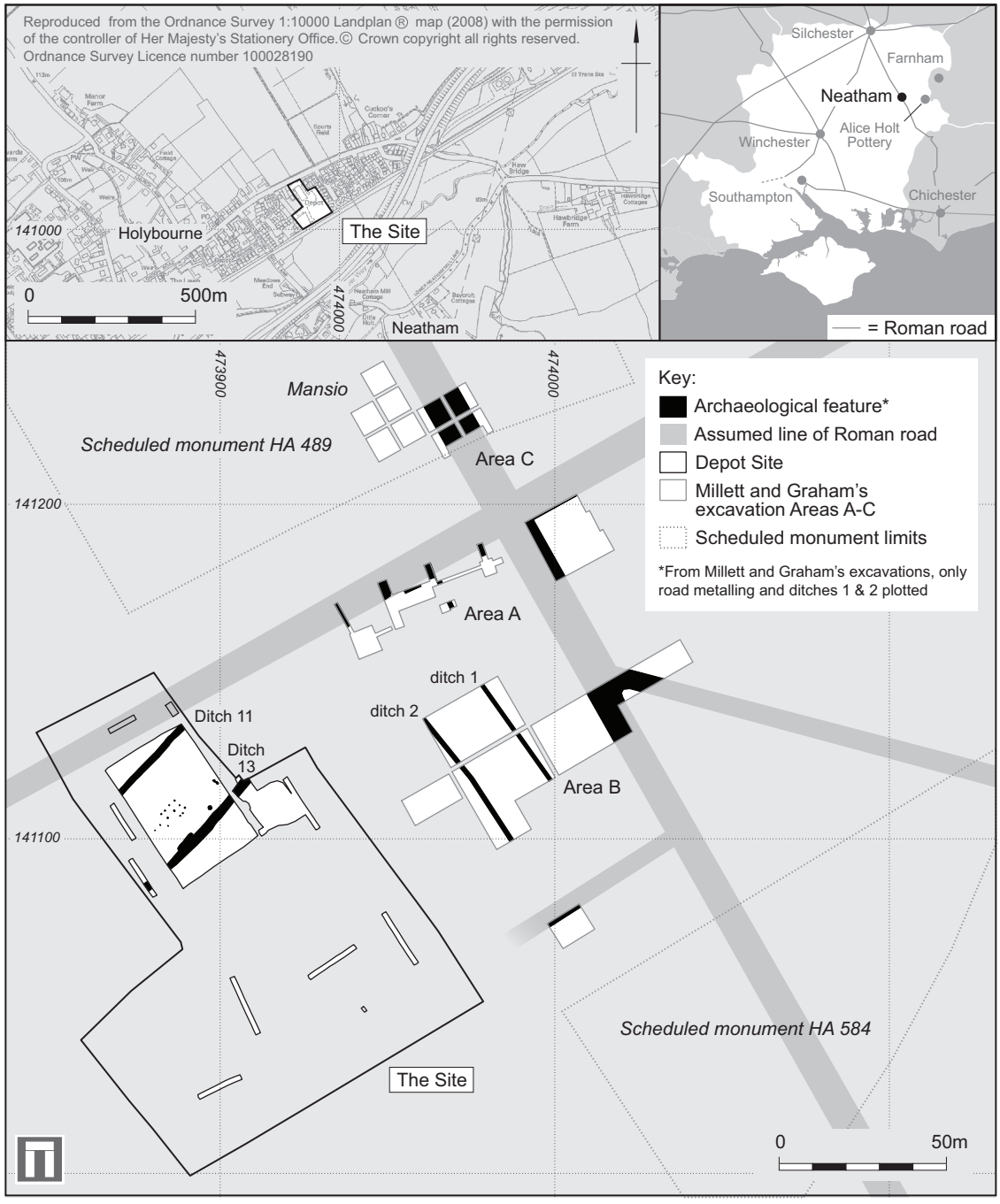


Fig 1 Location of the Depot site in relation to Millett & Graham's Areas A-C

## RESULTS

The excavation revealed a number of middle–late Romano-British features: two parallel ditches (Ditches 11 and 13), *c.* 24m apart aligned north-east to south-west, between which was a rectangular post-built building (Structure 77) with the same orientation, and a pit (1007). In addition, there was a short linear feature (58) of uncertain date, and a small patch of possibly burnt gravel (40) (Fig. 2).

In order to avoid confusion, features from Millett & Graham's excavations are not capitalised (e.g. 'ditch 1') while those from the Depot site are (e.g. 'Ditch 11').

*Feature 58*

This feature was 6.5m long, at least 1.3m wide and 1.0m deep, with a U-shaped profile. Like Ditch 13, which cut its south-east side, it was aligned north-east to south-west. Both its primary (66) and secondary (59) fills contained no finds, and its function is unclear. It is not certain whether the overlying layer (67) was also a fill of this feature, or the lowest fill in Ditch 13, although its profile broadly matches that of the U-shaped ditch, suggesting the latter (Fig. 3).

In addition to a single sherd of Romano-British greyware pottery, layer 67 contained five large sherds (232g) of flint-tempered Middle Bronze Age pottery. Whatever the date of Feature 58, the unabraded condition of the sherds indicates that there was some form of Middle Bronze Age activity within its immediately vicinity. The only other finds of this general date from the site were two small flint-tempered body sherds, both abraded, recovered from evaluation trench 9, some 40m to the north-west.

*Ditches 11 and 13*

The north-western (11) of the two parallel ditches was 1.8–2.0m wide and up to 1.0m deep with a variable profile, but a consistent sequence of fills readily identifiable as primary, secondary and tertiary (Fig. 3). The only find from its primary fill was one small sherd (2g) of Romano-British pottery and only 18 sherds (166g) were recovered from its secondary fills. These, however, produced over 1.5kg of ceramic building material (CBM) and 1.2kg of animal bone, as well as a 3rd–4th century coin and a part of a pair of copper alloy tweezers. By far the largest quantity of pottery (200 sherds weighing 2332g, representing 93% by weight of the pottery from the ditch) came from its tertiary fill, which produced a similar range of finds to the secondary fill, including ten coins.

The south-eastern ditch (13), which was exposed for over 45m, was up to 3.0m wide and 1.0m deep. In three of the five excavated sections it had a broad, gently sloping U-shaped profile, while in two it had generally straight sides with a narrow, steep-sided, flat-based slot in the base. The ditch contained up to five fills. The primary fill produced no finds and the largest quantities of finds were recovered from the secondary fills: over 20kg of pottery, 11kg of CBM and 5kg of animal bone. The fact that no tertiary fills were recorded in three of the five sections probably accounts for the lower levels of finds from these layers, compared to Ditch 11, but the contrast with Ditch 11 is noticeable.

The finds from both ditches indicate that they were filling up in the later 3rd century, perhaps extending into the early 4th century, although the pattern of coin loss suggests that Ditch 13 remained open for longer, perhaps even into the early 5th century. While the recovery of 16 pieces of medieval roof tile from the upper fills of both ditches might indicate that the Romano-British material in these fills was residual, it would seem more likely that this material, which comprised only a fraction of the total quantity from the ditches, was intrusive.

*Structure 77*

A rectangular post-built structure, at least 10m long and 5m wide and aligned north-east to south-west, lay between the Ditches 11 and 13. Thirteen post-holes were arranged in three rows although apparent gaps in their arrangement suggest that others had been lost through truncation, the recorded post-holes having depths of no more than 0.2m. The longer, central row had five quite evenly spaced post-holes, 2.2–3m apart, the two at the south-west being noticeably smaller (*c.* 0.3m diameter compared to 0.5m). The shorter row on the north-west side

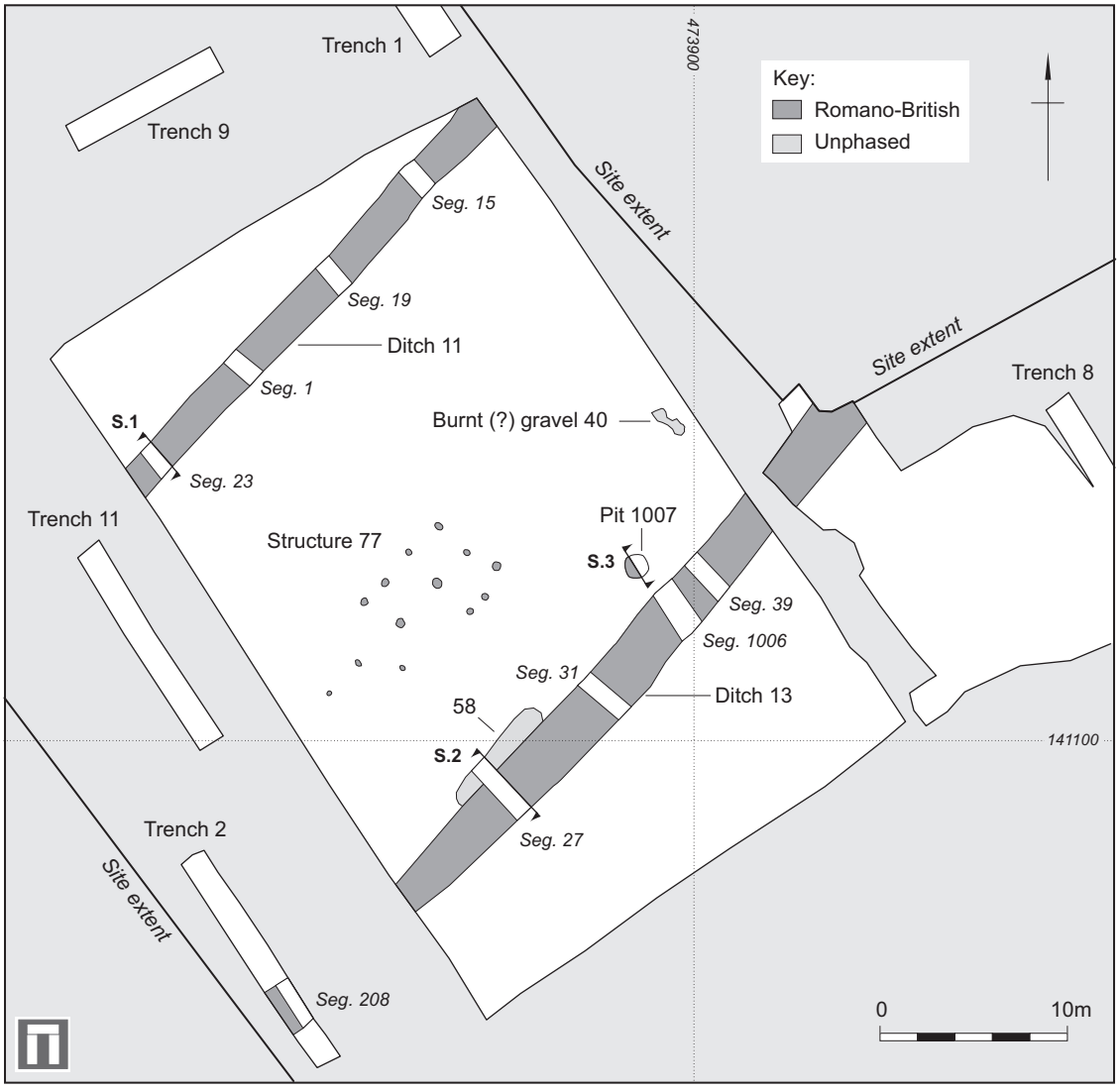


Fig 2 Archaeological features on the Depot site

had four post-holes spaced 1.6–2m apart, while the spacing on the south-east side was far less regular. Because neither side extended as far towards the south-west as the central row, it is possible that this end of the building may have suffered the highest level of truncation.

A small quantity of finds, a single sherd of late 3rd/4th century pottery, four fragments of painted wall plaster, two nails, two hobnails and a small quantity of animal bone, was recovered from the post-holes. No evidence was found within the structure for floor surfaces, or features such as hearths.

All but two of the buildings excavated by Millett and Graham were also timber built, some employing beam-slots in addition to post-holes. However, there was no evidence for beam-slots in Structure 77, and its form, comprising three rows of posts, finds no immediate parallels among the other buildings.

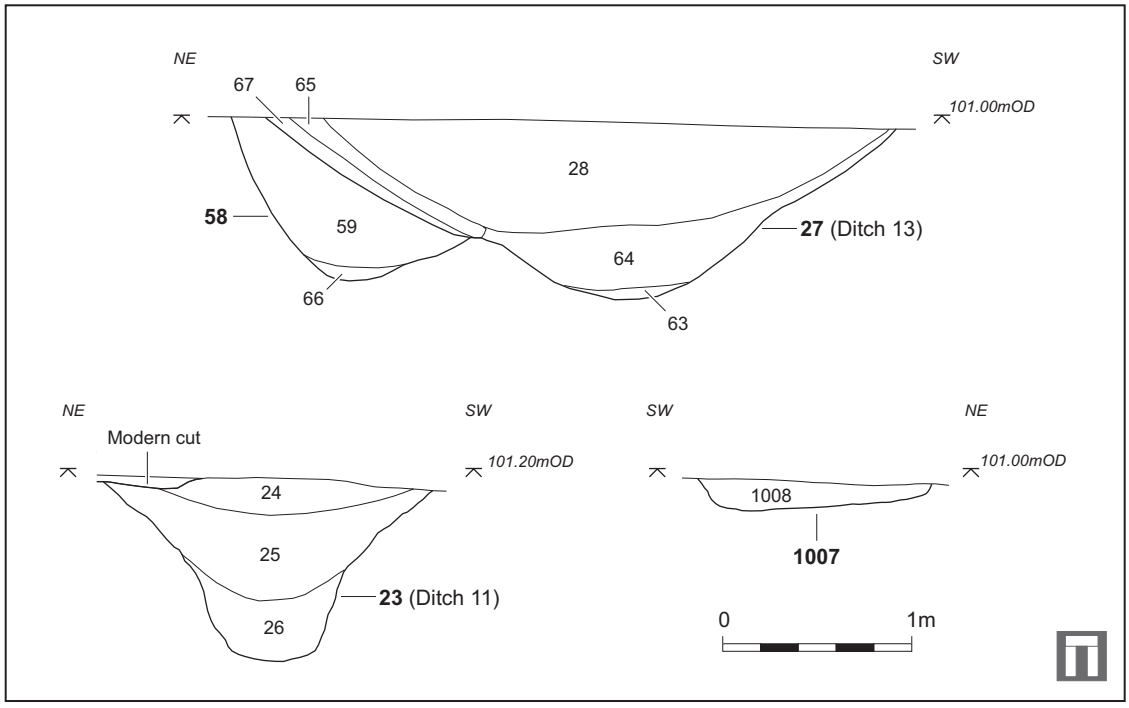


Fig 3 Sections of Ditches 11 and 13 and Pit 1007

*Other features*

A subcircular pit (Pit 1007) lay *c.* 7m east of the Structure 77, just 1m from Ditch 13. It was 1.2m in diameter but only 0.2m deep with a backfilled deposit containing 24 sherds (299g) of pottery, two pieces of CBM, a copper alloy bar, eight nails and fragments of animal bone and fired clay, as well as a large quantity of charcoal.

Some 12m north-east of the building there was a small area of red gravel in an irregular feature of uncertain character, but interpreted on-site as a possible three-throw hole (40). It was unclear whether this colouring was part of the natural colour variation noted within the gravel across the site, or due to localised burning, although there was no charcoal or any finds associated with it.

## FINDS

*Coins* by Nicholas Cooke

One hundred and six coins were recovered. All are copper-alloy Roman coins, struck in the 2nd–4th centuries. In general their condition is fair with all but eight identifiable to period. Some show signs of corrosion but generally such damage is limited. All but two were from Ditches 11 and 13, most within their upper fills found with the aid of a metal detector, with smaller numbers found during excavation and the processing of environmental samples.

A complete record of the coin assemblage is contained in the project archive; a summary is presented in Table 1. The breakdown of the coins according to the 21 periods proposed by Reece (1991) can be seen in Figure 4.

The earliest coins are three 2nd-century issues, one found unstratified and two from the upper fills of Ditch 11. All are *sestertii*, one of Hadrian, and two of Marcus Aurelius. All are heavily worn and had clearly been in circulation for a considerable time prior to their loss or deposition.

The majority of the coins (79 coins) are radiates of the late 3rd century (periods 13 and 14), found in significant quantities in

*Table 1* Roman coins by period

| *Ruler* | *Coin type* | *Reverse type* | *Officina* | *Reference* | *No of coins* |
|---|---|---|---|---|---|
| *Reece period 6. AD 117 – 138* | | | | | |
| Hadrian | AE 1 Sestertius | Advent via Aug Italiae | - | RIC II, 888 | 1 |
| | | | | | 1 |
| *Reece period 7. AD 138 - 161* | | | | | |
| Marcus Aurelius | AE 1 Sestertius | VICT AVG TR PXVIII IMP II COS III | - | RIC III, 890 | 1 |
| | AE 1 Sestertius | Uncertain | - | - | 1 |
| | | | | | 2 |
| *Reece period 13. AD 260 - 275* | | | | | |
| Gallienus | AE 3 Antoninianus | Abundantia Aug | - | RIC V (I) 157 | 1 |
| | AE 2 Antoninianus | Dianae Cons Aug | - | RIC V(I) 180 | 1 |
| Victorinus | AE 2 Antoninianus | Salus Aug | - | ? Copy as RIC V (II) 122 | 1 |
| | AE 2 Antoninianus | Pax Aug | - | RIC V (II) 118 | 1 |
| Claudius II | AE 2 Antoninianus | Annona Aug | - | RIC V (I), 18 | 1 |
| | AE 3 Antoninianus | PMTRPIICOSPP | - | RIC V (I), 10 | 1 |
| | AE 2 Antoninianus | Victoria Aug | - | RIC V (I) 140 | 1 |
| | AE 2 Antoninianus | Consecratio (altar) | - | Copy as RIC V (I) 257 | 2 |
| | AE 3 Antoninianus | Consecratio (altar) | - | Barbarous copy | 1 |
| | AE 3 Antoninianus | Consecratio (eagle) | - | ?Copy as RIC V (I) 265 | 3 |
| | AE 4 Antoninianus | Consecratio (eagle) | - | ?Copy as RIC V (I) 265 | 1 |
| | AE 3 Antoninianus | ? from Pax | - | - | 1 |
| Tetricus | AE 2 Antoninianus | Comes Aug | - | RIC V (II) 56 | 1 |
| | AE 2 Antoninianus | Victoria Augg | - | As RIC V (II), 138 | 1 |
| | AE 2 Antoninianus | Virtus Aug | - | ? Copy as RIC V (II) 148 | 1 |
| | AE 2 Antoninianus | Fides Militum | - | Barbarous copy | 1 |
| | AE 3 Antoninianus | ? from Pax | - | Barbarous copy | 2 |
| | AE 4 Antoninianus | ? from Pax | - | Barbarous copy | 1 |
| | AE 3 Antoninianus | Spes Augg | - | Barbarous copy | 1 |
| | AE 3 Antoninianus | Unknown | - | Barbarous copy | 1 |
| | AE 2 Antoninianus | Spes Augg | - | RIC V (I), 271 | 1 |
| | AE 2 Antoninianus | Spes Publica | - | Barbarous copy | 1 |
| | AE 2 Antoninianus | Fides Militum | - | Barbarous copy | 1 |
| | AE 3 Antoninianus | Pietas Augustorum (priestly implements) | - | Barbarous copy | 3 |
| | AE 2 Antoninianus | Uncertain | - | Barbarous copy | 1 |
| | AE 3 Antoninianus | Uncertain | - | Barbarous copy | 1 |
| | | | | | 32 |
| *Reece period 14. AD 275 - 296* | | | | | |
| Carausius | AE 2 Antoninianus | ? Providentia | - | - | 1 |
| | AE 2 Antoninianus | Pax Aug | - | Pax Aug | 3 |
| | AE 2 Antoninianus | Pax Aug | - | RIC V (II) 118 | 1 |
| Allectus | AE 2 Antoninianus | Pax Aug | - | RIC V (II), 85 | 1 |
| Uncertain | AE 3 Antoninianus | ? from Pax | - | Barbarous copy | 2 |

*Table 1* (cont.) Roman coins by period

| *Ruler* | | *Coin type* | *Reverse type* | *Officina* | *Reference* | *No of coins* |
|---|---|---|---|---|---|---|
| | | AE 4 Antoninianus | ? from Pax | - | Barbarous copy | 2 |
| | | AE 3 Antoninianus | ? Priestly implements | - | Barbarous copy | 1 |
| | | AE 2 Antoninianus | Uncertain | - | Barbarous copy | 8 |
| | | AE 3 Antoninianus | Uncertain | - | Barbarous radiate | 8 |
| | | AE 4 Antoninianus | ? Priestly implements | - | Barbarous copy | 2 |
| | | AE 4 Antoninianus | ? Fides Militum | - | Barbarous copy | 1 |
| | | AE 4 Antoninianus | Uncertain | - | Barbarous radiate | 17 |
| | | | | | | 47 |
| *Reece period 16. AD 317 - 330* | | | | | | |
| Trier | Contantine II | AE 2 Nummus | Beata Tranquillitas | 2nd | RIC VII, Trier, 382 | 1 |
| | | | | | | 1 |
| *Reece period 17. AD 330 - 348* | | | | | | |
| Trier | | AE 3 Nummus | Constantinopolis | 1st | LRBC I, 52 | 1 |
| | | AE 2 Nummus | Urbs Roma | 2nd | LRBC I, 65 | 11 |
| | | AE 3 Nummus | Urbs Roma | 1st | LRBC I, 76 | 1 |
| | Constans | AE 3 Nummus | Victoriaeddauggqnn | - | ? Copy as LRBC I, 140 | 1 |
| Lyons | | AE 3 Nummus | Constantinopolis | 1st | LRBC I, 185 | 1 |
| | Constantine II | AE 2 Nummus | Gloria Exercitus (2 stds) | 1st | LRBC I, 193 | 1 |
| Arles | | AE 3 Nummus | Gloria Exercitus (2 stds) | 2nd | ? Copy as LRBC I, 352 | 1 |
| Uncertain | | AE 4 Nummus | Victoriaeddauggqnn | - | ? Copy as LRBC I, 137 | 1 |
| | | | | | | 8 |
| *Reece period 18. AD 348 - 364* | | | | | | |
| Uncertain | | AE 3 Nummus | Fel Temp Reparatio (FH 3) | - | Copy as LRBC II, 25 | 1 |
| | | | | | | 1 |
| *Reece period 19. AD 364 – 378* | | | | | | |
| Arles | Valentinian I | AE 2 Nummus | Securitas Reipublicae | 3rd | LRBC II, 490 | 1 |
| Lyons | Valentinian I | AE 2 Nummus | Gloria Romanorum | 2nd | LRBC II, 284 | 1 |
| Aquilea | Valentinian I | AE 2 Nummus | Gloria Romanorum | 2nd | LRBC II, 965 | 1 |
| Unknown | | AE 3 Nummus | Gloria Romanorum type | - | As LRBC II, 78 | 1 |
| | | | | | | 4 |
| *Reece period 21. AD 388 – 402* | | | | | | |
| Unknown | | AE 4 Nummus | Victoria Auggg type | - | As LRBC II, 164 | 1 |
| | | AE 4 Nummus | Salus Reipublicae type | - | ? Copy as LRBC II, 796 | 1 |
| | | | | | | 2 |
| *Illegible* | | | | | | |
| | | AE 3 Antoninianus/ Nummus | - | - | C3-C4 | 3 |
| | | AE 4 Antoninianus/ Nummus | - | - | C3-C4 | 3 |
| | | AE 3 Nummus | - | - | C4 | 1 |
| | | AE 4 Nummus | - | - | C4 | 1 |
| | | | | | | 8 |
| Total | | | | | | 106 |

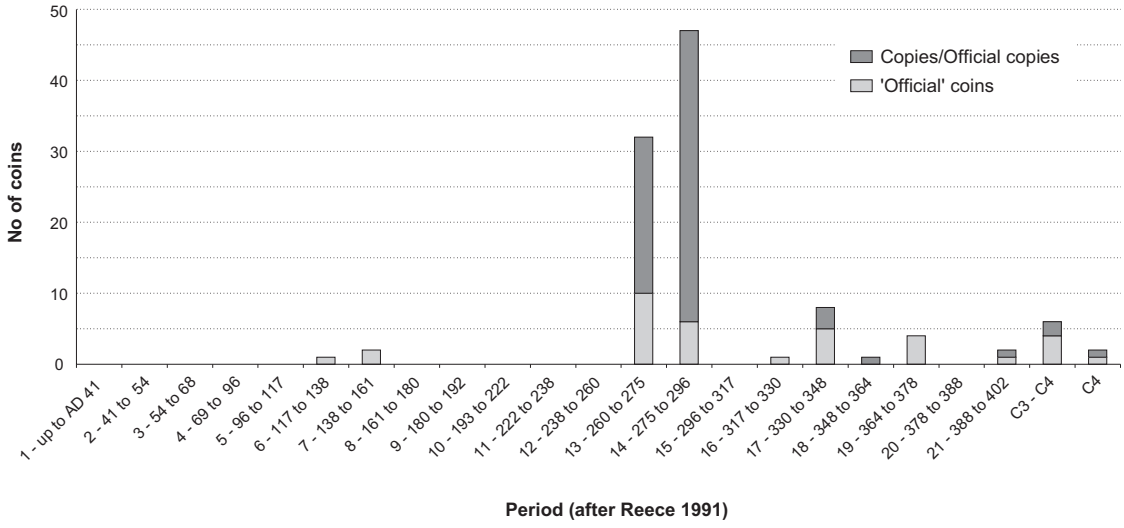


Fig 4 All coins by period


Fig 5 Previously unpublished antoninianus of the rebel British Emperor Carausius, issue date: AD 286–293. Object 35, Ditch 11 context 12. Copper Alloy Antoninianus; diameter 20mm; reverse axis: 2; weight 3.3g. *Obverse*: Very worn; Bust r, radiate; inscription (I)MPCARAVSIVSPAVG *Reverse*: Very worn; Providentia standing left, holding baton and cornucopiae; inscription PROVID (–ENTI-) A; mint mark MC

both ditches. These include a high proportion of barbarous copies, contemporary copies of 'official' coinage, possibly struck to compensate for gaps in supply of coinage to Britain and to supply sufficient small change for the province's needs. It is unclear whether they were officially sanctioned, if at all, but they are not uncommon as site finds, and seem to have circulated in the same fashion as officially struck coins.

One of the 'official' issues of this period is worthy of comment. Object 35 (from Ditch 11 context 12 [cleaning layer]) is a previously unpublished antoninianus of the rebel British Emperor Carausius, struck at the 'C' mint (probably Colchester). The reverse depicts Providentia standing left holding a baton and cornucopiae, and has a previously unrecorded legend, probably PROVIDENTIA (Sam Moorhead pers. comm.) (Fig. 5).

The 4th century coins include three struck by the House of Theodosius in 388–402, which form part of the last issues of coinage to be shipped to Britain prior to the edict of Honorius, issued in 410, which called upon the British provinces to look to their own defences, effectively signalling their abandonment by the Empire. The presence of these three coins probably indicates that activity and coin use on the site continued into the late 4th or early 5th century.

A substantial number of Roman coins (1066) were recovered from the earlier excavations at Neatham, with a further 195 found in a hoard within a well (Merson 1986, 95). These indicate that the town was occupied throughout the Roman period and that coin loss continued into the early 5th century. As with the smaller assemblage from the Depot site, small proportions of early coins were followed by major

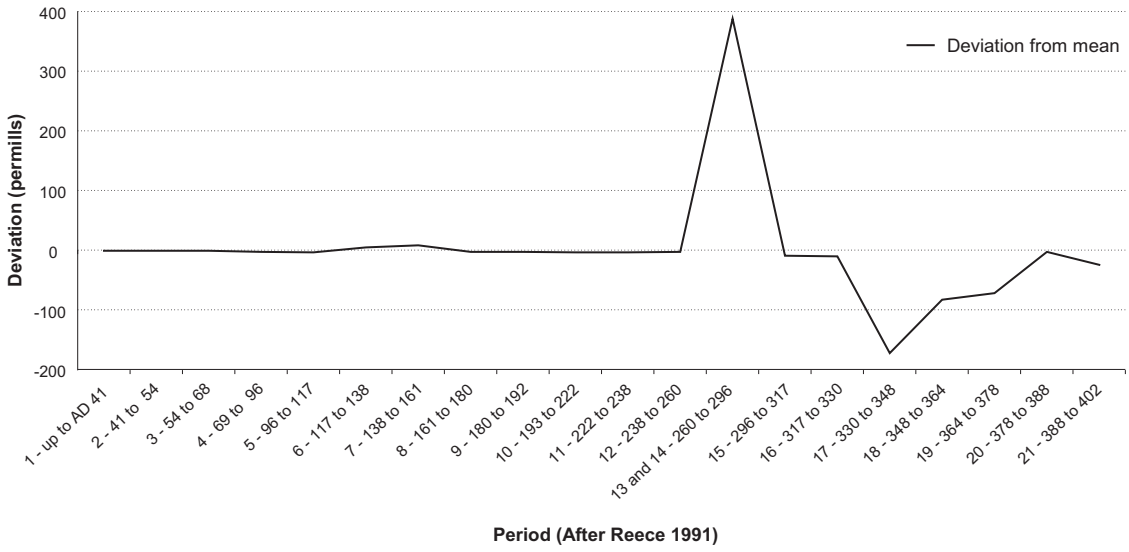


Fig 6 Coins from the Depot site: deviation from the overall mean

peaks of coin loss in periods 13 and 14, with further 4th-century peaks in periods 17 and 19. Despite this, however, there are significant differences between the two assemblages.

Figure 6 demonstrates these differences. Here the coins from the Depot site are shown in terms of their deviation from the overall mean of the coins recovered from the earlier excavations (expressed as the number of coins per period/number of coins from the site x 1000). This demonstrates that there is relatively little deviation from the overall mean until periods 13 and 14 (280–296) when significantly higher proportions of radiate coins were recovered from the Depot site (the figures from these periods are not divided in the earlier report). It is also clear that the proportion of 4th-century coins is less than from the earlier excavations.

It is unusual for assemblages of Roman coins to be so dominated by radiate coins of periods 13 and 14. Indeed, of the 140 sites published by Reece (1991), only five have a higher proportion of coins of period 13 (260–275) and none has as high a proportion of coins of period 14 (275–296). There can be little doubt that the levels of period 13 and 14 coin loss or deposition on the site is exceptional and it is tempting to suggest that the assemblage may contain a dispersed late 3rd century hoard. However, a distribution plot of period 13 and 14 coins shows few concentrations of coins, those of this date being found along the lengths of both ditches.

A further anomaly is the uneven distribution of the 4th century coins, all but one of which came from Ditch 13 (the other being a small nummus of the House of Theodosius recovered from the upper fill of Ditch 11). This clearly suggests that Ditch 13 remained open for longer than Ditch 11 which had probably completely silted by the early 4th century. Some 22 of the 68 coins from the Ditch 13 were recovered from the secondary fill of the ditch. There is clearly considerable residuality in the coin assemblage; the significant number of radiate coins recovered from the upper fills of Ditch 13 are unlikely to have remained in circulation into the 330s, when the peak of late 4th century coinage occurs, let alone into the 390s, when the final coins in the assemblage were probably struck.

Analysis of the distribution of coin loss across the site appears to favour heavy coin loss in the late 3rd century, followed by less intense loss in the 4th century. It may be that the Structure 77 between the two ditches was in use in the late 3rd century and was abandoned in the 4th,

thus contributing to the anomalous peak in late 3rd century coin loss. Certainly, the coin assemblage from Ditch 11 suggests that it was largely filled by the end of the 3rd century. There was, however, activity on the site well into the late 4th century and probably into the early 5th century, judging from the number of coins of this period.

*Metalwork* by Kayt Brown

A total of 219 metal objects, excluding coins, was recovered, predominantly iron, with small quantities of copper alloy, lead and a single silver item. The metal objects have been x-radiographed, and individual object identifications are in the project database (Microsoft Access) which forms the full catalogue. With the exception of two nails and two hobnails from Structure 77, and eight nails and a copper alloy bar fragment from Pit 1007, the remainder of the assemblage derives from the secondary and tertiary fills of Ditches 11 and 13.

Objects of personal adornment comprised a copper alloy finger ring with notched decoration around the outer face (Object Number (ON)24, Ditch 11 context 12 [cleaning layer] Fig. 7.1) and a second copper alloy ring decorated with three crenellations and incised grooves (ON89, Ditch 13, context 14 [cleaning layer] Fig. 7.2). Both find parallels at Colchester (Crummy 1983, fig. 50, 1766, 1768) and are Romano-British in date, although they occur here as residual finds. A fragment of a silver finger ring of uncertain date was also recovered from the upper fill of Ditch 13 (ON93). A pointed, flat copper alloy object with spatulate end (ON19, Fig. 7.3) from Ditch 11, could be a toilet spoon with a flat rather than cupped bowl (Crummy 1983, fig. 64). A group of 37 iron hobnails (ON188) from a secondary fill of Ditch 13 may represent the remains of a single

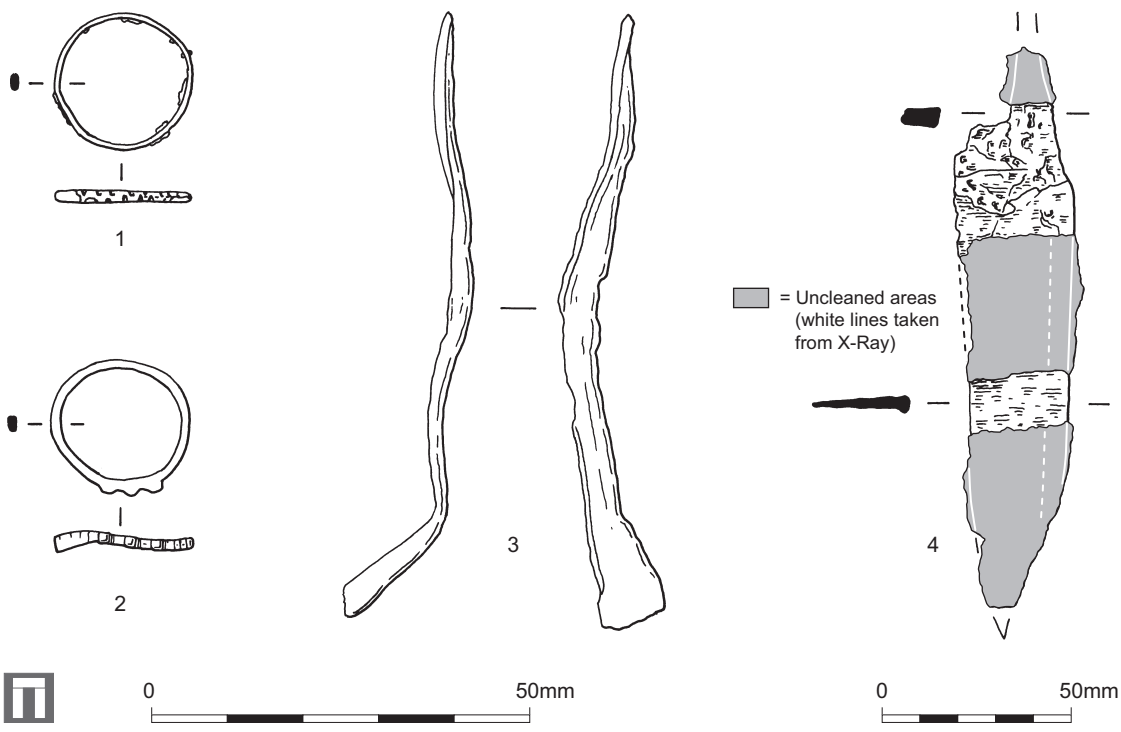


Fig 7 Metal objects

shoe. A further seven hobnails were recovered from other fills within this ditch.

Identifiable iron tools comprise a blade fragment from medium-sized shears (ON10, Ditch 11, context 9 [cleaning layer] Fig. 7.4; cf. Manning 1985, 34), a tanged chisel fragment (ON186), a possible knife blade fragment (ON147) and a small iron reaping hook, socketed with a U shaped blade (ON136). This latter object may have been used for pruning or as a leaf-hook rather than for cereal cutting, given its small size (*ibid.*, 53).

Iron structural fastenings and fittings include 96 round headed nails (Manning 1985, 134, type 1b). Two examples (ON161 and ON129) retain their complete shape and provided an indication for timber widths of 20mm and 25mm respectively. Other items included a T-clamp (ON153) used for attaching stone or ceramic tiles, a hinge fragment (ON122) and a possible latch lifter fragment (ON117). A copper-alloy box-fitting (ON105), with a triangular sectioned strip and *in situ* rivet at one end was identified, while a number of other copper alloy strip fragments may represent the remains of structural fastenings and/or fittings but, given their condition, these could not be identified with any certainty.

Two definite post-Romano-British objects, both surface finds from Ditches 11 and 13, comprise a copper alloy *fleur-de-lis* mount (ON43) and a complete copper alloy thimble with machine decoration (ON41), dated to the 18th century (Holmes nd, 4).

*Pottery* by Rachael Seager Smith

The pottery is predominantly of late Romano-British date, with the exception of five Middle Bronze Age sherds. The assemblage has been fully recorded according to Wessex Archaeology's standard procedures (Morris 1994), and quantified by number of sherds, weight and estimated vessel equivalents (EVE) within each context. In addition to a range of 'established wares' of known type or source (such as samian, New Forest colour-coated ware, Overwey/Tilford ware), fabrics were defined by predominant inclusion type. Vessel forms were recorded using standard published corpora (Fulford 1975; Young 1977; Lyne & Jefferies 1979), while a site-specific form series was created for the less common types, where appropriate cross-referenced with other assemblages from the vicinity.

*Middle Bronze Age*

Five thick-walled body sherds in a coarse, flint-tempered fabric belonging within the Deverel-Rimbury tradition of the Middle Bronze Age were recovered from the point where Romano-British Ditch 13 cut Feature 58. They survive in a relatively unabraded condition suggesting minimal post-depositional disturbance, in contrast to a small abraded piece of Roman sandy greyware from the same context (67).

*Romano-British*

The good condition of the Romano-British sherds is reflected in the high average sherd weight of 17.5g. There are few signs of abrasion and surfaces are well preserved although rims are generally broken at the rim/shoulder junction and 42% (150 out of the 356 rims recorded) are represented by less than 5% of the vessel's diameter. Consequently, the EVE totals presented in Table 3 have been calculated without these small sherds and with each of them representing 1% and 5% of the diameter to provide minimum and maximum figures.

*Composition of the assemblage*

The fine and specialist wares are dominated by products of the two main late Romano-British regional industries of the New Forest (Fulford 1975) and Oxfordshire (Young 1977) (Table 2). Although most of the identifiable vessel forms (Table 3) were made throughout the life of these industries, a single hemispherical bowl with widely spaced stamped decoration (Young 1977, 158, 162, type C59), and a wall-sided whiteware bowl rim (*ibid.*, 87, type P24) indicate a distinctive 4th century component to the assemblage. At least some of the unsourced oxidised wares may also represent abraded pieces of Oxfordshire colour-coated ware, while others derive from flagons and bowls which form part of the standard range of oxidised vessels made in these wares across southern England. Local red wares, predominantly of 3rd-century date, have also been identified in

*Table 2* Pottery, overall quantities (No./weight in g) by fabric and feature

| | *Feature 58* | | *Ditch 11* | | *Ditch 13* | | *Struct. 77* | | *Pit 1007* | | *Total* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Fabrics* | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* | *No.* | *Wt.* |
| *Middle Bronze Age* | | | | | | | | | | | | |
| coarse flint-gritted ware (F1) | 5 | 232 | – | – | – | – | – | – | – | – | 5 | 232 |
| *Romano-British* | | | | | | | | | | | | |
| Central Gaulish samian (E304) | – | – | 2 | 21 | 3 | 73 | – | – | – | – | 5 | 94 |
| Easter Gaulish samian (E308) | – | – | 1 | 86 | 1 | 11 | – | – | – | – | 2 | 97 |
| Moselkeramik (E121) | – | – | 1 | 8 | 1 | 2 | – | – | – | – | 2 | 10 |
| New Forest colour-coated ware (E162) | – | – | – | – | 21 | 255 | – | – | – | – | 21 | 255 |
| Oxon red/brown slipped ware (E170) | – | – | 7 | 48 | 22 | 458 | – | – | 1 | 10 | 30 | 516 |
| Oxon white ware (E173) | – | – | – | – | 1 | 34 | – | – | – | – | 1 | 34 |
| Oxon white ware mortaria (E209) | – | – | 1 | 21 | 2 | 45 | – | – | – | – | 3 | 66 |
| Oxon colour-coated mortaria (E211) | – | – | – | – | 2 | 21 | – | – | – | – | 2 | 21 |
| Unsourced oxidised wares (Q101) | – | – | 2 | 4 | 14 | 57 | – | – | 2 | 4 | 18 | 65 |
| Local red wares (Q102) | – | – | 3 | 54 | 8 | 79 | – | – | – | – | 11 | 133 |
| Unsourced colour-coated ware (Q103) | – | – | 3 | 7 | 1 | 2 | – | – | – | – | 4 | 9 |
| Sandy greywares (Q100) | 1 | 7 | 189 | 2150 | 1487 | 27647 | 1 | 5 | 19 | 250 | 1697 | 30059 |
| Overwey/Tilford ware (E181) | – | – | 1 | 12 | 23 | 387 | – | – | – | – | 24 | 399 |
| Grog-tempered ware (G100) | – | – | 6 | 69 | 3 | 39 | – | – | 1 | 22 | 10 | 130 |
| Total | 6 | 239 | 216 | 2480 | 1589 | 29110 | 1 | 5 | 23 | 286 | 1835 | 32120 |

other areas of the Roman town (Millett 1986, 70–71).

Continental imports are restricted to a few sherds of Central and Eastern Gaulish samian and pieces from two Moselkeramik beakers, one a motto beaker, unusually with the barbotine letters (part of the letter A survives) in the lower band of decoration. The samian includes form 31 and 37 bowls and a form 45 mortarium, while the corner of a stamp (unfortunately insufficient to be legible) was noted on an Eastern Gaulish bowl base from Ditch 11 (segment 19, context 20). Although products of the later samian industry, these sherds are chronologically earlier than the remainder of the assemblage and could be residual or may indicate some form of curation of vessels. Although reaching Britain from the late 2nd century, the production of dark colour-coated ware beakers at Trier continued into the 4th

*Table 3* Vessel forms quantified by the number of examples, weight and EVEs

| *Form* | *No.* | *Wt. (g)* | *EVE* | *EVE min* | *EVE max* | *Class* |
|---|---|---|---|---|---|---|
| *Finewares* | | | | | | |
| form 37 | 1 | 19 | 0.06 | 0.06 | 0.06 | bowl |
| Fulford 27 | 1 | 7 | 0 | 0.01 | 0.05 | beaker |
| Young C8 | 1 | 19 | 1 | 1 | 1 | flagon |
| Young C45 | 4 | 68 | 0.33 | 0.33 | 0.33 | bowl |
| Young C51 | 4 | 38 | 0.14 | 0.17 | 0.29 | bowl |
| Young C59 | 1 | 37 | 0.15 | 0.15 | 0.15 | bowl |
| Young C97 | 1 | 17 | 0.10 | 0.10 | 0.10 | mortaria |
| Young P24 | 1 | 34 | 0 | 0.01 | 0.05 | bowl |
| *Finewares subtotal* | *14* | *239* | *1.78* | *1.83* | *2.03* | |
| *Coarsewares* | | | | | | |
| L&J early 4 | 1 | 46 | 0.12 | 0.12 | 0.12 | jar |
| L&J 1 | 7 | 189 | 0.79 | 0.81 | 0.89 | jar |
| L&J 1A/B | 10 | 457 | 2.15 | 2.15 | 2.15 | jar |
| L&J 3B | 141 | 1975 | 7.76 | 8.53 | 11.61 | jar |
| L&J 3C | 14 | 236 | 0.93 | 0.99 | 1.23 | jar |
| L&J 4 | 1 | 80 | 0.28 | 0.28 | 0.28 | jar |
| L&J 5A | 3 | 68 | 0.10 | 0.12 | 0.20 | jar |
| R102 | 3 | 52 | 0.33 | 0.33 | 0.33 | jar |
| R104 | 1 | 50 | 0 | 0.01 | 0.05 | jar |
| R105 | 2 | 26 | 0.17 | 0.17 | 0.17 | jar |
| R106 | 1 | 55 | 0.20 | 0.20 | 0.20 | jar |
| *Jars subtotal* | *184* | *3234* | *12.83* | *13.71* | *17.23* | |
| L&J 5B | 49 | 1536 | 4.71 | 4.82 | 5.26 | bowl |
| L&J 5D | 1 | 39 | 0.05 | 0.05 | 0.05 | bowl |
| L&J 5E | 2 | 55 | 0.19 | 0.19 | 0.19 | bowl |
| R101 | 1 | 5 | 0 | 0.01 | 0.05 | bowl |
| R103 | 2 | 13 | 0.09 | 0.10 | 0.14 | bowl |
| *Bowls subtotal* | *55* | *1648* | *5.04* | *5.17* | *5.69* | |
| L&J 6A | 69 | 1997 | 3.89 | 4.17 | 5.29 | dish |
| L&J 6C | 1 | 52 | 0.16 | 0.16 | 0.16 | dish |
| *Dishes subtotal* | *70* | *2049* | *4.05* | *4.33* | *5.45* | |
| L&J 1C | 4 | 938 | 0.58 | 0.58 | 0.58 | storage jar |
| L&J 10 | 1 | 121 | 0.10 | 0.10 | 0.10 | storage jar |
| L&J 5C | 1 | 36 | 0.09 | 0.09 | 0.09 | strainer |
| L&J 7 | 10 | 308 | 1.10 | 1.12 | 1.20 | lid |
| L&J 8 | 4 | 96 | 1.50 | 1.51 | 1.55 | flagon |
| R100 | 13 | 136 | 0 | 0.13 | 0.65 | various |
| *Miscellaneous subtotal* | *33* | *1635* | *3.37* | *3.53* | *4.17* | |
| *Coarsewares subtotal* | *342* | *8566* | *25.29* | *26.74* | *32.54* | |
| *Overall total* | *356* | *8805* | *27.07* | *28.57* | *34.57* | |

century (Symonds 1992, 46) and others found within the Roman town have also been in late 3rd century contexts (Millett 1986, 75, fig. 51, 31 and 32). Amphorae were not identified and were only poorly represented among the much larger collection from the earlier excavations (Parker 1986), with two of the ten pieces perhaps re-used as pestles. Mortaria too, are scarce, confined to the single samian sherd and vessels from the Oxfordshire industry.

Coarsewares dominate, with the sandy greywares forming the bulk of this assemblage. Most probably derived from the Alice Holt/Farnham industry (Lyne & Jefferies 1979), perhaps with a few vessels from small local centres, or others such as Rowland's Castle (Nelson 2003), 30km to the south. Although a few pieces of the distinctive 4th century Overwey/Tilford fabric (Tomber & Dore 1998, 146, fabric OVW WH) were recorded separately, no attempts were made to subdivide the greyware group given the proximity of Alice Holt industry, its known dominance over local markets (Millett 1986, 76) and the highly variable nature of its products (Lyne & Jefferies 1979, 18). The small number of grog-tempered sherds may also include Alice Holt products (*ibid.*, 18, fabric G) while others probably belong within the Hampshire grog-tempered tradition (Tomber & Dore 1998, 139, fabric HAM GT), also found in small amounts within the core of the Roman town (Millett 1986, 81).

A relatively wide range of coarseware vessel forms was observed (Appendix 1), encompassing all standard vessel classes; jars, bowls, dishes as well as a miscellaneous group comprising storage jar, strainer, lid and flagon forms. Most have parallels within the repertoire of the late Alice Holt potters (Lyne & Jefferies 1979, 34–51) but only three forms (everted rim jars, beaded and flanged bowls and shallow, plain rimmed dishes; *ibid.*, classes 3B, 5B and 6A respectively) occur in any quantity (Table 3). The dominance of the everted rim jars is unsurprising, but is almost certainly enhanced by the tendency for the rims of these vessels to break into a larger number of smaller pieces than the thicker, heavier rims of the contemporary bowl and dish forms. This is confirmed by the average sherd weight of the rims from these forms (*c.* 14g for the everted rim jars compared with 31g and 29g for the beaded and flanged bowls and shallow, plain rimmed dishes). Only 10% of the greyware sherds (14% by weight) were decorated, mostly with burnished or combed line motifs.

*Distribution*

The greatest quantities of pottery were found in the two parallel ditches (Table 1) but, with the exception of one small, thin-walled oxidised ware sherd from the primary fill (context 22) of segment 19 of Ditch 11, all the sherds were from the secondary and tertiary fills and thus relate to the period when the ditches had gone out of use and were filling up. The wider southern ditch (13) was far more prolific than the northern one (Table 1), and the pieces significantly larger (average weight 18g compared with 11.5g). The fine- and specialist-wares, however, were better represented in Ditch 11, where they accounted for 9% of the sherds (10% by weight) compared with 5% and 4% respectively in Ditch 13 and in the assemblage as a whole, but this discrepancy may just be a feature of the smaller (less representative) assemblage size. Otherwise, the composition of the two assemblages is remarkably similar (Tables 2 and 4). Jar forms are dominant in both ditches (at around 50% of the coarseware vessel forms; Table 4), with bowls (*c.* 18–22%) slightly more frequent than dishes (*c.* 15–20%) and the range of miscellaneous forms, representing around 10% of the total. Most are of late 3rd or perhaps early 4th century date, although both contained a few residual early Romano-British sherds as well as a small number characteristic of the period after *c.* 320/330, e.g. the Overwey/Tilford and grog-tempered wares, the stamped Oxfordshire colour-coated ware bowl (Young 1977, 162, type C59), rilled, hooked rim jars (Lyne & Jefferies 1979, class 3C), convex-sided plain rimmed dishes (*ibid.*, class 6A9–11) and triangular-rimmed dishes (*ibid.*, class 6C). However, the handful of medieval peg-hole roof tile fragments found in the upper fills of Ditch 11 (segments 1 and 19) and Ditch 13 (segments 31 and 39) may indicate that more of this late Romano-British material is in fact residual.

Only one sherd, a scrap from the rim of a greyware everted rim jar, was found within the

*Table 4* Vessel forms from Ditches 11 and 13 quantified by the number of examples, weight and EVEs

| | *Ditch 11* | | | *Ditch 13* | | | |
|---|---|---|---|---|---|---|---|
| *Form* | *No.* | *Wt. (g)* | *EVE* | *No.* | *Wt. (g)* | *EVE* | *Class* |
| *Finewares* | | | | | | | |
| form 37 | 1 | 19 | 0.06 | - | - | - | bowl |
| Young C8 | - | - | - | 1 | 19 | 1.00 | flagon |
| Young C45 | - | - | - | 3 | 58 | 0.26 | bowl |
| Young C51 | - | - | - | 1 | 24 | 0.14 | bowl |
| Young C59 | 1 | 37 | 0.15 | - | - | - | bowl |
| Young C97 | - | - | - | 1 | 17 | 0.10 | mortaria |
| *Finewares subtotal* | *2* | *56* | *0.21* | *6* | *118* | *1.5* | |
| *Coarsewares* | | | | | | | |
| L&J early 4 | 1 | 46 | 0.12 | - | - | - | jar |
| L&J 1 | - | - | - | 5 | 154 | 0.79 | jar |
| L&J 1A/B | 4 | 75 | 0.48 | 6 | 382 | 1.67 | jar |
| L&J 3B | 5 | 106 | 0.67 | 58 | 1210 | 6.99 | jar |
| L&J 3C | 1 | 20 | 0.12 | 7 | 151 | 0.81 | jar |
| L&J 4 | - | - | - | 1 | 80 | 0.28 | jar |
| L&J 5A | - | - | - | 1 | 31 | 0.10 | jar |
| R102 | 3 | 52 | 0.33 | - | - | - | jar |
| R105 | | - | - | 2 | 26 | 0.17 | jar |
| *Jars subtotal* | *14* | *299* | *1.72* | *80* | *2034* | *10.81* | |
| L&J 5B | 4 | 102 | 0.39 | 34 | 1275 | 4.32 | bowl |
| L&J 5D | - | - | - | 1 | 39 | 0.05 | bowl |
| L&J 5E | 2 | 55 | 0.19 | - | - | - | bowl |
| R103 | - | - | - | 1 | 6 | 0.09 | bowl |
| *Bowls subtotal* | *6* | *157* | *0.58* | *36* | *1320* | *4.46* | |
| L&J 6A | 3 | 95 | 0.40 | 38 | 1513 | 3.59 | dish |
| L&J 6C | 1 | 52 | 0.16 | - | - | - | dish |
| *Dishes subtotal* | *4* | *147* | *0.56* | *38* | *1513* | *3.59* | |
| L&J 1C | - | - | - | 1 | 983 | 0.10 | storage jar |
| L&J 10 | - | - | - | 4 | 121 | 0.58 | storage jar |
| L&J 5C | 1 | 36 | 0.09 | - | - | - | strainer |
| L&J 7 | 1 | 7 | 0.06 | 6 | 221 | 1.04 | lid |
| L&J 8 | 1 | 11 | 0.20 | 2 | 75 | 1.30 | flagon |
| *Miscellaneous subtotal* | *3* | *54* | *0.35* | *13* | *1400* | *3.02* | |
| *Coarsewares subtotal* | *27* | *657* | *3.21* | *167* | *6267* | *21.88* | |
| *Overall total* | *29* | *713* | *3.42* | *173* | *6385* | *23.38* | |

post-holes forming Structure 77, and it can only be assigned a generalised late 3rd/4th century date. Similarly, the material from Pit 1007 cannot be more precisely dated; recognisable forms include everted rim jars in grog-tempered and sandy greyware, a shallow, plain rimmed dish and part of a bowl copying samian form 31 in Oxfordshire red-slipped ware, a type made *c.* 270–400+ (Young 1977, 158).

*Discussion*

Overall, the composition of the assemblage is directly comparable with that from the core of the settlement in the period after *c.* 275 (Millett 1986, 89) although the samian and a handful of earlier form types, such as the single bead rim jar (Lyne & Jefferies 1979, 28–9, class 4) sherd from Ditch 11 (segment 19, context 20) and three flat- or triangular- rimmed bowl sherds from Ditch 13 (segment 31, contexts 30 and 35) indicate small residual elements. The proportion of fine- and specialist- wares remained constant at 5% of the assemblage (4% by weight), while the New Forest and Oxfordshire products which dominated this group continued to show the complementary rather than competitive nature of the supply from these industries (*ibid.*, 90). Although Ditches 11 and 13 seem to have been open into the middle decades of the 4th century, if not beyond (indicated by the pieces of medieval roof tile), the relatively low proportions of these 4th-century elements within their assemblages suggests that the bulk of the pottery, like the coins, belongs within the later 3rd century, perhaps extending into the early 4th century. Similarly, there was little evidence for the highly-decorated, poorly-finished Alice Holt vessels identified by Lyne and Jefferies as characteristic of the later 4th century and no additional pieces of the post-Roman handmade wares found intrusively in the tops of features in the core of the Roman town (Millett 1986, 81) occurred here. The absence of South-east Dorset Black Burnished ware is likely to be the result of smaller assemblage size, it being present in only small amounts in the previous, much larger collection (*ibid.*, 76, table 20),

There is little within the assemblage to suggest the functional range of the vessels present or to support the environmental evidence for brewing on the site, and most vessels were probably used for a variety of purposes. One unusual feature is the high frequency of sherds with post-firing, scratched graffiti. Nine examples were recognised: 1 for every 204 sherds in the assemblage. Springhead, Kent (Seager Smith *et al.* 2011) and Higham Ferrers, Northamptonshire (Timby 2007), both religious sites where graffiti was considered to be unusually common, showed significantly lower rates; 1:1578 and 1:865 sherds respectively. All are on greyware vessels from Ditch 13. The sherds include three everted rim jar rims, two with two parallel, diagonal lines and one with an X scratched into the inner surface of the rim and two jar bases, one with a feather motif scratched into the external surface and the other with an X on the underside as well as body sherds with parallel grooves, a divided square or rectangle, X and feather motifs. Marks like these are already known within the Roman town (e.g. Millett 1986, fig. 47, 1, fig. 54, 17, fig. 61, 76, fig. 63, 84) while the feather motif has parallels among vessels from the late Roman cemeteries at Lankhills, Winchester (Wessex Archaeology 2009b) and Lazenay, Bourges, central France (Fourré 2007, 406, fig. 5.2–3). Such abstract motifs are generally interpreted as illiterate marks of ownership (Evans 1987; Biddulph 2006), although alternatives include numbers, indications of capacity, weight or intended contents and apotropaic marks designed to charm the pot or to protect its contents (Going 1987, 108), although the reasons for the frequency of graffiti here remains unknown.

*Ceramic building material* by Rachael Seager Smith

The ceramic building material (CBM) is predominantly of Romano-British date. No detailed analysis was undertaken, the pieces from each context were simply quantified by chronological period (Table 5), noting the presence of any identifiable fragments (e.g. *tegula*, *imbrices*, peg-hole roof tiles). Although the pieces survive in a fresh condition, their relative scarcity and small size (average weight 88g) indicate that they represent dumped material and were never directly associated with Structure 77.

*Table 5* Ceramic building material: overall quantities by period

| | | *Roman* | | *Medieval* | | *Post-med* | | *Undated* | | *Total* | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| *Feature* | *Segment* | *No.* | *Wt. (g)* | *No.* | *Wt. (g)* | *No.* | *Wt. (g)* | *No.* | *Wt. (g)* | *No.* | *Wt. (g)* |
| Ditch 11 | 1 | 5 | 619 | 2 | 130 | – | – | – | – | 7 | 749 |
| | 15 | 57 | 1968 | – | – | – | – | – | – | 57 | 1968 |
| | 19 | 12 | 555 | 2 | 155 | – | – | – | – | 14 | 710 |
| | 23 | 2 | 84 | – | – | – | – | – | – | 2 | 84 |
| *subtotal* | | *76* | *3226* | *4* | *285* | – | – | – | – | *80* | *3511* |
| Ditch 13 | 27 | 34 | 4372 | – | – | – | – | – | – | 34 | 4372 |
| | 31 | 36 | 5680 | 4 | 135 | – | – | – | – | 40 | 5815 |
| | 39 | 41 | 2743 | 6 | 208 | – | – | – | – | 47 | 2951 |
| | 208 | 2 | 117 | – | – | – | – | – | – | 2 | 117 |
| | 1006 | 16 | 2312 | – | – | – | – | – | – | 16 | 2312 |
| *subtotal* | | *129* | *15224* | *10* | *343* | – | – | – | – | *139* | *15567* |
| Pit 1007 | | 2 | 424 | – | – | – | – | – | – | 2 | 424 |
| Modern ditch | | – | – | – | – | 3 | 21 | – | – | 3 | 21 |
| Unstratified | | 4 | 734 | – | – | – | – | 1 | 48 | 5 | 782 |
| *Total* | | *211* | *19608* | *14* | *628* | *3* | *21* | *1* | *48* | *229* | *20305* |

The CBM was concentrated in the secondary and tertiary fills of Ditches 11 and 13, although a few pieces of medieval peg-hole roof tiles present in these contexts may indicate the residuality of all the Romano-British artefacts from these layers. Identifiable Romano-British pieces include *tegulae*, *imbrices* and *tubuli*, the latter often with combed wavy line keying, as well as fragments of the thinner, smaller brick types (e.g. *bessalis*, *pedalis* and *lydion*) used in hypocausts, floors and the lacing or bonding courses of walls (Brodribb 1987, 34–40). Five flat fragments have the concentric, semi-circular, finger-smeared signatures typically found on *tegulae* (*ibid.*, 99) while a flat corner fragment from a secondary fill of Ditch 11 (context 20) preserves part of a small, pre-firing nail hole. One piece of *tegula* from Ditch 13 (segment 1006) is tentatively dated to *c.* 160–260 (Warry 2006, 3 and 63, cut-away type C, fig. 1.2).

*Worked bone* by Jessica M Grimm

Six more-or-less complete bone pins were recovered, as well as three shank fragments. It is thought that these pins were used as hairpins rather than for fastening clothing, although the latter function cannot be ruled out (Crummy 1983, 19). Although the pins do not show original bone surfaces or articulations, it can be assumed that they were fashioned out of the thick walls of adult large mammal long bones. The irregular faceting, particularly on the shanks of the pins, indicates that they were carved using knives and not lathe-turned, which corresponds to evidence from other sites, such as Colchester (*ibid.*, 19).

Using Crummy's Colchester typology (1983, 19–25), these six pins fall into four types: type 3, with more or less spherical heads (two examples; Fig. 8.1–2), type 4, with faceted cuboid heads (one example; Fig. 8.3), type 5, with reel(s) beneath a conical or ovoid head (two examples, Fig. 8.4–5), and one miscellaneous type, with a flat, carved head (Fig. 8.6). Pins of types 3–5 are known from elsewhere in Neatham (Millett & Graham 1986, figs 86 and 88). At Colchester, the dating for these pin types lies entirely within the late Romano-British period (3rd–4th century; Crummy

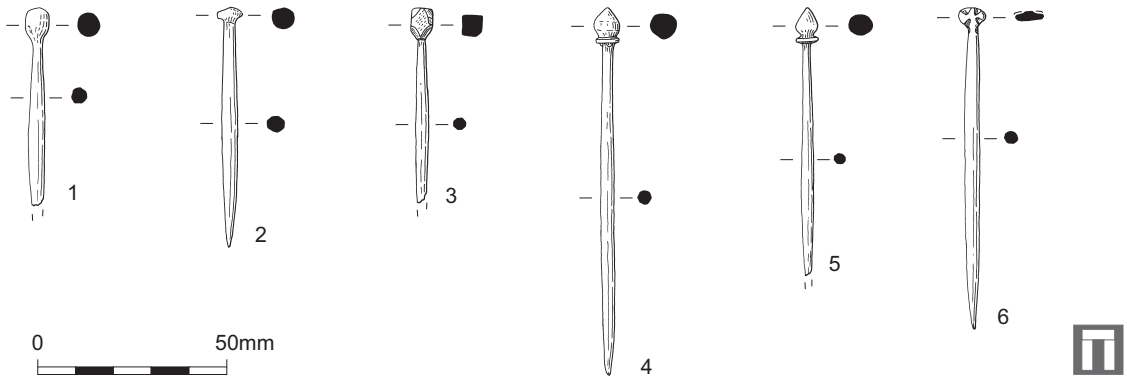


Fig 8 Bone pins

1979; 1983, 19–25), and this accords with the previous evidence from Neatham (Millett & Graham 1986, 124–30).

*Animal bone* by Jessica M Grimm

The small but well preserved animal bone assemblage came mainly from Ditches 11 and 13. Taphonomic analysis showed that at least part of the assemblage had been re-worked and nearly a fifth of all the bones shows gnawing marks. This indicates that the ditches were filled with bone waste that had been lying around for some time prior to deposition. The roasting of meat and the possible burning of waste is demonstrated by partly scorched and calcined bone fragments.

For each animal bone fragment, the following characteristics were recorded where applicable: species, bone element and side, fusion (Habermehl 1975), mandible wear stages (following Habermehl 1975; Grant 1982; Jones 2006), sex and measurements (Von den Driesch 1976). For the distinction between sheep and goat, the data published by Prummel & Frisch (1986) and Payne (1985) were used. The positions of butchery marks (following Lauwerier 1988) and burnt areas (Wahl 1981) were described. Evidence of gnawing, condition (very poor, poor, fair, good and excellent) and completeness (zonation after Serjeantson 1996) was also recorded. Conjoining fragments were counted as one bone in order to minimise distortion. Fragments that could not be identified to species or family were recorded as small, medium or large mammal, bird or fish. The database with details on each analysed bone fragment can be found in the archive.

*Species proportions*

According to the *number of individual specimens* (NISP) (Table 6), cattle bones are most common, followed by sheep and goat, and small proportions of horse and pig. Heavy scavenger gnawing means that it is likely that the assemblage is biased towards the larger animals and their robust bones. Different feature types produce different species proportions with sheep/goat and pig generally being relatively more numerous in pits and cattle and horse being more numerous in ditches (Maltby & Coy 1991, 100). All the material came from the two ditches and thus this might further favour cattle.

The proportions of cattle, sheep/goat and pig fit well with the pattern observed at rural settlements in Hampshire and more widely in Britain (King 1999, 180), with pig content too low and sheep/goat too high for a typical Roman town assemblage. A dominance of cattle over sheep/goat was noted elsewhere in Neatham (Done 1986) and at the shore fort at Portchester Castle (Grant 1975), possibly reflecting Roman eating habits, as well as at the extra-mural settlement at Silchester (Maltby 1984) and the rural settlements of Brighton Hill South (Maltby 1995a) and Winnall Down (Maltby 1985) (Table 7). The dominance of

*Table 6* Fauna list per period according to NISP, BW and MNI

| | *NISP* | *BW* | *MNI* |
|---|---|---|---|
| *Mammals* | | | |
| horse | 15 | 807 | 1 |
| cattle | 194 | 6690 | 6 |
| sheep | 5 | 120 | |
| goat | 1 | 18 | 11 |
| sheep/goat | 142 | 794 | |
| pig | 29 | 237 | 2 |
| dog | 9 | 128 | 2 |
| cat | 31* | 30 | 1 |
| *Birds* | | | |
| domestic fowl | 4 | 3 | 2 |
| *Fish* | | | |
| sea bream | 1 | 0 | - |
| bird | 1 | 0 | - |
| fish | 10 | 0 | - |
| large mammal | 117 | 419 | - |
| medium mammal | 115 | 96 | - |
| small mammal | 3 | 1 | - |
| *Total* | *677* | *9343* | *25* |

sheep/goat seems to be related to settlement type (i.e. rural settlement and hillfort), and the relatively high proportion of sheep/goat in this assemblage, coming from the outskirts of a small Roman town, probably reflects the husbandry practices in its hinterland.

Cattle, followed by sheep/goat and horse, also lead the ranking in terms of *bone weight* (BW) (Table 6), and as this measure is correlated to live weight, beef was probably more important than mutton, pork or horse meat. The *minimum number of individuals* (MNI) suggests that sheep/goat, followed by cattle were the most numerous animals kept (Table 6). Both sheep and goat are present, as was the case for Portchester Castle (Grant 1975, 397), Danebury (Grant 1991, 452), Winnall Down and Micheldever Wood (Maltby & Coy 1991, 102). All equid teeth indicated horses, not donkeys or crossbreeds. Apart from one sea bream caudal vertebra, no wild species were present in the material, suggesting that the site's occupants relied mainly on their livestock for their protein needs.

*Age and sex*

Bearing in mind the small number of ageable bones, and the fact that there might be a bias towards the bones of mature animals, cattle seem to have been killed primarily at over 36 months of age. This is consistent with the results from the rural settlements at Brighton Hill South (Maltby 1995a, 53), Balksbury Camp (Maltby 1995b, 85) and Suddern Farm

Table 7 Comparison of cattle, sheep/goat and pig proportions with other Late Iron Age and Romano-British sites in Hampshire

| *Site* | *Period* | *Preservation* | *Type* | *NISP* | *Cattle* | *Sheep/goat* | *Pig* |
|---|---|---|---|---|---|---|---|
| Danebury | Late Iron Age | very good | hillfort | 34903 | 7068 | 21283 | 4230 |
| Twyford Down | Late Iron Age/early Romano-British | ? | rural settlement | 396 | 58 | 274 | 18 |
| Brighton Hill South | Late Iron Age/Romano-British | poor | rural settlement | 2595 | 948 | 732 | 136 |
| Houghton Down, Stockbridge | Late Iron Age/Romano-British | good | rural settlement | 1696 | 391 | 876 | 94 |
| Danebury | Early Romano-British | very good | rural settlement | 1621 | 417 | 716 | 88 |
| Owslebury | Early Romano-British | good | rural settlement | ? | 2484 | 2549 | 980 |
| Suddern Farm | Early Romano-British | good | rural settlement | 1829 | 312 | 1289 | 58 |
| Neatham (Millett & Graham) | Romano-British | good | small town | 2013 | 1070 | 492 | 148 |
| Winnall Down, Winchester | Romano-British | poor | rural settlement | 2192 | 831 | 831 | 130 |
| Balksbury Camp | Late Romano-British | mixed | rural settlement | 846 | 299 | 383 | 38 |
| Portchester Castle | Late Romano-British | good | shore fort | 18918 | 10774 | 3212 | 2654 |
| Silchester Defences | Late Romano-British | good | extra mural settlement | 364 | 164 | 73 | 91 |
| Holybourne (Neatham) | Late Romano-British | good | small town | 431 | 194 | 148 | 29 |

(Hamilton 2000, 184), the extra-mural settlement of Silchester (Maltby 1984, 202) and the shore fort at Portchester Castle (Grant 1975, 395). Danebury showed high proportions of both very young animals and mature ones, with little evidence for subadults (Grant 1991, 464). The small assemblage from Millett and Graham's excavation at Neatham showed a variety of age groups (Done 1986, 142).

The limited ageing data available for sheep/goat indicate the presence of adult and subadult animals. The presence of a variety of age groups among the sheep/goat population was also seen at Brighton Hill (Maltby 1995a, 53), Balksbury Camp (Maltby 1995b, 111), Portchester Castle (Grant 1975, 397–8), Danebury (Grant 1991, 455) and Suddern Farm (Hamilton 2000, 181). Mainly subadult sheep were killed at Silchester (Maltby 1984, 204), and from the earlier excavations at Neatham (Done 1986, 143), emphasising their role as meat producers.

Pigs were killed at the optimum slaughter age of just below two years, as at Portchester Castle (Grant 1975, 399). This seems to be a year older than most pigs from Brighton Hill South (Maltby 1995a, 54). One canine tooth was derived from a boar.

All horse bones were fused and no bones of subadult or juvenile animals were found. Two dog mandibles fell within the young and intermediate categories as devised by Horard-Herbin (2000). The limited metric data indicates that the cattle, sheep/goat, pig and horse were of similar height as those from other Roman sites. Apart from some minor dental health problems in cattle, sheep/goat and dog, no pathologically changed bones were found.

*Butchery and deposition*

The presence of most parts of the cattle and sheep/goat skeletons indicate that they were processed on or near the site, and this may also apply to pig and horse. The numerous butchery marks seen on the cattle and sheep/goat bones were mainly inflicted by cleavers. The use of a cleaver to fillet the scapula and the long bones is indicative of the Roman way of butchery (Maltby 1995a, 55).

The butchery practices at the site were similar to those noted during the earlier excavations at Neatham (Done 1986, 144), as well as at Portchester Castle (Grant 1975, 389–92) and Suddern Farm (Hamilton 2000, 186). Dumps of primary butchery waste at Silchester are evidence of the Roman industrial way of slaughtering cattle (Maltby 1984, 202, 210). More traditional ways of butchering, in which mainly knives were used (Maltby 1995a, 55), were seen at Brighton Hill South (Maltby 1995a, 55) and Balksbury Camp (Maltby 1995b, 85).

Some chop marks indicate the removal of the horn cores for either reasons of skin or horn working. A cattle horn core deposit at Brighton Hill indicated horn working or tanning at the rural settlement. Skulls and horn cores from Portchester Castle also showed chop marks (Grant 1975, 389). The paucity of horn cores at Silchester Defences led Maltby (1984, 200) to believe that these were removed and transported off site for working.

The animal bone assemblage consists of a mix of butchery and kitchen waste of mainly domesticated animals. Spatial analysis showed that cattle dominated in both ditches, but possibly more so in the Ditch 11. Analysis of the skeletal parts of cattle, sheep/goat and pig per feature type shows that leg bones dominated by weight in Ditch 11, while elements from the head and feet were better represented in Ditch 13. A partial adult cat skeleton in one of the postholes of Structure 77 may represent a foundation deposit.

## ENVIRONMENTAL EVIDENCE

*Charred plant remains* by Chris J Stevens

Seventeen bulk environmental samples were taken from the ditches, the post-holes of Structure 77 and the adjacent pit 1007. On the basis of the assessment (Wessex Archaeology 2009a), four of the richest samples were selected for detailed analysis – two from Ditch 13 (from segment 27 at the south-west and segment 39 at the north-east), one from Ditch 11 (segment 15 at the north-east), and one from Pit 1007 – although the other samples assessed are also considered below.

The samples were processed by standard flotation methods; the flots were retained on

a 0.5 mm mesh, residues fractionated into 5.6 mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6 mm) were sorted, weighed and discarded. The samples were then sorted, charred material extracted, identified where possible and quantified (Table 8). The nomenclature in all cases follows that of Stace (1997) for wild plants and the traditional nomenclature given in Zohary & Hopf (2000, 28, tables 3 and 65), for cereals.

*Results*

Many of the ditch samples, and that from Pit 1007, were relatively rich in charred cereal remains, but those from the Structure 77 postholes had almost no charred remains, with little other than single cereal grains and/or glume bases and occasional charred fragments of hazelnut shell. All the samples were very similar in composition comprising mainly cereal grains and glume bases of hulled wheat (*Triticum spelta/dicoccum*). The glume bases are often poorly preserved, but where better preserved only spelt wheat (*T. spelta*) was identified. Smaller numbers of hulled barley grains (*Hordeum vulgare*) are present, but no barley chaff or rachis fragments.

Grain far outnumbered chaff in the samples from both Pit 1007 and segment 27 of Ditch 13; this was also true of the assessed samples from segments 1006 and 31 of the same ditch, which lie between the pit and segment 27. Segment 39, however, to the immediate north-east, was distinctly richer in chaff than grain, as was the sample from the north-east end of Ditch 11 (segment 15).

The most significant feature of all the samples is the high number of germinated grains, mainly of spelt wheat, although most of the barley grain had also germinated. This is evident either through the presence of the acrospire or sprout (the elongated coleoptile/embryo) on the grain or, as in the majority of cases, the groove in the dorsal surface of the grain left by the acrospire. Although several grains of hulled wheat show few signs of germination, most are too degraded to allow such identification. Many have split in two, probably due the extension of the acrospire (sprout) along the dorsal surface of the grain causing structural weakness. Additionally, the insides of many of the grains are hollow, an indicator of germination in charred grain caused by the conversion of starch to sugars. As such, it is probable that the vast majority come from germinated grain. Detached acrospires (sprouts) were less frequent in the samples although, as they are fragile, many will be destroyed by charring. No other cereal remains, or indeed crop plants, were recorded in the analysed samples other than a single cereal culm node.

Most of the remaining charred seeds are of wild species probably growing as weeds with the crops in the field, being inadvertently collected and charred with the grain during processing. They include common large seeded arable weeds such as corncockle (*Agrostemma githago*), vetch/tare (*Vicia/Lathyrus* sp.), ribwort plantain (*Plantago lanceolata*), cornflower/knapweed (*Centaurea* sp.), and oats (*Avena* sp.). Smaller to intermediate sized seeds included dock (*Rumex* sp.), sheep's sorrel (*Rumex acetosella*), cinquefoil/tormentil (*Potentilla* sp.), black medick (*Medicago lupulina*), clover (*Trifolium* sp.), basil thyme (*Clinopodium acinos*), red bartsia (*Odontites vernus*), perennial rye grass (*Lolium* sp.) and annual meadow grass/cats tails (*Poa/Phleum* sp.).

The range of weed seeds indicates a fairly wide range of soils under cultivation. Several, taken together, can be associated with the cultivation of local drier more calcareous soils, for example black medick, red bartsia, ribwort plantain and basil thyme. There are others though which suggest the cultivation of wetter, possibly even seasonally flooded fields, such as common spikerush (*Eleocharis palustris*), sedge (*Carex* sp.) and buttercup (*Ranunculus* sp.). This range of species is similar to that seen at Balksbury (de Moulins 1995), the most significant absence being that of stinking mayweed (*Anthemis cotula*), an indicator of the cultivation of heavy clay soils.

The only species which are not likely to have been brought in as weeds of the crop are fragments of hazelnut shell (*Corylus avellana*) and a pinule of bracken (*Pteridium aquilinum*). The former is more likely to relate to nuts gathered from the wild for food, while the latter may come from dried bracken collected from the local environment for use as tinder/fuel, bedding or packing. A few mineralised

*Table 8* Charred plant remains

| *Feature* | | *Ditch 11* | *Ditch 13* | | *Pit 1007* |
|---|---|---|---|---|---|
| *Segment* | | *15* | *27* | *39* | |
| *Context* | | *18* | *28* | *29* | *1008* |
| *Sample* | | *1* | *13* | *7* | *2* |
| *Size (l)* | | *20* | *9* | *20* | *10* |
| *Flot size (ml)* | | *120* | *120* | *60* | *60* |
| *Cereals* | | | | | |
| *Hordeum vulgare* L. *sl* (germinated hulled grain) | Barley | 7 | 34 | 3 | 20 |
| *H. vulgare* L. *sl* (grain) | Barley | 3 | – | 2 | 2 |
| *Triticum spelta* L. (glume bases) | Spelt wheat | 3 | 4 | 8 | 6 |
| *T. dicoccum/spelta* (grain) | Emmer/spelt wheat | 12 | 175 | 5 | 94 |
| *T. dicoccum/spelta* (germinated grain) | Emmer/spelt wheat | 16 | 153 | 15 | 53 |
| *T. dicoccum/spelta* (spikelet fork) | Emmer/spelt wheat | 4 | 4 | 2 | 0 |
| *T. dicoccum/spelta* (glume bases) | Emmer/spelt wheat | 65 | 42 | 74 | 28 |
| Cereal indet. (grains) | Cereal | 3 | 35 | 5 | – |
| Cereal frag. indet. (est. whole grains) | Cereal | 7 | 158 | 15 | – |
| Cereal (germinated coleoptile) | Cereal | 7 | 18 | 3 | 5 |
| Cereal indet. (culm node) | Cereal | – | – | 1 | – |
| *Species* | | | | | |
| *Pteridium aquilinum* Gled. Ex Scop. (pinules) | Bracken | 1 | – | – | – |
| *Ranunculus* sp. subg *Ranunculus* arb L. | Buttercup | 1 | cf.1 | – | 1 |
| *Corylus avellana* L. (fragments) | Hazel | 3 | 21 | 18 | 7 |
| Chenopodiaceae L./Caryophyllaceae L. | Goosefoot/campion | – | – | – | 1m |
| *Agrostemma githago* L. | Corn cockle | – | – | – | 1 |
| *Rumex* sp. L. | Docks | 8 | 1 | 7 | 13 |
| *Rumex acetosella* L. group | Sheep's sorrel | – | – | – | 1 |
| *Brassica* L. sp. | Small indets. 1-2mm | – | – | – | 1 |
| Rosaceae (seed indet.) | Bramble, rose etc. thorns | – | – | – | cf.1 |
| Potentilla sp. L. | Cinquefoil | – | – | – | cf.1 |
| *Vicia* L./*Lathyrus* sp. L. | Vetch/pea | – | 2 | 2 | – |
| cf. Lathyrus sp. L. | Grass-pea | – | 1 | – | 1 |
| *Medicago lupulina/Trifolium* sp. L. | Black medick/clover | – | – | 7 | 6 |
| *Medicago lupulina* L. | Black medick | – | – | 1 | – |
| *Trifolium* sp. L. | Clover | 1 | 1 | 3 | 4 |
| *Clinopodium* cf. acinos (L.) Kuntze | Basil thyme | – | – | 2 | cf.1 |
| *Plantago lanceolata* L. | Ribwort plantain | – | – | 2 | 6 |
| *Odontites vernus* (Bellardi) Dumort | Red bartsia | – | – | 2 | – |
| *Centaurea* sp. L. | Knapweed | – | – | 2+cf.1 | 3 |
| *Eleocharis cf. palustris* (L.) Roem. & Schult. | Common spike-rush | – | 3 | 1 | – |
| *Carex* sp. L. lenticular | Sedge flat seed | – | – | – | 2 |
| *Carex* sp. L. trigonous | Sedge trigonous seed | – | – | 1 | – |
| Poaceae (mid-large indet.) | Med. to large grass seed | – | – | 5 | – |
| Poaceae (small indet.) | Small grass seed | 6 | – | – | 14 |
| POACEAE (culm node) | Grass culm node | – | 1 | – | 3 |
| POACEAE (culm internode) | Grass stem | – | – | – | 2 |
| *Lolium perenne* L. | Rye grass | – | 3 | – | – |
| *Poa/Phleum* sp. L. | Meadow grass/cats'-tails | – | 8 | 7 | 7 |
| *Avena* sp. L. (grain) | Oat grain | – | 10 | 2 | 2 |
| *Avena* sp. L. (germinated grain) | Oat grain germinated | – | 1 | – | – |
| *Avena* sp. L. (awn) | Oat awn | 1 | 1 | 2 | – |
| *Avena* L./*Bromus* L. sp. | Oat/brome | 1 | – | – | – |
| cf. *Danthonia decumbens* (L.) DC. | Heath-grass | – | – | – | 2 |
| Seed indet. | | 1+2m | – | 2 | 3+1m |

seeds were also recovered, although these were rare and in most cases not identifiable.

*Discussion*

The high presence of germinated grain can be related to malting and since few grains show no sign of germination it is reasonable to suggest that most of the deposits derived from malting waste. Neatham can be added, therefore, to a growing number of Romano-British sites in southern England with good evidence for malting.

As dehusking damages the grain's embryo, the grain must be malted in the spikelet in the case of spelt wheat, or the hulls in the case of barley. Malting would have involved steeping the spikelets in water for up to 2 days, then laying them out on the malting floor for a further 4–6 days to germinate, during which time they would have been regularly turned over to ensure even germination and to stop them overheating. Germination was halted by heating, probably by placing the sprouted spikelets on a cloth or raised wooden floor above an oven (*cf.* Andrews 1995, 85).

In modern malting, the germination of barley is halted when the acrospires are ¾ to ⅞ of the grain's length (Briggs 1998). Although acrospires were absent in most of the grains examined, most of the grooves left were ½-¾ the length of the grain, indicating acrospires probably of length similar to those used within modern malt. The presence of germinated barley is a common feature of other sites with evidence of malting (e.g. Fryer 2004, Stevens 2013), but it is always found in smaller quantities than spelt, raising the question of whether it was deliberately malted alongside spelt wheat, or was a contaminant of the crop.

At many sites with evidence for malting, glume bases considerably outnumber grains, e.g. Springhead, Kent (Stevens *et al.* 2011; Campbell 2006) and Weedon Hill, Buckinghamshire (Stevens 2013), Catsgore, Somerset (Hillman 1982), Mildenhall, Suffolk (Fryer 2004) and Bicester, Oxfordshire (Martin 2011). The most probable explanation is that the material represents the waste from the dehusking of malted spikelets, probably used to fuel the drying ovens (Fryer 2004; Stevens *et al.* 2011; van der Veen 1989). The grain-rich samples from the Depot site, therefore, suggest either that charred dehusked grains are present or, more probably, that many of the grains are from charred spikelets that have fallen into the oven or been exposed to too much heat when being dried to stop malting. In this respect it is noted that deposits from the drying oven at Weedon Hill were richer in grain (Stevens 2013).

The grain-rich deposits came from Pit 1007 and the *c.* 10m length of Ditch 13 adjacent to Structure 77. However, no malting ovens, as seen at Weedon Hill (Wakeham & Bradley 2013) and Mildenhall (Bales 2004), were found in this area, or any other features identifiable as related to malting, such as the stone-lined steeping tanks and run-off channels at Weedon Hill and potentially also at Bicester (Martin 2011). Depending on how the drying is done, it is possible that the malted grain itself may contain charred spikelets; if so, these grain-rich deposits may represent waste from the malting floor, suggesting a possible function for Structure 77. In this respect it might be noted that at Beck Row, Mildenhall, Suffolk, the malting floor was richer in grain than the oven itself (Fryer 2004).

The lower levels of chaff in the north-eastern segments of Ditch 11 (segment 15) and Ditch 13 (segment 39) might indicate low level waste from the processing of malted spikelets, involving first pounding them, and then winnowing and sieving them to separate the glume bases, chaff and acrospires from the malted grain. At Springhead, it was noted that the processing of spelt grain was slightly different for brewing to that for milling, generating different types of waste (Stevens *et al.* 2011). The main difference was that grain for brewing was less likely to have had the larger weed seeds removed as these would be less of a problem within the later stages of the brewing processes compared with the production of flour.

*Charcoal* by Ruth Pelling

Of the deposits selected for examination of their charred plant remains, two were chosen for the identification of charcoal; Ditch 13 (segment 39, context 29) and adjacent Pit

*Table 9* Charcoal present in selected samples

| | | *Feature* | *Ditch 13* | *Pit 1007* |
|---|---|---|---|---|
| | | *Segment* | 39 | |
| | | *Context* | 29 | 1008 |
| | | *Sample* | 7 | 2 |
| | | *Size (l)* | 20 | 10 |
| | | *Charcoal vol >2mm (ml)* | 20 | 23 |
| *Quercus* sp. | Oak, heartwood | | 5 | – |
| *Quercus* sp. | Oak | | 81 | 98 |
| *Prunus spinosa* | Sloe | | 2 | – |
| Pomoideae | Hawthorn/apple/pear etc | | 9 | – |
| cf. *Corylus avellana* | Hazel | | – | 1 |
| Indeterminate | | | – | 1 |
| *Total fragments identified* | | | 100 | 100 |

1007. It was of interest to explore the relationship between the two features and possible fuel use associated with malting activity as indicated by the charred plant remains.

Fragments of charcoal were extracted from the 2mm and 4mm flots. A random selection of 100 fragments (including all fragments retained in the 4mm sieve) was selected for identification. Charcoal fragments from each sample were fractured to expose a fresh transverse section (ts) and sorted into groups based on anatomical features under a binocular microscope at magnifications of up to x40. Representative fragments were selected for detailed examination. These were fractured to expose a tangential (tls) and radial (rls) longitudinal surface and mounted on to a slide using modelling clay (methods follow Leney & Casteel 1975; Gale & Cutler 2000). Slides were examined using an incident-light microscope at magnifications of up to x400. Identification was made according to anatomical characteristics described by Schweingruber (1990) and Hather (2000). Identification was to the highest taxonomic level possible, usually that of genus, while nomenclature follows Stace (1997).

The results are summarised in Table 9. Both samples produced in excess of 100 fragments of charcoal measuring just over 20ml in volume. The 100 fragments examined for each formed approximately 10ml, so represented about half of the assemblage. In both cases the assemblage is dominated by fragments of oak (*Quercus* sp.). Other taxa present are blackthorn (*Prunus spinosa*), Pomoideae, which includes hawthorn (*Crataegus*), apple (*Malus*), pear (*Pyrus*) and whitebeam (*Sorbus*). A fragment of possible hazel (*Corylus avellana*) was identified from Pit 1007.

In general the charcoal is too fragmented to enable identification of the part of the tree from which it derived. Five fragments of oak were identified as heart wood, although it was not possible to identify the fragments as being from juvenile round wood, or from the centre of larger pieces.

Oak clearly dominates both charcoal assemblages and is likely to have been the dominant fuel at the site. The possibility that both deposits also contain malting waste has been raised and while it is not possible to establish if there is a direct link between the malting waste and the charcoal from the same deposits, it is possible that they originate from

the same source. The less well represented taxa (hawthorn/apple/whitebeam type, blackthorn and hazel) are typical scrubland or hedgerow species not tolerant of heavy shade but widely present elsewhere. Oak is likely to have been available as woodland or isolated strands. All would have been available within the local environment.

The dominance of oak in archaeological assemblages is a common, although not universal, occurrence, and in part must reflect availability of the wood but also its suitability for both construction and fuel. Coppiced oak appears to have been the main wood used as fuel throughout the Roman period, for example, at Pomeroy Wood, Devon, supplemented by a range of tree and shrubby species (Gale 1999). At the Roman roadside settlement of Westhawk Farm, Ashford, Kent, oak dominated all the samples forming 80% of the total assemblage by fragment count (Challinor 2008). Within the Danebury Environs, oak was the principal fuel throughout the Romano-British period in hypocausts, ovens and smithing hearths, alongside other woods, cereal processing waste and coal (Campbell 2008, 71). At the Danebury sites there appeared to be some deliberate selection of non-oak taxa for specific purposes, such as the use of alder to supplement the oak in a possible smithing hearth at Houghton Down (Campbell, 2008, 71).

In malting ovens and corn driers the evidence tends to suggest cereal chaff formed the dominant fuel (Campbell 2008; Fryer 2004; Stevens *et al.* 2011; van der Veen 1989). At Fullerton, while chaff appears to have been the main fuel in a corn drier, wood charcoal was recovered from the stokehole suggesting that was also used as fuel (Campbell 2008, 71). Within the Fullerton assemblage ash seems to have dominated, while birch, oak, field maple, hazel and sloe/plum type woods were also used. If the charcoal present in Pit 1007 and Ditch 13 derived from the same source as the cereal remains, it is possible that the whole assemblage was scooped out of a malting oven, and that the charcoal represents the fuel used. It is not possible to assess the significance of the choice of wood, although it is likely that wood charcoal represents a supplementary fuel source rather than the principal fuel.

## DISCUSSION

The excavation at the Depot site has added significant evidence relating to the suggested Roman road between Neatham and Winchester. Although the line of the Chichester-Silchester road was clearly established during the original excavations, the course of the road which crossed it at a right-angle was less precisely indicated. The latter road was built slightly later, as its metalled surface overlay the deliberately infilled road-side ditch of the Chichester-Silchester road, but its course to the south-west of the town remains a matter of conjecture. Indeed, while there is circumstantial evidence to support the existence of a road running between Neatham and Winchester (and in the opposite direction towards London), that evidence is still not conclusive and the precise course of any road has yet to be determined (Weston 2008).

During the earlier excavations, the road's metalled surface was observed extending some 50m west-south-west from the intersection, laid directly on the natural gravel. However, only its southern edge was recorded in plan (Fig. 1), and this turned quite markedly towards the south-west some 37m from the intersection (Millett & Graham 1986, fig. 11). While it is possible that the southern edge of the metalling does not reflect the actual line of the road's edge, perhaps marking instead a localised area of hard standing adjacent to it, it is nonetheless significantly skewed from the assumed line of the road (*ibid.*, fig. 31), particularly at its western extent (in Millett and Graham's trial trench II). In fact, its orientation is closer to that of Ditches 11 and 13 and, if it continued on its line at the west, the edge of the road would have run between the two ditches.

This raises the possibility that Ditches 11 and 13, spaced over 23m apart, defined the original road zone when the road was built. Millett and Graham's suggested course Neatham to Winchester road is not a straight line, but changes direction (from west-south-west to south-west) *c.* 1km from the town (*ibid.*, fig. 1, with a more marked bend near to Winchester. The location of the turn near Neatham is entirely conjectural and their excavation in fact suggests that

it may have turned close to the intersection. Although no traces of a road were observed on the Depot site, either within the excavation area or in Evaluation Trenches 1 and 9 which lie on the road's assumed route (Fig. 2), it may be that the road was only metalled close to the intersection, and therefore not archaeologically visible further from it.

There are a number of problems with this interpretation, not least the position of Structure 77 almost mid-way between the ditches. Secondly, most of the pottery, both from the ditches and the building, was significantly later (largely after 275) than the road surface which Millett and Graham dated to *c.* 100–125. It should be noted, however, that most of the pottery from the ditches came from their upper fills and that the significantly smaller quantities from their lower fills could, in most cases, be assigned only a general Romano-British date. This allows for the possibility of an early date for ditch construction, contemporary with the road surface and before any significant level of development along the road towards Winchester.

Millett and Graham suggest that the centre of the town was reorganised *c.* 275 after which settlement started to expand southwards along the road to Chichester (*ibid.*, 13), and clearly also westwards along the road towards Winchester. During this episode of reorganisation a large expanse of gravel was laid down around the road intersection, sealing and concealing the earlier road surface, so that the subsequent line of the road towards Winchester was not visible. While it is feasible that this reorganisation involved a realignment of the Winchester road towards the north, with former road zone ditches now defining roadside properties on its southern side (equivalent to Millett and Graham's ditches 1 and 2 along the Chichester road), this seems unlikely. Nonetheless, even if the Winchester road, from its initial construction, followed the assumed route depicted by Millett and Graham, it would have almost intersected with Ditch 11 just north of the Depot site, unless that ditch terminated or changed course immediately beyond the excavation area.

It is unclear why Ditch 13 should have remained open later than Ditch 11, other than the fact that it was a larger ditch. As neither was recorded in Millett and Graham's Area A, it is also unclear exactly how they, and Structure 77, fit into the changing layout of the town and its roads. In the absence of clear evidence for the possible Winchester road's exact course in the late Romano-British period, the most likely interpretation of Ditches 11 and 13 is that they represent a road-side ditch and a rear boundary ditch, respectively, comparable to ditches 1 and 2 which lay a similar distance apart in Area B although set back much further from the road. The Area B ditches, however, had filled up well before there is any evidence of activity in the Depot site. The few finds from the roadside ditch (1) date from the 1st and early 2nd centuries, while the infilling of the rear boundary ditch (2) dates to around the end of the 2nd century; although the boundary which the latter formalised survived in some form through the Roman period, since subsequent occupation along the road did not spread beyond it.

All these boundaries suggest that, beyond the *mansio*, the town consisted of ribbon development along the road frontages. However, with only a single structure and pit recorded between Ditches 11 and 13, it is not possible to discern the extent of any associated property plot, as was possible in Area B where there appeared to be a standardised pattern of buildings, open yards and wells etc. Although the small number of features on the Depot site contrasts with the dense occupation exposed in Areas B and C, the range of materials recovered from the two ditches points to significant domestic activity in this area. Structure 77, with its central line of post-holes, was slightly different in form to many of the other timber structures in Neatham, but there is no reason to suppose that was not primarily a domestic structure, particularly since the largest quantities of characteristically domestic finds recovered from the ditches came from the excavated sections, particularly of Ditch 13, closest to the eastern end of the building and Pit 1007.

The building's location within the town's ribbon development suggests that its occupants, rather than being involved solely or even primarily in the agricultural exploitation of the surrounding countryside, may

have been taking advantage of the economic opportunities for trade and commerce offered by the town's location on a crossroads, and by the market for goods and services provided by the *mansio*. Evidence was found during the earlier excavations of iron, copper and bronze working, and specialist bone working. In addition, as well as the town possibly having a role in the marketing of Alice Holt/Farnham pottery, there was also some evidence of pottery production. Although the pottery assemblage indicates a later 3rd–4th century date for occupation on the Depot site, the pattern of coin loss points to this type of economic activity continuing at least until the late 4th century and possibly right up to 410 when the Roman administration ended.

The suggestion from the charred plant remains from the Depot site that cereal grains were being malted highlights the possibility that brewing was being undertaken on or close to the site (although no artefactual or structural evidence for this was found), supplying the *mansio* and other travellers along the Roman roads, as well as the town's occupants generally. Evidence for malting and brewing has been found at an increasing number of Romano-British settlements in southern England many of them located along Roman roads, such as Springhead, Kent, on Watling Street (Stevens *et al.* 2011); Weedon Hill, Buckinghamshire (Wakeham & Bradley 2013), and Bicester, Oxfordshire (Martin 2011), on Akeman Street; Ilchester, (Murphy 1982; Paradine 1994; Stevens 1999) and Catsgore (Hillman 1982), Somerset, on the Fosse Way; and Alcester, Warwickshire, (*cf.* Pelling 2002; Colledge 1986) on Icknield Street, as well as associated with the Roman settlement of *Salinae* at Droitwich, Worcestershire (Vaughn 1982; de Moulins 2006; Straker 2006). There is also evidence for specialist brewers, associated at least with the Roman military, from tablets at *Vindolanda* on Hadrian's Wall (Bowman & Thomas 1994).

Another aspect of some of these brewing sites, such as Springhead (Andrews 2011, 195–199; Stevens *et al.* 2011, 243) and Weedon Hill (Stevens 2013, 33), is their association with springs and sacred places, as suggested here by the name *Holybourne*. As noted above, there is also a suggestion that the frequency of graffiti on the pottery at the Depot site may reflect some religious association at the site.

The excavation at the Depot site, therefore, has added significant new information about the Roman small town at Neatham, extending the area investigated to the south-west of the town's centre, indicating possible ribbon development along the suggested Roman road to Winchester. In addition, analysis of the finds and environmental remains has added to an understanding of the settlement's economic basis, providing evidence, for example, for malting and brewing in the town, in addition to crop and animal husbandry in the surrounding countryside.

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The archive, which is currently held at the offices of Wessex Archaeology under the project codes 63820–3, will be deposited in due course with Hampshire County Council Museums Service.

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APPENDIX 1: List of the vessel form codes used

| *Form code* | *Description* |
|---|---|
| form 31 | samian form 31: shallow bowl |
| form 37 | samian form 37: decorated, hemispherical bowl |
| form 45 | samian form 45: mortaria |
| Fulford 27 | indented beaker (Fulford 1975, 52, type 27); *c.* 270–400 |
| L&J 1 | cordoned jars (Lyne & Jefferies 1979, late class 1) |
| L&J 10 | large cable-rimmed storage jars (Lyne & Jefferies 1979, late class 10) |
| L&J 1A/B | narrow-necked cordoned jars/flasks with moulded rims (Lyne & Jefferies 1979, late class 1A/B) |
| L&J 1C | large cordoned storage jars (Lyne & Jefferies 1979, late class 1C) |
| L&J 3A | flat-rimmed jars (Lyne & Jefferies 1979, late class 3A) |
| L&J 3B | everted rimmed jars (Lyne & Jefferies 1979, late class 3B) |
| L&J 3C | triangular and hook-rimmed jars (Lyne & Jefferies 1979, late class 3C) |
| L&J 4 | large bead rimmed storage jars (Lyne & Jefferies 1979, late class 4) |
| L&J 5A | flat- and triangular- rimmed bowls (Lyne & Jefferies 1979, 45, late class 5A) |
| L&J 5B | dropped flange bowls/dishes (Lyne & Jefferies 1979, late class 5B) |
| L&J 5C | strainers (Lyne & Jefferies 1979, late class 5C) |
| L&J 5D | deep decorated bowls (Lyne & Jefferies 1979, late class 5D) |
| L&J 5E | large reeded-rimmed bowls (Lyne & Jefferies 1979, late class 5E) |
| L&J 6A | shallow, straight- and convex- sided dishes with plain or grooved rims (Lyne & Jefferies 1979, late class 6A) |
| L&J 6C | dropped flange dishes (Lyne & Jefferies 1979, late class 6C); often with short, squat bead/flange (almost residual) |
| L&J 7 | lids (Lyne & Jefferies 1979, late class 7) |
| L&J 8 | flagons |
| L&J E4 | bead rimmed jars (Lyne & Jefferies 1979, early class 4) |
| R100 | rim fragments too small to assign to a particular form; vessel class recorded where possible |
| R101 | bead rimmed bowl |
| R102 | necked jars with bulbous rim terminals |
| R103 | flanged bowl, copying samian form 38 |
| R104 | fairly narrow-mouthed jar; rim is everted and externally moulded |

| | |
|---|---|
| R105 | jar with an upright, internally-cupped rim - similar rims known from Southampton in contexts dated to *c.* 170/180-350 (Cotton & Gathercole 1958, 113, fig.26, 18); similar form (although with a larger diameter) also present among the material from the route of the A325 in the Alice Holt forest (Birbeck *et al.* 2008, 124, fig.7, 5) |
| R106 | sloping-shouldered jar with an out-turned, triangular pulled bead rim. Other examples already known from Neatham (Millett 1986, fig.65, 99) and considered to be an Alice Holt product while although smaller, another example is known from the route of the A325 in the Alice Holt forest (Birbeck *et al.* 2008, 126, fig.7, 24) |
| Young C45 | shallow bowl copying samian form 31 (Young 1977, 158, type C45); *c.* 240-400+ |
| Young C51 | flanged bowl copying samian form 38 (Young 1977, 160, type C51); *c.* 240-400+ |
| Young C59 | hemispherical bowl with bead rim, perhaps copying samian form 37, with single, widely-spaced stamps around the bowl (Young 1977, 158, 162, type C59); *c.* 310-360 |
| Young C8 | flagon with tall neck, grooved below rim, flange half-way down neck and a single handle (Young 1977, 148, type C8); *c.* 240-400+ |
| Young C97 | mortaria copying samian form 45 (Young 1977, 173, type C97); *c.* 240-400+ |
| Young P24 | wall-sided bowl, moulded at rim and carination (Young 1977, 87, type P24); 240-400+ (but popularity greatly increasing during the 4th century) |