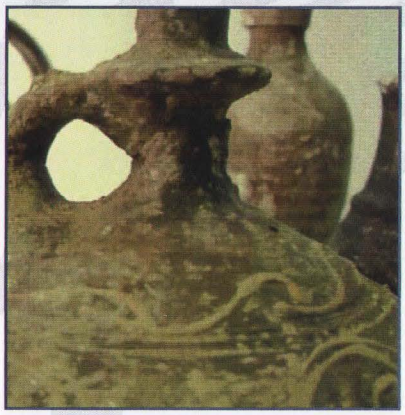
Mid Sussex : Hassocks

Planning ref. HA/04/02313/FUL

07-032

Post Excavation Assessment

Land West of Mackie Avenue Hassocks West Sussex



Post-Excavation Assessment and Project Design

oxfordarchaeology

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Archaeological Excavation on land west of Mackie Avenue, Hassocks, West Sussex
Post-excavation Assessment and Project Design

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Summary

Between August and November 2007 Oxford Archaeology (OA) undertook a programme of archaeological work on land west of Mackie Avenue, Hassocks, West Sussex (NGR TQ 3100 1630; Mid Sussex District Council planning refs. HA/04/02313/FUL & HA/04/02311/OUT). The work was commissioned by Barratt Homes Southern in advance of a housing development on the site.

Excavations were conducted in five separate areas, given area codes 1 to 5. These revealed archaeological remains consisting of a series of ditches, pits and postholes indicative of a number of phases of activity dating from the Bronze Age and Roman periods. Excavated features include the remains of a post-built roundhouse of Bronze Age date, associated with a series of pits and possible field boundaries. A Roman building was also excavated on the site and this was also associated with a field system. An enclosure containing a number of pits, interpreted as a possible shrine, was also excavated at the site.

1 INTRODUCTION

1.1.1 This document forms an assessment and project design for the site archive generated by fieldwork undertaken by Oxford Archaeology (OA) on land west of Mackie Avenue, Hassocks, West Sussex. The works were carried between August and November 2007, on behalf of Barratt Homes Southern, in advance of a housing development. The document sets out the research framework and proposed methods for the analysis and report preparation, as prescribed by English Heritage MAP 2 (Phase 4) and updated by MoRPHE (*Management of Research Projects in the Historic Environment: The MoRPHE Project Managers' Guide*, English Heritage, 2006).

2 PROJECT HISTORY AND BACKGROUND

2.1 Location and scope of work

1.1.1 The site occupies open land to the north of Hassocks in the historic parish of Keymer centred on NGR TQ 3100 1630 (Fig. 1). The site is located on a low hilltop at the foot of the north side of the South Downs.

1.1.2 The site is bounded to the south by a wooded stream channel, to the west by a railway embankment and to the east by a 20th century housing development. To the north the site overlooks farmland and the Lower Weald.

1.1.3 The overall development site is approximately 9.36 ha in extent. The excavation focused on five separate areas measuring 22,654 m^2, 1823 m^2, 1995 m^2, 4207 m^2, and 7377 m^2 respectively. These areas were identified as areas of potential interest by trial trenching carried out by OA in September and October 2005 (see below).

2.2 Geology and Topography

1.1.4 The geology of the site consists Lower Greensand over Wealden Clay. The elevation of the development area varies from an average height of *c* 41 m OD in the southern part of the site, rising to 47 m - 49 m OD towards the north-east corner of the site. There was extensive evidence of artificial drainage in the form of land drains.

2.3 Excavation Methodology

1.1.5 The excavation was undertaken using a 'strip, map and sample' strategy. The whole excavation area was stripped using a mechanical excavator under close archaeological supervision, to the top of the first archaeological horizon or the natural geology, whichever was encountered first. Subsequently the exposed archaeological features were cleaned by hand and digitally mapped using a Total Station.

1.1.6 An appropriate sample of the features were excavated by hand. The agreed sampling strategy was that structural remains and other areas of significant and specific activity were fully excavated and recorded. Non-structural linear features were sample excavated and recorded with an appropriate number of sections to establish character,

date and morphology of the feature. Artefacts were recovered from feature intersections, and where assemblages were concentrated the percentage sampling was increased to ensure maximum retrieval. Non-structural pits were half-sectioned as appropriate. A targeted programme of palaeo-environmental sampling was also undertaken. All features and deposits were issued with a unique context number. Context recording followed procedures laid down in the *Oxford Archaeology Fieldwork Manual* (1992). Individual and intersecting features were planned by hand and sections drawn, both at a scale of 1:20. Features were photographed using colour slide and black and white print film.

2.4 Archaeological and Historical background

Prehistoric

1.1.7 Three Palaeolithic flint tools are known in the vicinity of the development site and the Palaeolithic human remains at Boxgrove, *c* 40 km to the west, are the earliest known evidence of human activity in Britain. Throughout Sussex scatters of Mesolithic flint have been recorded from the Lower Greensand belt at the foot of the Downs (Drewett 1978); there are fifteen known finds of Mesolithic date near to the development area.

1.1.8 There are five records of finds of individual flint objects or scatters of flint dating to the Neolithic period close to the site, all located within the Lower Greensand. The nearest of these is a Neolithic flint scatter *c* 60 m to the west of the site boundary.

1.1.9 A cemetery containing middle to late Bronze Age cinerary urns and cups lies 1.1 km south-west of the site and a bowl barrow is located on Lodge Hill, some 1.3 km to the east of the site. A late Bronze Age socketed axe was also found 800 m to the south east of the site in 1908. The only significant Iron Age find in the vicinity is a La Tene cinerary urn from the general area of Hassocks (exact location unknown), found in the 1930s.

1.1.10 During the site walkover survey carried out by OA as part of the desk-based assessment, a flint scatter (covering an area measuring 15 m x 10 m) was identified close to the south edge of the site.

Romano-British

1.1.11 Two major Roman roads run *c* 1 km south-west of the site. These link Hassocks with London, the Weald iron production sites and the *Civitas* or regional capital of Chichester (*Noviomagus Regnensium)* some 30 miles to the west.

1.1.12 A substantial Romano-British cemetery to the south of the junction of the Roman roads was excavated in 1925 and in 1956, the finds indicating a significant local population (for a summary of the finds see Lyne 1994). This cemetery appears to have been associated a settlement in the vicinity of the crossroads at Hassocks, which might have been a market centre, and the main period of use for the site was 2nd to 3rd century AD. Two Roman villa sites are located within a mile of the crossroads and a camp site near Hassocks was examined in the 19th century.

Saxon and early medieval

1.1.13 The Roman cemetery at Hassocks lay immediately to the west of an Anglo Saxon cemetery which consisted mainly of early Anglo Saxon cremations in urns, although spearheads, shield bosses and a knife are known from inhumations (Lyne 1994). Excavations at Friars Oak in 1994 identified a Saxon sunken-floored building and another possible structure *c* 600 m west of the site. Locally, the parish name Keymer is Old English for *Cy-mere (*cow mere, Ekwall 1980), suggesting a small-scale agricultural community here during the period.

Medieval and post-medieval

1.1.14 Domesday records that the parish of Keymer (*Chemere*) had a church and two mills in 1086 and was held by William de Waterville from William de Warenne. Late 18th-century maps by Yeakell and Gardner (1778) and Gardner and Gream (1795) show the area of the development site divided into small fields. Keymer is depicted as a small nucleated settlement; there is no sign of settlement at Hassocks.

1.1.15 The tithe map of 1845 shows the area of the site consisting chiefly of arable fields surrounded by wooded belts and small areas of pasture. The railway that forms the west boundary of the site was constructed between 1837 and 1841. The Tithe Map of 1845 shows two large clay pits to the west of the site by the railway. Adjacent to each is a small structure which may have been brick kilns. The second edition 25" map of 1895 shows the clay pits as 'old clay pits', and thus disused. The third edition 25" map of 1910 shows the site more or less as it appears today.

3 Background to the excavation

1.1.16 In September and October 2005, Oxford Archaeology (OA) carried out a 63-trench field evaluation at land west of Mackie Avenue, Hassocks in West Sussex (NGR TQ 3100 1630). A further 15 test pits were also opened in the course of the fieldwork. The evaluation was undertaken on behalf of Barratt Homes Southern, in respect of determination of a planning application for new housing on this 9.36 ha. site.

1.1.17 The evaluation revealed dispersed areas of occupation on the site beginning in the prehistoric period, with middle Bronze Age features (but with an absence of Iron Age activity), Roman field ditches and field boundaries, medieval field ditches and post-medieval ditches/gullies/pits and posthole structures. All of the features had been truncated by ploughing.

1.1.18 A substantial and extensive scatter of burnt flint and worked flint was identified to the south end of the site. The flint scatter has been characterised as typical of the later prehistoric period, in particular the middle Bronze Age. This date is based on the technological characteristics of the assemblage, the apparent opportunistic and irregular use of the material and the lack of formal tools. The flint scatter and the remainder of the flint assemblage may well be contemporary with middle Bronze Age activity and features to the centre/north of the site. A middle Bronze Age Deverel-Rimbury urn was discovered in the vicinity of a series of postholes within possible

eaves-drip gullies, which probably represent a pair of roundhouses. Environmental material from one of these gullies provided evidence for the presence of *Vicia faba* var. *minor*, the genetic predecessor of the broad bean. These are the most significant finds from the archaeological evaluation of the site.

1.1.19 The Roman period was characterised by a series of ditches, either for drainage or field division. A number of these features in the north-east corner of the site appear to be re-cuts of a field boundary, as each ditch contained pottery groups of a later date than the previous ditch. The field ditches are presumably associated with farming settlement(s), although no structural evidence was recovered during the evaluation. The pottery evidence suggests that occupation spanned the entire Roman period. A few medieval field ditches were identified, but there was no evidence of settlement during this period.

1.1.20 Post-medieval features included pits, gullies and ditches containing post-medieval evidence of industrial activity, associated with documented clay extraction and brick-making activities at the west of the site.

1.1.21 The majority of significant archaeological remains located in the evaluation are concentrated within an area which is to remain as open space. There will be no development impact on these. However, the southern margins of the Roman activity and southern part of the Bronze Age activity will be impacted by housing, roads and other ground disturbance. In light of this the Mid-Sussex District Council Archaeological Advisor requested that the area was subject to further archaeological investigation.

4 QUANTIFICATION OF THE EXCAVATION ARCHIVE

Record type	Quantification
Context Records	1010
Plans A4	281 total
Sections A4	311 total
Black and White films	36
Colour Films	36
Environmental Sample sheets	17

5 PROJECT AIMS

5.1 Original fieldwork aims

1.1.22 To investigate, characterise and record the archaeological evidence (from all periods) which will be destroyed during the development, and to make available the results of the investigation through full publication.

1.1.23 To recover artefactual information to shed light on the chronology, evolution and status of buildings and properties on the site, and the status, occupations and lifestyles of the inhabitants.

1.1.24 To recover animal bone and palaeo-environmental data to provide evidence for the

status, diet, occupations and lifestyles of the inhabitants of the site and to provide evidence for the utilisation of natural resources and the local environmental conditions.

1.1.25 To recover evidence for the exploitation of local and non-local resources.

1.1.26 To compare and contrast the evidence from the site with contemporary local, regional and national sites.

1.1.27 To produce a well-dated chronological sequence of archaeological deposits from the site.

1.1.28 To investigate the extent and character of occupation on the site in the middle Bronze Age.

1.1.29 To examine how the middle Bronze Age occupation relates to the probable relict water channel to the south of the site.

1.1.30 To examine whether the presence of the probable water channel can provide a source of well-preserved landscape, environmental and dietary indicators that can be stratigraphically linked to any archaeological remains.

1.1.31 To investigate what activities are represented by the burnt flint deposits (ie are these a by-product of cooking, sweat houses, cremations, textile production etc.).

1.1.32 To investigate what phase the postholes in Trench 34 represent and whether they are part of a larger structure or group of structures.

1.1.33 To investigate the extent of the Roman field system and look for any evidence of Roman occupation of the site.

5.2 Specific research aims of the current assessment

1.1.34 A number of specific research aims are intended to test the data from the Mackie Avenue site at the Assessment stage. These are listed below.

Aim 1: Settlement and people: social, ritual and economic processes

- *What can the Mackie Avenue excavations tell us about the character of the prehistoric activity? Was it domestic? If so what light can it throw on settlement and mobility patterns?*
- *What can the excavations tell us about settlement development and building forms from the middle Bronze Age through to the Romano-British period?*
- *Can the Mackie Avenue data increase our understanding of the regional settlement economy and the control and exploitation of resources? What was the economic basis of the settlement in key periods and what evidence of trade and exchange can be identified?*
- *What can we reconstruct of the local environs at Mackie Avenue and what can it tell us about human interaction with the environment?*

- *What light can data from Mackie Avenue shed on Romano-British ritual practice? Can culturally specific practices be identified through the deposition of material culture?*

Aim 2: The wider context

- *How far can data from Mackie Avenue increase our knowledge of prehistoric settlement in this region?*
- *How can the Mackie Avenue site increase our understanding of regional settlement patterns in the Roman period in West Sussex? How does the Roman settlement fit into the wider communication network?*
- *What can the Mackie Avenue data tell us about regional variations in material culture and agricultural processes?*

Aim 3: Process of change

- *What can the data from Mackie Avenue tell us about continuity of place within a framework of significant social, economic and environmental change over four millennia?*
- *Can any cross period practices be identified from the excavations at Mackie Avenue?*
- *Can the Mackie Avenue data allow identification of the impetus for reorganisation of landscape?*
- *What evidence can the Mackie Avenue data provide to increase our understanding of local and regional processes of change in prehistory?*
- *How can Mackie Avenue contribute towards our understanding of local, regional and provincial patterns of development in the 2nd and 3rd centuries AD?*

6 SUMMARY OF THE EXCAVATION RESULTS

6.1 Introduction

1.1.35 A total of five areas of archaeological activity were investigated within the development site. These were given Area codes 1-5 respectively (Fig. 2). Overall, the investigations revealed activity dated by pottery analysis to the Bronze Age and Roman periods. The archaeological features excavated consisted of postholes, pits and ditches revealing evidence of middle to late Bronze Age activity, Bronze Age and Roman field enclosures, Roman settlement, domestic and industrial activity.

6.2 Late Neolithic/Early Bronze Age (Fig. 3)

1.1.36 A single feature dated to this period was present on the site, in the north-western part of Area 1. Pit (20073) contained two fills, the secondary fill (20075) containing a sherd of comb impressed Beaker, with worked flint and poorly preserved charcoal being recovered from both the secondary and tertiary fills.

6.3 Bronze Age (Figs 4-6)

1.1.37 Features containing Bronze Age pottery were located only within Areas 1 and 2, which coincided with the main concentration of Bronze Age features found in the evaluation. These features consisted of ditches, pits and postholes interpreted as possible field boundary ditches and associated settlement activity. Undated pits filled with burnt flint also occurred in Area 5 and these are also not unlikely to be Bronze Age in date.

1.1.38 Although no finds other than large fragments of oak charcoal were recovered from any of the fills of posthole group (20909), this formed what appears to be a post-built roundhouse, *c* 7 m in diameter in Area 1 (Fig. 5). However, a large handled jar of middle Bronze Age date was recovered from an associated posthole (20274), and the series of large pits/ditches (20135), (20230), (20251), (20340), (20342), (20344), (20246), (20249) and (20562), surrounding the structure all contained flint tempered pottery of middle Bronze Age date. A large pit (20265) measuring *c* 5 m in diameter was located to the south-east of this structure and contained sherds of at least four Deverel-Rimbury vessels. The function of this pit is uncertain.

1.1.39 The primary fill (20034) of ditch (20033) contained flint tempered pottery of middle Bronze Age date and this formed a group (20904) with ditch (20015), the terminal of which was recorded as (20013) (Fig. 6). This feature ran north-south across the southern part of Area 1 and terminated before it reached ditch group (20905).

1.1.40 Fill (20038) of ditch (20037) contained similar flint tempered pottery, this ditch forming part of group (20905). This ditch ran east-west across the whole of Area 1 but no other pottery was recovered from this feature. Flint tempered pottery was also recovered from fill (20182) of feature (20180), which formed part of a north-south aligned ditch (Group 20913), running at right angles to ditch group (20905). The lower fill (20003) of ditch (20002) also contained flint tempered pottery. This was the only Bronze Age feature recorded in the northern part of Area 1.

1.1.41 A group of postholes (20131), (20306), (20359), (20368), (20370) and (20379) were located to the east of the probable roundhouse (20909) (Fig. 4). These features all contained Bronze Age pottery, but they formed no discernible structure.

1.1.42 A total of two (20059, 20071) from a group of nine postholes (20907) located to the south-west of roundhouse (20909) contained middle Bronze Age flint tempered pottery (Fig. 6). These postholes formed a loose scatter but did not form any discernible pattern. Oak charcoal was also recovered from their fills. Pit (20094) was located within this scatter of postholes and contained two fills, the upper of which (20095) contained pottery, oak, hazel and hawthorn charcoal, animal bone and the largest assemblage of flint (191 individual pieces) from any feature on the site. Pit (20068) was located slightly to the west of the scatter of postholes and contained two fills, both of which produced pottery. A further three pits, (20127), (20513) and (20469), also contained middle Bronze Age pottery.

1.1.43 A series of four pits in Area 2 (Fig. 4) contained pottery of middle to late Bronze Age

date. Pits (12031), (12026) and (12032) also contained flint and (12031) also contained charcoal, predominantly oak. These are similar in nature to the pits excavated in Trench 34 of the 2005 evaluation and form a rough arc, *c* 26 m in diameter.

6.4 Roman (Figs 7-9)

1.1.44 The most significant features of Roman date on the site were a rectangular ditched enclosure (20917), measuring 26 m by 15 m and a smaller, sub-circular enclosure (20921), measuring *c* 6 m by 6 m to its north-east (Fig. 8). Both lay in the eastern part of Area 1.

1.1.45 Enclosure (20917) contained a series of pits and postholes (group number 20818), forming a rectangular structure *c* 6 m by 11 m. Pottery of the 2nd century AD was recovered from the enclosure ditch fill and pottery of 1st to 4th century AD was recovered from the posthole fills, although the bulk of the pottery appears to belong to the earlier part of this date range. The enclosure appears to have an entrance in the south west corner.

1.1.46 The fill of the ditches of enclosure (20921) contained pottery of the 1st to 2nd century AD and three pits (20712), (20696), (20698) within the enclosure returned pottery of a similar date. Pit (20698) also contained a large amount of both box and plain tile. A further pit (20881) contained the articulated skull of a cow, placed within the back half of a ribcage, probably of the same animal (Fig. 9). Pottery from the fill of this feature suggests a date in the 1st to 3rd centuries. A single posthole (20714) was located between pits (20696) and (20698). The enclosure was surrounded by postholes (20774), (20764), (20762), (20760) and the presence of tile from the enclosure ditch may suggest that these postholes supported a roof.

1.1.47 Enclosure (20917) was surrounded by a series of rectilinear ditches which appear to span the early and middle Roman periods (1st to 3rd centuries AD). Ditch groups returning an early Roman date included (20906), (20910), (20911), (20915) and (20922) and these seem to have been supplemented in the middle Roman period by ditch group (20916) with ditch groups (20924), (20929) returning pottery of early and middle Roman date. The remaining ditch groups could not be dated more securely than within the Roman period.

1.1.48 A series of early Roman pits (20415), (20669), (20691) were also excavated in this Area, but the main period of pit digging appears to occur in the middle Roman period, when (20137), (20409), (20426), (20667) and (20680) were dug. These pits contained pottery and charcoal, but their precise function is difficult to interpret. Pits continue into the later Roman period on the site, with (20209), (20694), (20815) containing pottery of the 3rd to 4th centuries AD.

1.1.49 Area 3 contained a ditch running north-south (14010), (14012), (14014) which contained pottery of early to middle Roman date.

6.5 Post-medieval (Fig. 10)

1.1.50 Post-medieval pottery was recovered from the fill of ditches (20164) and (20447) and from the fill of a large feature interpreted as a pond (20192), all in Area 1.

1.1.51 Area 3 contained only a single ditch (13000), probably associated with post-medieval/modern agricultural activity. The fill of this feature contained brick and some residual worked flint.

1.1.52 Ditch (14000)/(14002) in Area 4 appeared similar in form to (13000) in Area 3 and is probably of similar, post-medieval date.

1.1.53 Area 5 contained a series of post-medieval field drains, which truncated some earlier features.

6.6 Undated

1.1.54 A number of pits and postholes within Area 1 remain undated, although it is likely that these belong to either the Bronze Age or Roman period.

1.1.55 A series of ditches in Area 5 contained no finds and their date remains uncertain. A spread of burnt flint and charcoal (15021), (15032), (15034) and (15038) was also excavated in this area. It is not possible to assign a definite date to these features, but the presence of burnt flint in their fills and their location (close to the area of burnt flint noted in the walk over survey and evaluation) suggests they may be prehistoric.

7 Provisional Interpretation

1.1.56 The flint assemblage produced evidence of Mesolithic and, to a lesser extent, Neolithic activity in the excavation area, although only a single feature of this date was excavated on the site: Late Neolithic/Early Bronze Age pit (20073). The earliest securely dated features are the middle Bronze Age pits, postholes and ditches in Areas 1 and 2, which contained pottery, worked flint and charcoal. These were located to the south of what is probably a roundhouse and, although no dating evidence was recovered from the postholes of this structure, the ditches surrounding it produced middle Bronze Age pottery. This possible roundhouse and its associated pits, postholes and ditches are located to the south of the middle Bronze Age roundhouses located in the 2005 evaluation. As no features of this date were found in the areas excavated to the south of the site, Bronze Age activity was probably focussed to the east and north of Area 1. The nature of the activity here is likely to have been a settlement, although no evidence for its economic basis was recovered from the excavation. Evidence for the cultivation of the genetic ancestor of the modern broad bean was, however, found in the evaluation. Roughly 20 settlements of similar date are known elsewhere in West Sussex (Hamilton 2003) and these have produced evidence of metalworking, cloth and leather working and possible grain processing (Drewett 1979). There appears to have been widespread clearance of woodland and the establishment of agricultural farmsteads during the middle to late Bronze Age in the area (Gardiner 1990). Dunkin (2001) has also noted that settlements of this date show a degree of spatial organisation, frequently being associated with burnt mounds and deposits of metalwork on lower ground, with the

main focus of settlement on adjacent rising ground. If this were the case at Mackie Avenue, the main settlement focus would be located to the north of Area 1.

1.1.57 A spread of burnt flint was noted across the south of the site in the walkover survey carried out by OA and test pitting in Area 5 retrieved high levels of burnt flint from the topsoil and subsoil (no features were identified). It was suggested at evaluation stage that the burnt flint possibly signified the presence of a burnt mound*.

> *(Burnt mounds have been noted from across the British Isles since at least the 19th century (Barfield & Hodder 1987, 370) and, although their distribution is fairly well known (Hedges 1975, 62), their function remains the subject of some debate (Barfield & Hodder 1987 and O'Drisceoil 1988). The interpretation of these mounds has ranged from temporary cooking sites associated with hunting expeditions; cooking sites associated with stable, agricultural settlements; saunas or sweat lodges; industrial sites, or a combination of any of these (Barfield & Hodder 1987, O'Drisceoil 1988). A middle to late Bronze Age date is generally accepted for this class of monument (Ehreneburg 1991, 41) and a burnt mound at Potlands Farm, West Sussex (*c* 24 km to the south west of Hassocks), which was associated with flint tempered pottery, returned a radiocarbon date of 900 to 800 cal BC from the central pit (Stevens 1997)).

1.1.58 However, open area excavation revealed no mounded deposits or features in the test pitting area. The density of burnt flint in Area 5 therefore likely represents fills of features which have been truncated by ploughing and survive only as scatters of burnt flint within the ploughsoil, or, as this part of the site lay at a break of slope, downslope of the main area of Bronze Age activity, the burnt flint may have collected in this area through the process of colluviation. The burnt flint fill of features may represent caches of material used in the production of pottery. All of the Bronze Age pottery from the site was flint tempered, the flint being frequently burnt and crushed (Appendix 1) and the spread of flint in Area 5 may be the by-product of the preparation of flint for pottery temper.

1.1.59 Rectangular structure (20917) appears to represent a small Roman building, located within an enclosure and associated field boundaries. This dates to the early Roman period, but little evidence of its economic basis was uncovered during the excavation, although spelt wheat was recovered from a single Roman ditch during the evaluation and wine and beer appear to have been consumed at the site (see Appendix 2). A similar structure, which also appears to date from the 1st to 2nd centuries AD, was excavated at Moraunt Drive, Middleton-on-Sea (Barber 1994). The building at Mackie Avenue is much larger than that at Middleton-on-Sea but it is likely that both were wattle and daub constructions. Building material recovered from Mackie Avenue, which includes box tile, box voussoir, *tegula* and possible *tesserae* debris suggests that the building was of relatively high status. It is highly unlikley that this building had a hypocaust structure, though the quantity of box tile suggests that there was a building with such a feature near by. The Mackie Avenue building was probably similar in construction to those found at Park Brow on the South Downs (Wolseley *et al* 1926). The buildings at Park Brow were of a similar size to those at from Mackie Avenue and produced evidence of window glass, painted wall plaster

and a tiled roof, suggesting a reasonably high status farmstead. Such buildings have been referred to as 'proto-villas', but the processes by which they were developed from simple timber to complex masonry buildings, or were left alone, is not known. Similarly, the hierarchy between such sites, villas and other settlements is poorly understood.

1.1.60 The field boundaries at Mackie Avenue mainly date to the early to mid Roman period and a number of pits of this date were also excavated at the site. The full extent of the site remains unknown, although it is likely to continue to the west, east and north of the excavated area. Other Roman farmsteads in Sussex appear to have practised mixed farming with evidence for wheat and barley cultivation and the raising of cattle and sheep, as well as the processing of their products such as cheese and wool (Rudling 2003).

1.1.61 The interpretation of the smaller Roman enclosure (20921) is more difficult but it could possibly represent a small shrine or religious enclosure. Pit (20881) appears to have contained the deliberate burial of a disarticulated cattle skeleton, but, despite their similar sizes and orientations, none of the other pits contained any significant material, with the exception of pit (20695) which contained large amounts of box and plain tile. The disposal of animal remains within pits is a well known phenomena within Roman rural sites, and is probably a continuation of Iron Age practices, but the presence of pits within an enclosure is rare. An enclosure of similar dimensions, and also containing a pit with an animal burial, was found at Smiths Field, Hardwick with Yelford in Oxfordshire (Allen 2000), but this was of Iron Age date and direct local parallels remain to be found. One possibility may be the shrine at Lancing Down, West Sussex, but again the shrine here dates to the Iron Age and was later replaced by a Romano-British temple (Bedwin 1981). Animal bone has also been recovered from a square enclosure at Slonk Hill, Shoreham, although this activity dated to the 4th century. Animal bone recovered from a temple at Chanctonbury hillfort, West Sussex was predominately pig bone, and Rudling (2001) suggested that this may relate to a local "boar cult". This makes the animal bone from Mackie Avenue more unusual in a Sussex context, although ox skulls are recorded from excavations at Muntham Court, Findon, again in association with a small shrine (Burstow & Holleyman 1956).

1.1.62 The main period of occupation of the Roman settlement at Mackie Avenue is in the early to middle Roman period, with limited evidence for later occupation. This seems a common pattern across Sussex, with the decline of villas near the coast in the 3rd and 4th centuries and the reorganisation of other sites during this period. The villa at Barcombe, 8 km to the east of Hassocks, appears to fit this pattern, having been abandoned in the 3rd century. The cemetery at Hassocks was in use during the late 2nd to early 3rd centuries (Lyne 1994), a period which overlaps with the main occupation at Mackie Avenue. It is not clear how large the catchment area for this cemetery was, as it is one of only two substantial cemeteries known from the county, but it almost certainly included Mackie Avenue and other settlements in the immediate area.

1.1.63 A similar sequence of Bronze Age and Roman settlement to that at Mackie Avenue

has been found at Barcombe, where a Roman villa was built over an abandoned Bronze Age settlement (information from http://www.msfat.com/ and Rudling 2003, 121). Late Bronze Age and Roman occupation is also known from Knapp Farm, Bosham (Gardiner & Hamilton 1997) and from Eastwick Barn, Brighton (Barber *et al* 2002), but little or no Iron Age material was recovered from either of these sites, or from Mackie Avenue itself. This might suggest discontinuity and the foundation of new farmsteads on the sites of those which had been abandoned for hundreds of years. Alternatively there may have been a change in agricultural practices during the Iron Age either to ones which rely less on manuring or from arable to pasture.

8 The Finds

Summaries of the finds assessments are presented below. Full results are presented in the Appendices.

8.1 Artefactual

Pottery

1.1.64 A total of 756 sherds (5629 g) of prehistoric pottery was recovered from the site, augmenting the 85 sherds (13370 g) recorded from the 2005 evaluation at Hassocks. The largest component of the 2007 assemblage dates to the middle Bronze Age, but fragments of a late Neolithic/early Bronze Age Beaker from a pit were identified. The pottery has inclusions of flint and is probably locally made. A small amount of sand-tempered body sherds may be Iron Age in date, but were recovered from a ditch which also contained Roman pottery and are probably residual.

1.1.65 A total of 2436 Roman period or later sherds weighing 15437 g were recovered from the fieldwork. While there are known pottery production sites in the area and in reasonable proximity to Mackie Avenue, no regional fabrics series or corpus of types exist. However, the fabrics identified correspond broadly to ware-groups typically recognised in the region, and reference has been made to published local forms. The ceramic assemblage mainly dated to before AD 150 and, although the mid-Roman period remained important, pottery declines substantially from the late 3rd century. The early assemblage is dominated by East Sussex grog-tempered ware, with sandy reduced wares becoming more important during the 2nd and 3rd centuries.

Flint

1.1.66 The excavations yielded a total of 316 flints and 1050 pieces (5.698 kg) of burnt unworked flint. The assemblage is dominated by hard hammer flake debitage dated to the middle to late Bronze Age. The assemblage was dispersed across a large number of contexts and many pieces are residual, but a few contexts contained moderately sized assemblages, in relatively fresh condition, that may be contemporary with archaeological features. In addition, a small collection of residual flints have been dated to the Mesolithic period on the basis of technological attributes and the presence of a micro-burin. A fragment of a later Neolithic transverse arrowhead represents the only diagnostic Neolithic artefact, although a small number of Neolithic flakes may be present.

Stone

1.1.67 Burnt stone totalling 48 fragments and weighing approximately 800 g was recovered from four contexts, all of which were Roman in date. Burnt stone is recovered in small quantities on many sites and this quantity is not especially noteworthy.

Metalwork

1.1.68 A minimum of 50 metal objects was recovered from the excavation, four of which were copper alloy, two were lead, the remainder of the group was iron. The assemblage was badly corroded and encrusted therefore its nature was not always clear. Although almost half of the assemblage was recovered from stratified Roman features, the material represented was in poor condition and of little archaeological value.

Ceramic Building Material

1.1.69 A total of 139 fragments of ceramic building material (weighing 14,104 g) was recovered from the excavation, the bulk of which was recovered from Roman ditches and pit fills. Identifiable forms were noted but no detailed characterisation of the fabric types has taken place. This assessment has suggested that a structure with a tiled floor, roof and a hypocaust system was located on the site or nearby.

8.2 Ecofactual

Bone

1.1.70 The Mackie Avenue animal bone assemblage consisted of 61 burnt fragments from fills of pits and ditches and a partial cattle burial (context 20883). None of the burnt fragments could be identified any nearer than large or medium mammal. The burnt fragments are probably mostly Prehistoric, whereas the cattle burial has been dated to the Roman period. The partial cattle burial comprises an articulated skull with mandibles, placed within the back half of a ribcage. It is uncertain whether the two parts derive from the same animal or not. This feature may be a ritual deposit, although the practice of animal burial does not appear to be as common in the Roman period as during the Iron Age.

Charred plant remains and charcoal

1.1.71 Charred plant remains (eg seeds, nuts, fruits, etc., but excluding charcoal) were particularly scarce from the excavated features, with only small amounts of cereal grain, cereal chaff and a few weed seeds noted. Charcoal from the excavations was not particularly diverse, but was directly associated with the Bronze Age round house (20909). Most of the charcoal recovered was oak, however, and is thus unlikely to return reliable radiocarbon dates due to the possibility of "old wood" errors.

9 Statement of Potential

9.1 Stratigraphy

1.1.72 Further stratigraphic analysis has potential to clarify the relationships of the Roman features on the site and resolve some chronological issues. The integration of this data with the stratigraphy from the archaeological evaluation also has the potential to allow a better understanding of the Bronze Age sequence of the site.

9.2 Artefactual and ecofactual evidence

1.1.73 The prehistoric pottery illustrates activity on the site during the middle to late Bronze Age, with earlier activity represented by a sherd of Beaker. Further work is required on the fabric of the prehistoric pottery and it also needs to be linked into the complex chronology of the Deverel-Rimbury tradition of Sussex (Hamilton 2003).

1.1.74 The Roman pottery requires further research, as the source of some of the gritty grey and white wares cannot be confirmed at this point and fabric identifications need to be clarified. This will provide a better sense of pottery supply and marketing patterns, contributing to research objectives relating to trade, supply and distribution. In addition, a regional comparison may reveal differences in pottery use and functional composition. The assemblage has good potential to answer questions on the status of the site and the pattern of pottery deposition will also be examined to identify means of discard and any associations between pottery and feature types.

1.1.75 Although the charcoal remains from the excavation were not particularly rich or diverse, a total of nine samples have potential to provide information about the selection of wood fuels, and possibly building materials, used at the site and may provide information on changes in woods selected over time. A further nine samples have medium potential and rapid scanning has the potential to establish the range of taxa in use.

1.1.76 Although the CBM assemblage was small, it contains a variety of tile types which can help to inform about the nature of the possible structures on the site. Further work is needed on the assemblage and a full catalogue needs to be compiled.

1.1.77 The flint, stone, metalwork, glass, slag, fired clay and bone assemblages have limited potential and require no further work.

9.3 Results measured against original project aims

1.1.78 The assessment had three main aims relating to settlement, the wider context and processes of change at the site (see Section 5.2). Whilst a number of these aims have been met, the post-excavation assessment process has both narrowed the range and scope of questions which can be asked of the material, as well as identifying new areas for research. These are set out below.

9.4 Revised Research Agenda

1.1.79 The evaluation and excavation at Mackie Avenue has uncovered evidence for Neolithic, Bronze Age and Roman occupation of the site and this has high potential to inform research questions for the wider area. In particular the following areas need

wider research in the analysis and publication phase of the project:

- How does the settlement fit into the wider Bronze Age landscape of this part of Sussex? Does this fit within a similar pattern to that suggested by Dunkin (2001)? Does the spread of burnt flint represent craft production? Can the Bronze Age occupation be scientifically dated?
- What is the nature of resource exploitation at the site in the Bronze Age and Roman periods? Which raw materials were used for pottery, fuel and buildings? Which crop species were exploited during these periods?
- What are the patterns of the trade, supply and distribution of pottery in the Roman period? How do these relate to other sites in the wider area and what patterns can be drawn out of the data?
- What are the parallels for the Roman occupation of the site, in particular the apparently ritual enclosure? How does the timber building and its associated enclosures at Mackie Avenue fit within the settlement hierarchy of the local area?

10 Method statement

1.1.80 The tasks listed below are those required to complete the analysis and publication of the land to the east of Mackie Avenue data. The methods are required to fulfil the research aims outlined in section 9.4, above.

10.1 Stratigraphy

1.1.81 Further stratigraphic analysis needs to be undertaken in the light of the refined dating provided by analysis of the Roman pottery, in order to clarify the chronology and function of the site. The results of this analysis also need to be combined with those from the evaluation in order to fully understand the archaeology of the site.

10.2 Artefactual and ecofactual evidence

1.1.82 Comparanda for the fabric of the prehistoric pottery needs further research but no further analysis is recommended on vessel form/style due to the paucity of diagnostic material. The assemblage also needs to be linked to the chronology of the Deverel-Rimbury tradition of Sussex (Hamilton 2003). Commentary on relevant taphonomic implications of the middle Bronze Age pottery requires further work.

1.1.83 The source of some of the Roman gritty grey and white ware needs further work. A Hardham or Wiggonholt source, some 25 km from Hassocks, is strongly suspected, but this requires confirmation. Pottery reports pertaining to these and other production sites in the region will be consulted to clarify fabric identifications. Fabric and form information from these and other production sites will be used to narrow the dating of context-groups where possible. In addition, a regional comparison may reveal differences in pottery use and function. Study of pottery use will be augmented through the evidence of wear, residues, and repair. Functional comparison will also

contribute to the question of site status, supported by the examination of indicators such as the proportions of fine and specialist wares, in particular samian. Finally, the pattern of pottery deposition will be examined to identify means of discard and any associations between pottery and feature types.

1.1.84 The lithic assemblage has been quantified and characterised typologically. During the initial analysis additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions. These data and the assessment report will be used to generate a publication text.

1.1.85 The recovery of Celtic bean/horse bean (*Vicia faba* L. var. *minor*) from the evaluation has been identified as being of regional, and indeed national, importance. It is strongly recommended, therefore, that sample <30> from the 2005 evaluation excavations is fully analysed. Charcoal from this sample was also particularly rich and further analysis is recommended. A further 9 samples from the 2007 excavation have produced good to rich assemblages and analysis of these deposits should provide information about the selection of wood fuels, and possibly building materials, used and may provide information on changes in woods selected over time. A further 9 samples, all from pits and primarily of Roman date, have produced rich assemblages that are not particularly diverse and these will be rapidly scanned in order to establish the range of taxa in use and to provide a wider comparison to the data generated from the samples selected for full analysis. Charred plant remains samples will be sorted for charred plant remains under a low-power binocular microscope at x12.5 magnification and identifications are made between x10 and x40 magnification. Nomenclature will follow Stace (1997) for indigenous taxa and Zohary and Hopf (2000) for cultivated plants. Charcoal samples will be identified, weighed and quantified. Approximately 100 fragments of charcoal with >2 years growth rings visible on the transverse section will be selected for identification. These will approximately reflect the range and quantity of wood taxa present in the assemblage. All charcoal will be identified using a high-power incident light microscope at magnifications between x100 and x400. Identifications will be made on the basis of examining all three plains (transverse, tangential and radial sections) of the charcoal fragments. All fragments will be weighed and quantified to provide comparable data sets for previous and future charcoal analyses.

1.1.86 Although the charcoal remains identified at Hassocks were predominantly of oak, and therefore not suitable for high precision dating, charred plant remains were identified which may be suitable. Special attention will be paid in the analysis phase of the project to identify suitable material for radiocarbon dating, especially from contexts which produced Bronze Age pottery and from the gully which produced Celtic bean/horse bean (*Vicia faba* L. var. *minor*) in order to date these contexts more accurately. Animal bone from the cattle burial will also be assessed for its suitability for radiocarbon dating.

10.3 Illustrations of plans, sections and finds

1.1.87 A number of plans and sections will need to be produced in order to provide the necessary level of detail for the report. Plans and sections will be needed for significant features and stratigraphic sequences, and phase plans drawn up of the site as a whole, adapted from existing plans.

1.1.88 No more than 20 Roman vessels need to be drawn in order to illustrate the chronological and typological character of the assemblage. Five or six Bronze Age sherds also warrant illustration. A small number (*c* 7) of the middle to late Bronze Age flints, including the fabricator and two concave scrapers, should be illustrated to characterise the flint from the site.

10.4 Preparation of published report

1.1.89 The report will be submitted for publication in the Sussex Archaeological Collections and will present a comprehensive account of the Bronze Age, Roman and post-medieval activity on the site, addressing the research aims detailed in Section 9. This will include a discussion of the site within its local and regional context. The publication outline is presented in Section 11.

10.5 General project tasks

Project management, monitoring and review

1.1.90 The project will be managed by Alex Smith with support from David Mullin and internal monitoring by Anne Dodd. Drawing office management will be undertaken by Paul Backhouse. IT support will be provided by Paul Miles. Environmental management will be undertaken by Rebecca Nicholson and CAD management by Matt Bradley. Finds and archive administration will be undertaken by Leigh Allen and Nicola Scott.

Report assembly and editing

1.1.91 The reports will be assembled and checked against the illustrations by David Mullin and Alex Smith. The final report will edited by an appropriate Project Manager.

Archives

1.1.92 Oxford Archaeology's archiving standards will be adhered to at all times with regards to project documentation and archivally suitable materials used (see Walker 1990). All post-excavation documentation will be filed, ordered and indexed as part of the research archive. This will be sent for microfiching and then submitted to the National Monuments Record. After completion of the project OA will hold the archive at their storage facility at Milton, until it can be archived with Lewes Castle Museum.

1.1.93 The digital archive (all relevant databases, CAD plans, GIS, Illustrations, spreadsheets, Word-processing documents) will be prepared by OA staff with appropriate documentation and metadata. This will comprise:

- A file of documentary metadata for all word-processed documents

- A file of documentary metadata for databases
- A file of documentary metadata for CAD & GIS drawings
- A file of documentary metadata for digital images

1.1.94 A completed OASIS form will be submitted to English Heritage upon completion of the project.

10.6 Health and safety statement

1.1.95 All OA post-excavation work will be carried out under relevant Health and Safety legislation, including the Health and Safety at Work Act (1974). A copy of the OA Health and Safety Policy can be supplied. The nature of the work means that the requirements of the following legislation are particularly relevant:

- *Workplace (Health, Safety and Welfare) Regulations 1992* - offices and finds processing areas
- *Manual Handling Operations Regulations (1992)* - transport of bulk finds and samples
- *Health and Safety (Display Screen Equipment) Regulations (1992)* - use of computers for word-processing and database work
- *COSSH (1988)* - finds conservation and environmental processing/analysis

11 Publication proposal

1.1.96 It is proposed to submit the final analysis of the project for publication as an article in The Sussex Archaeological Collections.

1.1.97 The publication will include the results of the archaeological investigations detailed in this assessment and further research carried out in accordance with the Research Aims outlines in Section 9.2 of this report.

11.1 Outline publication synopsis (including approximate word count)

EXCAVATIONS ON LAND TO THE WEST OF MACKIE AVE, HASSOCKS, WEST SUSSEX

By David Mullin

(Approx. 15-20,000 words)

Approximate number of illustrations

Intro figures: 1
Plans: 4
Sections: 2
Finds illustrations: 4

12 Resources

12.1 Personnel

Specialist/staff	Subject
Post Excavation	
Alex Smith (OA)	Project Manager
David Mullin (OA)	Project Officer
Matt Bradley	Geomatics Manager
IT	
Paul Miles (OA)	Computer manager
Finds	
Lisa Brown (OA)	Prehistoric pottery
Rose Grant	Finds administartion
Edward Biddulph (OA)	Roman pottery
Leigh Allen (OA)	Finds manager /CBM
Hugo Lamdin-Whymark (freelance)	Lithics
Kelly Powell (OA)	Metalwork
Cynthia Poole (OA)	Fired clay, daub and tile
Ruth Shaffrey (OA)	Worked Stone
Environmental	
Denise Druce (OA)	Charcoal identification
Lena Strid (OA)	Mammal and bird bones
Dr Rebecca Nicholson (OA)	Environmental Manager/marine molluscs/Fish remains/intestinal parasites
Wendy Smith (OA)	Charred plant remains

12.2 Task list

Task	Task description	Performed by	Days
1000	Management and general costs		
1001	Management	A Smith	5
1002	Project administration/specialist liaison	D Mullin	3
1003	Finds Management	L Allen	1
1004	Finds Administration	R Grant	0.5
1005	CAD/illustrator admin	M Bradley	0.5
1006	Library research	D Mullin	2
1007	Transport of Finds and technical assistance	Technician	1
1008	Environmental Management	R.Nicholson	0.5
1009	Environmental Administration	Supervisor	0.5
2000	Stratigraphy		
2001	Stratigraphic analysis	D Mullin	3
2002	Write stratigraphic narrative	D Mullin	5
2003	Produce briefs for plans	D Mullin	0.5
2004	Produce plans	Illustrator/CAD	3
3000	Finds		
3001	**Prehistoric Pottery:** analysis and report	L Brown	1.5
3002	**Roman Pottery:** analysis and report	E Biddulph	3.5
3003	**Flint:** analysis and report	H Lamdin-Whymark	2
3004	**Metalwork:** analysis and report	K Powell	0.5
3005	**CBM:** analysis and report	L Allen	2
3006	**Illustration of finds**	Illustrator/CAD	5

4001	**Animal bone**	L Strid	0.5
4002	**Charcoal**	D Druce	11.5
4003	**CPR**	W Smith	1.5
5001	Assemble and edit specialist reports	D Mullin	2
5002	Prepare publication text	D Mullin	5
5003	Check illustrations	D Mullin	0.5
5004	Review and edit publication report	A Smith	2
5005	Security copy and archive	N Scott	3

12.3 Gantt Chart

A Gantt Chart for the project is attached.

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Appendix 1: The Prehistoric Pottery

By Lisa Brown

Introduction

A total of 756 sherds (5629 g) of prehistoric pottery was recovered from the site, augmenting the 85 sherds (13370 g) recorded from the 2005 evaluation at Hassocks. The largest component of the 2007 assemblage dates to the middle Bronze Age, but fragments of a late Neolithic/early Bronze Age beaker from a pit were identified and a small group of sand-tempered body sherds from a ditch complex may be Iron Age.

The condition of the pottery is generally poor, with approximately 70% of sherds recorded as highly abraded. The mean sherd weight of the 2007 pottery is only 7.5 g. This is in contrast to a mean sherd weight of 157 g for the HAMA 2005 group, which reflects the recovery of a near complete large middle Bronze Age urn, possibly a cremation vessel. The paucity of diagnostic sherds is interesting and may indicate a high level of redeposition, reflected in the generally poor condition of sherds, or severe truncation/disturbance of *in situ* deposits, possibly including, in the case of large basal sherds, cremation burials.

The flint inclusions of the largest group of pottery doubtless reflects the proximity of the South Downs geology adjacent to the Greensand and gault clays on which the site is located. The glauconitic fabric of the sandy wares probably derived from the latter.

Results

Fabric and Forms

The range of fabrics identified is relatively varied, but 88% count / 89% by weight of the assemblage belonged to two flint-tempered fabric groups, FL2 (10% count / 14% weight) and FL4 (78% count / 75% weight), described in table 1 below. FL2 is a somewhat sandy clay containing generally fine, well-sorted white calcined flint inclusions whilst the largest group, FL4, is a smoother clay containing ill-assorted white and grey calcined fragments, some measuring up t 6 mm. The clays and flint of both groups may derive from similar sources but the sorting and selection of temper and treatment of the vessels is quite different.

Sherds in FL2 are invariably thinner walled and show some attempt at surface finish. Only five diagnostic sherds were identified within this group - four upright or slightly out-turned rim fragments of jars or urns and several sherds making up a small jar with a perforated lug handle. Sherds in fabric FL4 rarely show evidence of surface treatment, even when decorated. Diagnostic examples include two partial bases of very large thick-walled vessels, possibly cremation urns. A boss from a smaller urn, a fingernail impressed sherd and a large, crudely formed horizontal cordon, a well as the coarse nature of the flint inclusions, distinguish fabric FL4 as most likely to belong to the Deverel-Rimbury tradition of the middle Bronze Age.

Fabric FL1 is represented by only 30 sherds (386 g) of which 26 belong to a single vessel. The fabric contains distinctive shiny, highly weathered rounded white, dark grey and red/pink calcined flint pieces, clearly from a different, although not necessarily distant, source to the other flint-tempered fabric groups. The clay base of the four sherds in fabric FL3 contain a very high density of large glauconite pellets, most likely representative of the Greensand of the region. One sherd of the four came from pit 12031 and the remainder from Roman pit 20841.

The very small sandy ware component (QU1, QU3, QU4) of the HAMA07 assemblage is glauconitic and likely to be of local or near-local manufacture. Unfortunately all examples are

body sherds and therefore, very difficult to date with any degree of precision. Fabric QU1 has a small flint component and is probably related to FL2. QU3 is flint free and the fabric, size and general appearance of the sherds, which are all handmade, distinctly resemble Iron Age glauconitic wares from Hampshire and elsewhere in Sussex. It is not impossible that they are instead fragments of late Iron Age or early Roman native coarsewares as they were all recovered from a complex of Roman boundary/enclosure ditches (20809, 20811, 20813). Of the three small sherds of the coarser QU4, which also came from this ditch complex, little can be said except that they are handmade and probably of relatively local origin.

Body sherds belonging to a highly abraded decorated late Neolithic/early Bronze Age beaker were the pottery present in pit 20073. The fabric is lightly sanded with small argillaceous fragments, possibly pale grog. The core is dark grey and surfaces pale reddish with a slightly soapy texture. The poorly preserved decoration consists of horizontal and diagonal linear comb impressions.

Table 1: fabric quantification

Fabric		No	Wt (g)
-	unidentifiable	8	3
FL-	Flint-tempered unidentifiable	2	2
FL1	Common coarse ill-assorted white/grey/pink rounded calcined flint up to 3 mm	30	386
FL2	Abundant well-asssorted calcined white flint < 3 mm in a finely sanded clay	75	778
FL3	Fine sandy clay with abundant fe pellets/glauconite and moderate ill-assorted flint < 4 mm	4	9
FL4	Common coarse ill-assorted calcined white/grey flint up to 5-6mm	589	4220
QU-	Quartz sand-tempered unidentifiable	6	7
QU1	Coarse quartz sand, sparse glauconite, micaceous, sparse-moderate chalk and flint < 3mm	13	50
QU2	Finely sanded slightly soapy fabric with small argillaceous inclusions (Beaker)	14	25
QU3	Fine sand and abundant glauconite (handmade)	12	69
QU4	Coarse rounded quartz sand and glauconite (handmade)	3	10

Table 2: Forms

Cxt	Cxt type	Form	Fab	Dec	Comments
20075	P 20073	Bkr	QU2	comb imp	Decorated beaker
20597	Spread	bossed urn	FL4	boss	Deverel-Rimbury urn
20553	P 20552	BS1	FL4		huge vess base 20 mm
12027	P 12026	BS1	FL4		flat base
20190	Pond 20189	D-R urn	FL4	Fingernail	Deverel-Rimbury urn
20190	Pond 20189	D-R urn	FL4		Deverel-Rimbury rim
20626	P 20625	D-R urn	FL4		Deverel-Rimbury plain rim
20626	P 20625	D-R urn	FL4	horiz cordon	Deverel-Rimbury cordoned urn
20626	P 20625	D-R urn	FL2		Deverel-Rimbury simple urn rim
20500	Spread	D-R urn	FL4	boss	Deverel-Rimbury urn boss
20256	P 20255	D-R urn	FL4		small frag upright plain rim
20626	P 20625	D-R vess	FL2		Thin rim of Deverel-Rimbury vess
20275	PH 20274	handled	FL2		Lug handled jar
12025	P 12024	J	FL2		upright, slightly everted rim
12008	P/PH 12007	Jar	FL1		
20095	P 20094	Urn?	FL4		slight incurved rim, internal bevel
20128	P 21027	Urn?	FL2		

Conclusions / Recommendations

The prehistoric assemblage has been fully recorded, fabric groups established and diagnostic sherds identified to vessel type where possible or, more generally to chronological tradition. The dominant element of the prehistoric assemblage indicates middle Bronze Age occupation of some type with a hint of earlier presence in the form of an abraded beaker. Possible Iron Age activity is suggested by hand made glauconitic sandy wares from a restricted locality on the site.

Fabric source comparanda with other sites in the region should be researched within the published literature but no further analysis is recommended on vessel form/style due to the paucity of diagnostic material. The discussion section will be extended to highlight fabric parallels and link the HAMA07 assemblage to the complex chronology of the Deverel-Rimbury tradition of Sussex (Hamilton 2003). Commentary on relevant taphonomic implications of the middle Bronze Age pottery will also be provided.

Five or six sherds - the beaker, finger-impressed and cordoned sherds, the large jar rim from feature 10027, the lugged jar and the largest of the plain urn rims - could be illustrated to present the stylistic range of the site, although they are so fragmentary that the drawings will not enhance the published regional illustrated sequence.

1.5 days should be allowed for the further research and discussion.

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Appendix 2: The Roman Pottery

By Edward Biddulph

Introduction

A total of 2436 Roman-period or later sherds weighing 15437 g were recovered from the fieldwork. The assemblage was sorted first within context-groups, then into 'sherd-families' or collections of sherds sharing certain characteristics, such as fragments from the same vessel or groups of undiagnostic body sherds belonging to the same fabric. Each sherd-family was quantified by sherd count and weight (in grammes), number of vessels based on rim count (MV), and estimated vessel equivalence (eve), which records the surviving percentage of a complete rim. While there are known pottery production sites in the area and in reasonable proximity to Hassocks, no regional fabrics series or corpus of types exist. However, the fabrics identified correspond broadly to ware-groups typically recognised in the region, and reference has been made to published local forms (eg Lyne 1994; Laidlaw 2002, 29-34; and Luke and Wells 2000, 87-91). In addition, regional corpora proved useful, in particular Hawkes and Hull's *Camulodunum* series (1947), Monaghan's North Kent type series (1987), and samian typologies (cf. Webster 1996). Context-groups were given spot-dates based on the diagnostic material.

Description

Table 1. Quantification of Roman pottery.

Fabric	Source	Sherds	Weight (g)	MV	EVE
Samian wares					
South Gaulish samian ware	La Graufesenque	15	43	1	0.07
Central Gaulish samian ware	Lezoux	19	188	4	0.27
East Gaulish samian ware	Moselle/Rhine Valley	6	97		
Pulborough samian	Pulborough	2	8	1	0.04
Amphorae					
South Spanish amphora	Baetica	2	35		
Fine wares					
Central Gaulish 'Rhenish' ware	Lezoux	1	1		
Central Gaulish colour-coated ware	Allier Valley/Lezoux	2	7		
Colchester colour-coated ware	Colchester	6	49		
Miscellaneous colour-coated ware	Unknown	1	5		
Nene Valley colour-coated ware	Nene Valley	5	12		
New Forest colour-coated ware	New Forest	6	29		
Oxford red colour-coated ware	Oxford	2	3		
Mortaria					
Verulamium-region white ware mortaria	Brockley Hill	1	23	1	0.06
Wiggonholt white ware mortaria	Wiggonholt	2	63	1	0.1
White wares					
Fine white ware	Unknown/?Wiggonholt	4	161	1	1
Sandy white/buff ware	Hardham/Wiggonholt	46	282	1	0.05
Wiggonholt white ware	Wiggonholt	32	400	1	0.12
Oxidised wares					
Fine oxidised ware	Unknown/Wiggonholt	7	21		
Sandy oxidised ware	Hardham/Wiggonholt	57	395	2	0.11
Oxidised storage jar fabric	Unknown/?local	1	102	1	0.11
Reduced wares					
Black-surfaced ware	?Local	110	534	13	1.55
East Sussex grog-tempered ware	East Sussex	1505	8881	91	7.07

Fine grey ware	Local/Hardham	10	36	2	0.09
Flint-tempered ware	?Local	5	103	1	0.04
Grog-tempered ware	?Local	183	1485	10	1.49
Late Roman grog-tempered ware	?Kent	5	68	2	0.11
Reduced storage jar fabric	Unknown/?local	2	102	2	0.09
Sandy reduced ware	Local/Hardham	395	2269	33	2.59
Black-burnished wares					
Black-burnished ware category 1	Dorset	2	28	2	0.08
Black-burnished ware category 2	North Kent	2	7		

Malcolm Lyne (1994, table 1) divided the assemblage from the Roman cemetery at Hassocks into three main phases: early Roman (AD 43-150), mid Roman (AD 150-270), and late Roman (AD 270-410). He found that most pottery (60% by vessel count) was attributable to the mid Roman period. Half as much belonged to the early Roman period, while the late Roman period accounted for a small proportion (8%) of the total assemblage. Applying a similar phasing scheme to our assemblage – pottery dating from AD 120 to after150 was generally placed in the mid Roman category – we can see that the early and mid Roman periods remain important. However, the order is reversed (Table 2): most pottery groups were seemingly deposited before AD 150, while about half as much was assigned to the mid Roman period. Nevertheless, it is clear from both sites that settlement activity declined substantially from the late 3rd century.

Table 2. Chronological distribution of the Roman pottery. Quantification by vessel count (MV).

Ceramic phase	**MV**	**% MV**
43-150	84	49%
43-270	24	14%
120/50-270	46	27%
120/50-410	1	1%
250/70-410	6	4%
Roman	2	1%
Residual in post-med. groups	7	4%
Total	**170**	

The early Roman period (AD 43-150) was dominated by East Sussex grog-tempered ware, which accounted for some 66% of the pottery assigned to this phase by sherd count. Forms comprised mainly jars – everted-rim jars being most popular – supplemented to a much lesser extent by curving-sided bowls. Other grog-tempered wares, included material that was consistent with 'Belgic' type pottery of a late Iron Age or early Roman date, took a 16% share of the early Roman assemblage. Platters and bead-rimmed jars were among the forms identified, and provide a strong indication for occupation commencing before *c* AD 70. Post-conquest sand-tempered wares formed much smaller proportions. Sandy reduced wares represented the baulk of them, though, at 7% of the early Roman phase, remained a minor component. This was supplemented by gritty black-surfaced ware and oxidised wares, all no doubt from the same predominantly local sources, including Hardham. More diagnostic was Wiggonholt white ware, which arrived from the late 1st century. This source was responsible for flagons and mortaria. A little competition for Wiggonholt products, particularly mortaria, came from the Verulamium region. More exotic still was Central Gaulish colour-coated ware and South Gaulish samian ware, though no forms were identified in these fabrics.

East Sussex grog-tempered ware continued to dominate in the mid Roman period (AD 120/50-270), though at a slightly reduced level, accounting for 54% of the mid Roman assemblage by sherd count. Forms were largely unchanged from the previous phase, with everted-rim jars remaining popular. Sandy reduced wares became more important during the

2nd and 3rd centuries, and increased their share to 29%. Jars, mainly everted-rim types, were available in these wares, but were also joined by bead-rimmed dishes. More dishes were recorded in black-surfaced ware and, from Dorset, handmade black-burnished ware. Wheel-thrown black-burnished ware from north Kent also reached the site, though no forms were recognised. Oxidised and white ware products from Hardham and Wiggonholt continued to arrive, but the site now received a greater range of regional finewares. These included Colchester and Nene Valley finewares and, by the end of the phase, Oxford red colour-coated ware. Continental imports were seen more frequently, too. Central Gaulish samian replaced South Gaulish products, and was supplemented by East Gaulish samian and, to much lesser extent, by samian locally-produced at Pulborough. Amphorae arrived from southern Spain.

Relatively few context-groups were dated to the late Roman period (AD 250/70-410). The proportion of East Sussex grog-tempered ware declined further to 38% by sherd count, and new pottery in this fabric is unlikely to have reached the site after *c* AD 300. Forms again were restricted almost exclusively to everted-rim jars, demonstrating a very limited repertoire among potters, although some occurrences of the fabric could well be residual. Another handmade-grog-tempered ware was recorded in this phase, but its fabric and surface appearance was reminiscent of late Roman products from eastern and western Kent (Pollard 1988, 129; 149). The form seen in the fabric – a bead-and-flanged dish – is consistent with a Kentish source. Sandy reduced wares accounted for 33% of the late Roman assemblage. A bead-and-flanged dish was recorded. Wiggonholt white ware was present in this phase, as was New Forest colour-coated ware and residual Central Gaulish samian ware.

The condition of the pottery was generally poor. The mean sherd weight was 6 g, and the average size of rim sherds, often broken at the neck, was just 0.08 eves, or 8% of the circumference. This made form identification difficult, and most vessels could be assigned only to broad types. In addition, surfaces were abraded; the condition of East Sussex grog-tempered ware was particularly poor, with many sherds taking on a 'nibbled' appearance. Based on the limited data on vessel form, the settlement appears to have been low to medium status; jars dominated the assemblage, accounting for 68% by eve. Tablewares – flagons, beakers, cups and dishes – accounted for 25%, though dishes may have been used in the kitchen as well as in the dining room. Low quantities of samian and amphorae were recorded. However, some samian sherds were decorated, pointing to a degree of sophisticated pottery use, for example communal wine or ale consumption (cf. Willis 2005).

Recommendations

The Roman pottery has been fully recorded, and so this assessment will form the basis of the final report. However, the excavation provides a rare glimpse of the settlement at Hassocks (knowledge is otherwise largely confined to funerary evidence), and a little further analysis of the pottery is required:

- The source of some of the gritty grey and white wares cannot be confirmed at this point. A Hardham or Wiggonholt source, some 25 km away from Hassocks, is strongly suspected, but this requires confirmation. Pottery reports pertaining to these and other production sites in the region will be consulted to clarify fabric identifications.
- Fabric and form information from these and other production sites will be used to narrow the dating of context-groups where possible. This will provide a better sense of pottery supply and marketing patterns, contributing to research objectives relating to trade, supply and distribution (Willis 2004, 13).
- In addition, a regional comparison may reveal differences in pottery use and functional composition (Willis 2004, 15; Evans 2001). Study of pottery use will be augmented through the evidence of wear, residues, and repair.
- Functional comparison will also contribute to the question of site status, supported by the examination of indicators such as the proportions of fine and specialist wares, in

particular samian (Booth 2004; Willis 2005, section 7.1). The type of settlement that Hassocks represents is far from clear (perhaps a roadside settlement (cf. Lyne 1994)), but further pottery analysis may help to resolve the issue.

- Finally, the pattern of pottery deposition will be examined to identify means of discard and any associations between pottery and feature types.
- No more than 20 vessels need to be drawn in order to illustrate the chronological and typological character of the assemblage.

Tasks and timings

Pottery analysis and report writing: 3 days
Illustrate pottery (Graphics Office): 3 days
Drawing brief/check illustrations: 0.5 days

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Appendix 3: The Flint

By Hugo Lamdin-Whymark

Introduction

The excavations yielded a total of 316 flints and 1050 pieces (5.698 kg) of burnt unworked flint (Table 1). The assemblage is dominated by hard hammer flake debitage dated to the middle to late Bronze Age. The assemblage was dispersed across a large number of contexts and many pieces are residual, but a few contexts contained moderately sized assemblages, in relatively fresh condition, that may be contemporary with archaeological features. In addition, a small collection of residual flints (*c* 38 pieces) have been dated to the Mesolithic on the basis of technological attributes and the presence of a micro-burin. A fragment of a later Neolithic transverse arrowhead represents the only diagnostic Neolithic artefact, although a small number of Neolithic flakes may be present.

Methodology

The artefacts were catalogued according to broad artefact/debitage type, general condition noted and dating attempted where possible. Retouched pieces were classified according to standard morphological descriptions (Bamford 1985, 72-77; Healy 1988, 48-49; Bradley 1999b, 211-227; Butler 2005). Additional information on condition (degree of edge-damage and degree of cortication), and the state of the artefact (burnt, broken, or visibly utilised) was also recorded. Unworked burnt flint was quantified by weight and number. The assemblage was catalogued directly onto a Microsoft Access database and data manipulated in Microsoft Excel.

Provenance

Struck flint was recovered from 91 contexts, but only four contexts contained more than 10 flints (20074, 20075, 20193 and 20633); 51 contexts contained a single flint. The poor condition of the majority of flints (see below) indicates that most of these artefacts were exposed for a considerable period prior to burial and probably have been re-deposited in later archaeological features. A small number of flints were in comparatively fresh condition and may be contemporary the archaeological features they are contained within. These include contexts 20074, 20075, 20095, 20193, 20229, 20332, 20515, 20553, 20633; the flint from these contexts dates to the middle to late Bronze Age. Burnt unworked flint was recovered in small quantities from 111 contexts across the excavation area. The largest single group was 191 pieces (484 g) from context 20095.

Table 1: The flint assemblage from Hassocks by feature and context.

CATEGORY TYPE	Total
Flake	207
Blade	15
Bladelet	7
Blade-like	10
Irregular waste	28
Chip	1
Micro burin	1
Rejuvenation flake other	1
Other blade core	1
Tested nodule/bashed lump	7
Single platform flake core	3
Multiplatform flake core	2
Core on a flake	2
Unclassifiable/fragmentary core	2
Fragmentary transverse arrowhead	1
End scraper	4
Side scraper	2
End and side scraper	5
Other scraper	3
Awl	1

Piercer	1
Spurred piece	1
Serrated flake	1
Notch	1
Backed knife	2
Retouched flake	4
Fabricator	1
Fragment of burnished flint pebble	1
Hammerstone	1
Grand Total	316
Burnt unworked flint No./Wt. (g)	1050/5698 g
No. of burnt flints (%)*	26 (8.3)
No. of broken flints (%)*	75 (23.8)
No. of retouched flints (%)*	27 (8.6)

* Percentage excludes chips

Raw material and condition

The raw material exploited was a locally available derived gravel flint. The flint varied in colour from light to dark brown. A black flint was also present and small pieces of yellow and orange flint were noted. The cortex was frequently abraded and pitted, but a white cortex, up to 10 mm thick, was recorded on several flints. The raw material appears to have been available in various sized nodules and cobbles, although many appear to have contained significant thermal faults and overall the raw material may be considered to be of relatively poor flaking quality.

The majority of the flint assemblage exhibited moderate edge-damage, characteristic of flint artefacts exposed for a considerable period of time before burial or redeposited into later archaeological features. A few contexts contained flints in fresh condition, but many of these contexts contained only a few flints. Contexts 20074, 20075 and 20193 contained assemblages of over ten flints in reasonably fresh condition; context 20633 contained 25 including a mixture of fresh and edge-damaged pieces.

The majority of the assemblage was free surface cortication, but a small number of flints exhibited a light speckled bluish-white surface or a moderate white cortication. A light to dark orange iron staining was present on 21 flints; many of these flints appeared to date from the Mesolithic.

Storage and curation

The struck flints are bagged individually; the burnt unworked flint is bagged by context. The struck flint is adequately boxed and bagged for long-term storage and curation. The burnt unworked flint (boxes F13-16) and the box of natural flint (F.12) have had been recorded and all worked flints removed; the material in these boxes may be discarded.

The assemblage

The flint assemblage includes pieces dated to the Mesolithic, Neolithic and middle to late Bronze Age. These flints will be considered by period below.

Mesolithic and Neolithic

A small number of flints were of distinctly narrower proportions than the flake debitage, considered below, and exhibited technological attributes indicating they are the product of a blade-orientated industry (i.e. dorsal blade scars and platform-edge abrasion). In total, 38 flints from 24 contexts have been assigned to this group, but this total should be considered a minimum as less distinct contemporary debitage may also be present. Several of the flints were of blade proportions (>2:1 length to breadth ratio), measuring up to 74 mm long, and the majority of flakes had been detached using soft hammer percussion. Two blades from context 20020 were in mint condition and had been struck from the same core although the flints did not directly refit; the context however also included Bronze Age flintwork with edge-damage.

A fragmentary crested blade was recovered from context 20077 and a blade core producing narrow blades up to 55 mm in length on the side of a flake was recovered from context 20644. Four retouched artefacts are considered contemporary with this debitage. These comprise an end and side scraper, a serrated blade, a backed knife, and an edge retouched flake with rounded use-wear; a proximal micro-burin from the manufacture of a microlith was also recovered. The micro-burin dates from the Mesolithic and the technological attributes and flake morphology suggests this date is also appropriate for the other flints (Pitts and Jacobi 1979). The Neolithic is represented by a rolled fragment of a later Neolithic transverse arrowhead from context 20633. It is possible that the assemblage also includes a limited number of Neolithic flakes, but no distinct groups were noted.

Middle to late Bronze Age
The majority of the flint assemblage is composed of broad, thick flakes, struck using hard hammer percussion. The flakes rarely exhibit platform-edge abrasion and most were stuck from simple platforms. Few formal cores were recovered, with only three single platform flake cores, two multi platform flake cores and two cores on flakes; a further flake core, weighing 159 g, had been reused as a hammerstone. In addition, seven tested nodules were retrieved, with each exhibiting only a few flake removals. The cores and tested nodules reflect a reduction strategy that involves the opportunistic removal of short sequences of flakes from chunks of flint where appropriate angles allow flaking. There is no evidence for the formal preparation and maintenance of cores. This reduction strategy is typical of flake-based industries of middle to late Bronze Age date.

The retouched assemblage is dominated by scrapers (13 examples), but also includes a limited range of other artefacts, such as piecing tools (4 examples, including a thick pointed awl), a backed knife, three edge-retouched flakes and a fabricator. The scrapers include a variety of forms, but are dominated by examples with curving semi-abrupt to abrupt retouch manufactured on reasonably large and thick flakes. Other forms include a crude denticulated scraper from context 20308 and two unusual forms with concave abrupt retouch at the proximal end, which removed the bulb (contexts 20661 and 20844). The latter scrapers may represent a specialised form that developed in the middle to late Bronze Age. The fabricator (context 20500) is a relatively crude form measuring 28 mm by 56 mm by 13 mm thick. The tool has been manufactured transversely on a squat flake with the application of abrupt retouch around the perimeter of the artefact to create a rod shaped form. One end exhibits heavy abrasion, typical of use-wear on the tool form. Fabricators are usually considered to date from the Mesolithic to early Bronze Age, but the method of manufacture of this example and the context potentially indicate a middle to late Bronze Age date.

The middle to late Bronze Age assemblage is widely distributed across the site and comparatively few contexts contain flints in fresh condition that many be contemporary with the archaeological features. Small numbers of flints in fresh condition were noted in contexts 20095, 20229, 20332, 20515, 20553, 20633, but only context 20074, 20075 and 20193 contained more than ten fresh flints. These contexts may include some knapping debris, but no refits were located in the assessment.

Potential
The flint assemblage recovered from Hassocks reveals the presence of Mesolithic and, to a lesser extent, Neolithic activity in the excavation area. The assemblage of earlier prehistoric flint is, however, relatively small and further work is unlikely to refine the dating of the assemblage or our understanding of activities performed at this location. The middle to late Bronze Age assemblage is again largely redeposited, although small groups may be associated with contemporary features. Due to intermixing with earlier assemblages, a technological attributes analysis would not aid our understanding of reduction strategies. The assemblage contains a few interesting artefacts (the fabricator and concave scrapers), that if

proven contemporary with the features, will assist in refining the typological date range of these tools. The burnt unworked flint has no potential for further analysis.

Recommendations

No further analysis is recommended, but this assessment should be re-written as publication report of *c* 1000 words with one table. A small number (*c* 7) of the middle to late Bronze Age flints, including the fabricator and two concave scrapers, should be illustrated to characterise the flint from the site. It is also recommended that the boxes of burnt unworked flint and 'natural' flint (F.12-16) should be discarded.

Task list

Task	Time (days)
Report writing (1000 words)	1 day
Write illustration catalogue, brief and check illustrations	0.5 days
Total	**1.5 days**
Illustration and paging up (illustrator)	*c* 2 days

Total cost: 1.5 days @ £225 per day = £337.50

Method statement

The lithic assemblage has been quantified and characterised typologically. During the initial analysis additional information on condition (rolled, abraded, fresh and degree of cortication), and state of the artefact (burnt, broken, or visibly utilised) was also recorded. Retouched pieces were classified according to standard morphological descriptions (e.g. Bamford 1985, 72-7; Healy 1988, 48-9; Bradley 1999, 211-277). These data and the assessment report will be used to generate a publication text.

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Appendix 4: The Stone

by Ruth Shaffrey

Summary and Quantification

A total of 108 pieces of stone were retained. None of these are worked and only one of these may have been utilised. A number of small burnt fragments of stone were also retained.

Methodology

The stone was examined in hand specimen but none was deemed worthy of closer analysis.

Description

Burnt stone totalling 48 fragments and approximately 800g was recovered from four contexts (20783, 20208, 20717 and 20318). Burnt stone is recovered in small quantities on many sites and this quantity is not especially noteworthy. A single pebble has some polish on one of its faces. This may be the result of use but natural causes cannot be entirely ruled out and as such it is not worth following up.

Catalogue of utilised stone

Context	Notes	Size	Wt (g)
20155	Small flat rounded pebble; worn on all sides but polished on one of the two faces. Could be a small polisher but equally possible, the polish could be naturally occurring	Measures 55 x 44 x 18mm thick	70

Catalogue of burnt stone

Context	Description
20783	3 frags, 181g burnt Greensand
20208	26 frags, 193g burnt sandstone
20717	5 frags, 187g burnt greensand
20318	14 frags, 180g frags burnt stone, various sandstone and Greensand

Statement of Potential

The assemblage is small and consists almost entirely of unworked and/or burnt stone and none of it has any potential to add to our understanding of the site.

Recommendations for further work

No further work is recommended.

APPENDIX 5: THE BONE

by Lena Strid

Quantity of material and recording methodology

The Hassock's Field animal bone assemblage consisted of 109 re-fitted fragments, all of which were included in the assessment. A record of the assessed assemblage can be found with the site archive. As of this time of writing, the contexts have not been dated, but most are believed to derive from the Prehistoric and Roman periods. The assessed animal bones were recovered through hand collection during excavation, and is thus biased against smaller fragments and species. A small number of bones were retrieved from sieved residues, but were not included in the assessment.

Methodology

The bones were identified to species using a comparative reference collection, as well as osteological books and articles. Disarticulated ribs and vertebrae, with the exception for atlas and axis, were classified by size: 'large mammal' representing cattle, horse and deer, 'medium mammal' representing sheep/goat, pig and large dog, and 'small mammal' representing small dog, cat and hare.

The condition of the bone was graded on a 6-point system (0-5), grade 0 equating to very well preserved bone and grade 5 indicating that the bone had suffered such structural and attritional damage as to make it unrecognisable.

For ageing, mandibles with two or more recordable teeth (Grant 1982) were noted. Measurable bones were recorded according to von den Driesch (1976).

The assemblage

The assemblage consisted of 61 burnt fragments from fills of pits and ditches and a partial cattle burial (context 20883). None of the burnt fragments could be identified any nearer than large or medium mammal. The burnt fragments are probably mostly Prehistoric, whereas the cattle burial has been dated to the Roman period.

Most bones were in a fairly good condition, with 5.5% being grade 1 and 94.5% being grade 2. Traces of animal gnawing were absent.

The partial cattle burial comprises an articulated skull with mandibles, placed within the back half of a ribcage (see plan 1256). It is uncertain whether the two parts derive from the same animal or not. This feature may be a ritual deposit, although these are very rare in the Roman period, compared to the widespread practice of animal burials during the Iron Age.

Both mandible halves show a mandible wear stage of 47 (M3 tooth wear stage: j, k), suggesting that the cattle was c. 8 years old at death (O'Connor 1988). The presence of age-related pathological conditions on the vertebrae (see below) doesn't contradict the possibility of this being the same animal.

Cut marks indicative of filleting were absent, although three fragments of costal cartilage had been chopped off, likely during butchery of the carcass. Pathological conditions were found on five vertebrae and one mandible. One vertebra displayed eburnation on the rib joint, a sign of degenerative joint disease. Another vertebra displayed minor bone growth on the inter-vertebral joint, suggesting muscle strains. The dorsal spines of three thoracic vertebrae were

flattened anteriorly-posteriorly on their top half. The aetiology for this is unclear. Bone absorption occurred on the left mandible, between P4 and M1. This is usually a sign of periodontal disease, possibly originated by food remains stuck between teeth and causing infection (Baker and Brothwell 1980:153-154).

Recommendation

As the assemblage is very small, and mostly unidentifiable to species, I recommend that no further work will be carried out on it. The sieved bones need to be identified and included in the bone database. In the event of further excavations in the area, the bones would be useful as an addition to these assemblages, and I therefore suggest that the bones be retained.

	Cattle	Medium mammal	Large mammal	Indeterminate	Total no. of fragments	Total weight (g)
20095				5	5	2
20318			1		1	1
20419		7		1	8	2
20420				2	2	2
20429		7	2	7	16	8
20742			1		1	0
20744			3	8	11	8
20777			3	1	4	4
20779			4	1	5	6
20796				2	2	0
20797				6	6	1
20883	48				48	5996
TOTAL	**48**	**14**	**14**	**33**	**109**	**6030**

Table 1. Identified number of bones/species and context in the HAMA07 assemblage.

Time estimation

TASK	TIME
Identify the sieved bones and to produce a publication text	0.5 day
TOTAL	0.5 day

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APPENDIX 6: THE METALWORK

By Kelly Powell

A minimum of 50 metal objects was recovered from the excavation, four of which were copper alloy, two were lead, the remainder of the group was iron. The assemblage had not been x-rayed prior to assessment and on the whole was badly corroded and encrusted therefore its nature was not always clear. The assemblage was recorded in terms of quantity, function and condition, measurements were taken and a brief description was made where appropriate. The data was entered onto an access database to be retained with the archive.

Almost half of the assemblage (22 objects) was recovered from stratified Roman features, 24 objects were unstratified, two were from a post medieval pond, one from an undated ditch and one from a natural feature.

Unstratified

The unstratified assemblage from topsoil and ploughsoil was primarily iron and comprised 10 nails or probable nails, three bolts, a series of rods of varying dimensions, a nut for a screw, a tinned button (copper alloy), a two pence piece (copper alloy), an irregular lump and three flat iron objects, probably miscellaneous fittings. A number of these items were clearly modern, in particular the coin, the button, the bolts complete with nuts, the smaller nut for a screw and several of the nails. Notably these were nevertheless heavily corroded and encrusted, including the two pence piece dated to 1988, indicating soil conditions on the site did not favour preservation of metal objects. Some of the nails and other miscellaneous objects may have dated to the medieval or Roman periods, however their unstratified nature makes this uncertain and of little value. The most interesting of the unstratified finds was a possible iron mount or plaque with two circular protrusions on the reverse for fixing and a possible central hole, the date of which is unknown.

Roman features

Of the metal finds recovered from Roman features only two were copper alloy. A screw from pit 20665 was clearly modern and therefore intrusive. This may also be true of a small circular perforated object resembling the eyelet from a laced shoe from spread 20191.

A total of two lead items were found including an irregular lump, possibly industrial waste from pit 20417 and a small sub circular weight from pit 20817. The latter object was somewhat irregular and not well-finished, with a tapering hole and a flat underside, it weighed 11g and could have dated to the Roman period or later.

The ironwork from Roman features typically mainly comprised fragments of nails or similar structural fittings and was recovered from ditches, pits and postholes. In general these were very fragmentary and corroded therefore are beyond classification. Only two nails were complete enough to be possibly identified as Manning (198*) type 1 nails but this is unclear without x-ray. Some of the nails were noted as having square sections indicating they were potentially Roman in date. Three possible hobnails (Manning type 10) were identified from environmental samples.

Other iron finds include a curved rod, possibly a hook corroded onto a further fitting from pit 20776 and a rectangular sectioned object, possibly part of a blade from posthole 20731.

Other stratified finds

Possible nail fragments were recovered from undated ditch 20746, post medieval pond 20192 and natural feature 20219.

Potential and Recommendations

The assemblage is badly preserved and incomplete and is of little archaeological value. It would be pertinent to x-ray the objects and update the database and interpretation as necessary. A summary of the findings should be included within the publication text.

Appendix 7: The Ceramic Building Material

By Leigh Allen

A total of 139 fragments of ceramic building material (weighing 14,104g) was recovered from the excavations at Mackie Avenue, Hassocks. The bulk of the assemblage was recovered from Roman ditches and pit fills. The assemblage has been briefly scanned and recorded in the table below. Identifiable forms have been noted but at this stage no detailed characterisation of the fabric types has taken place. For the purposes of the assessment the fabrics have only been recorded as either Roman or Post Roman.

Context	*No. frags*	*Weight(g)*	*Tile Type*	*Fab*	*Th. (mm)*	*Ctx date*	*Comments*
13001	1	924	Brick	?	60	-	-
14003	1	2	Misc	RB	-	-	-
15027	1	448	Brick	?	46	-	-
15042	5	134	Misc	?	-	-	-
20000	1	90	Box	RB	17	-	Corner v.abraded + faint combing
20000	1	26	Imbrex	RB	12	-	Same frabric as 20140 imbrex
20000	1	84	Misc	Post RB		-	-
20000	1	28	Plain	RB	-	-	-
20000	1	18	Plain	RB	15	-	-
20000	2	112	Roof/peg	Post RB	-	-	-
20000	5	232	Roof/peg	Post RB	-	-	-
20140	1	2	Imbrex	RB	12	RB 1-3	
20140	1	72	Plain ?	RB	14	RB 1-3	Possible box (curve at one edge)
20268	3	14	Misc	RB	-	RB 1-3	-
20270	1	342	Box	RB	17	RB 1-3	One straight edge on reverse this is cut/finished not broken could be aperture. Single set of combing (Doesn't join with other box frags from this context).
20270	1	280	Box	RB	17	RB 1-3	Complete width measures 115mm. C urving comb design lightly applied. Broken edges show on reverse
20270	1	288	Plain/teg	RB	26	RB 1-3	Groove but no flange
20318	3	30	Misc	RB	-	RB 2-3	-
20318	1	82	Plain	RB	-	RB 2-3	-
20414	1	42	Plain	Post RB	-	RB 2	-
20422	2	20	Misc	RB	-	RB 2	-
20427	4	40	Misc	RB	-	RB 2	-
20427	1	814	Voussoir	RB	18	RB 2	Tapered sides (complete width at base 173mm, towards top 160mm) Heavily applied combing design (cross + both diagonals)
20429	1	24	Plain	RB	26	RB 1-2	Roughly cut block , tess ?
20438	1	30	Plain	?	12	-	-
20640	1	192	Brick		-	RB 1-2	-
20643	4	165	Misc	RB	-	RB 1	-
20646	1	2138	Brick	RB	55	RB 1	Corner frag there is an exgressence (lump) fired into the upper surface
20647	15	436	Miac	RB	various	RB 1-2	A bag containing 15 frags many of which are cut into rough

							blocks. Could be tess. and tess. debris
20672	1	126	Plain	?	incompl ete	RB 1-2	-
20679	1	38	Misc	-	-	RB 1	-
20686	1	44	Misc	-	-	RB 1-2	-
20686	4	34	Misc	-	-	RB 1-2	-
20686	1	280	Plain	RB	35	RB 1-2	
20686	1	186	Teg	RB	24	RB 1-2	Tegula (TFH: 38mm), groove at base of flange. Broken almost at the cutaway but it is just showing
20688	1	14	Plain	Post RB	-	RB 2	-
20693	1	10	Misc	RB	-	RB 1-3	-
20693	1	228	Plain	?	27	RB 1-3	-
20696	10	722	Box	RB	15-17	RB 2-3	Various frags from box tile all same frabric but I can't make them join. Heavily combed patten
20696	10	504	Box	RB	15-17	RB 2-3	Various frags from box tile all same frabric but I can't make them join. Very soft soapy (orange) fabric, frags v. abaded, combing worn.
20696	1	24	Box	RB	16	RB 2-3	Small fragment from the corner of a box tile. Combing pattern on one face
20696	1	286	Box	RB	18	RB 2-3	Damaged corner fragment from a box tile with faint combing pattern on one face
20696	17	108	Misc	RB	-	RB 2-3	-
20696	1	42	Plain	RB	19	RB 2-3	-
20696	1	148	Plain	RB	16	RB 2-3	
20722	1	26	Misc	?	-	-	-
20738	1	40	Plain	RB	18	RB 2	
20738	1	16	Plain	RB	22	RB 2	
20747	2	94	Modern	Post RB	-	-	-
20778	1	78	Plain	RB	21	RB 3	-
20778	1	26	Plain	RB	18	RB 3	
20789	1	10	Misc	-	-	RB 1-3	-
20797	1	634	Brick	RB	39	RB 1-3	
20797	1	56	Plain	RB	15	RB 1-3	
20816	1	240	Box	RB	18	RB 3-5	Frag of box tile with combing pattern on one face
20816	4	152	Misc	RB		RB 3-5	
20816	1	48	Plain	RB	14	RB 3-5	
20816	1	62	Plain	RB	20	RB 3-5	
20816	1	52	Plain	RB	18	RB 3-5	
20816	1	1744	Plain (floor)	RB	38	RB 3-5	Fragment from a large plain floor tile
20876	3	859	Plain (floor)	RB	31	RB 1-3	3 conjoining fragments forming the corner of a large floor tile. Three intercutting shallow finger grooves run straight across upper surface.
TOTAL	**139**	**14,104g**					

Forms and function

The assemblage although relatively small includes a variety of tile types. Roof tile in the form of tegula and imbrex fragments are not well represented, only one fragment from a tegula was recovered from context 20686, and three fragments of imbrex from contexts 20000 and

20140. More numerous were the fragments from box flue tiles identifiable by their characteristic combing pattern (which acts as a key for plaster). A total of 26 fragments were recovered from four contexts (20000, 20270, 20696 and 20816), 22 of which came from context 20696. A single fragment from a box voussoir was recovered from context 20427, it has tapering sides (varying in width from 160-173mm) and a heavily applied combing pattern. Box tiles and box vouissoir are both forms of cavity walling designed to allow heat from a hypocaust system to pass into the space behind walls. Box voussoir are more specifically designed to carry heat across an arch. Floor material in the form of large flat tiles and bricks are also represented in the assemblage. Fragments of large flat tile were recovered from contexts 20816 and 20876, the later was decorated with three inter-cutting shallow finger grooves running across the upper surface. Brick fragments (with a thickness greater than 39mm) were recovered from contexts 13001, 15027, 20640, 20646 and 20797 (the fragments, however, from the first two contexts are probably Post Roman). In addition a small collection of roughly cut blocks recovered from context 20647 could be evidence of tesserae.

The remaining fragments are either small and plain (with a measurable thickness) but not identifiable to type or miscellaneous fragments (with no complete dimensions present).

The assemblage also included fragments of Post Roman roofing material (7 fragments of peg tile from context 20000) and modern field drain (2 fragments from context 20747).

Tile types	*No. frags*	*Weight (g)*
Tegula	1	186
Inbrex	3	92
Box tile	26	2488
Voussoir	1	814
Large flat (floor)	4	2603
Brick	5	4336
Plain tile	22	1800
Misecellaneous fragments	68	1347

Peg tile (Post Roman)	7	344
Modern tile	2	94

Distribution

The bulk of the ceramic building material was recovered from Roman ditches and pits.

Significant quantities of tile, of a variety of forms, was recovered from the fills (contexts 20140 and 20270) of a ditch running close to the Roman timber building and the fill (20427) of a pit to the west of the building. Identifiable tile forms include imbrex, box tile and the box voussoir fragment, which would suggest that this building, or one nearby might have had a tiled roof and a hypocaust system. The fill (context 20647) of a ditch close to, but not associated with, the building produced the possible evidence of tessarae.

A further concentration of tile was recovered from a ditch and a pit associated with a sub-rectangular enclosure (possibly a shrine). Ditch fill 20686 contained the only tegula fragment from the site and pit fill 20696 the majority of the box flue tile fragments from the site. An additional fragment of box flue tile and fragment from a large floor tile were recovered from the fill of a pit (context 20816) which lay just outside the possible shrine. These tile types would again suggest evidence for a nearby structure with a tiled floor, roof and hypocaust system.

Context	*No. frags*	*Weight(g)*	*Tile Type*	*Comments*	*Context data*
20140	1	2	Imbrex		Roman ditch close to timber building
20140	1	72	Plain ?	Possible box (curve at one edge)	
20270	1	342	Box	One straight edge on reverse this is cut/finished not broken could be aperture. Single set of combing (Doesn't join with other box frags from this context).	Roman ditch close to timber building
20270	1	280	Box	Complete width measures 115mm. C Curving comb design lightly applied. Broken edges show on reverse	
20270	1	288	Plain/teg	Groove but no flange	
20427	1	814	Voussoir	Tapered sides (complete width at base 173mm, towards top 160mm) Heavily applied combing design (cross + both diagonals)	Pit to the west of the timber building
20647	15	436	Miac	A bag containing 15 frags many of which are cut into rough blocks. Could be tess. and tess. debris	Ditch close to, but not associated with the Roman timber building
20686	1	44	Misc	-	Ditch associated with a small sub-rectangular enclosure which has pits and a cattle burial in it (possible shrine).
20686	4	34	Misc	-	
20686	1	280	Plain		
20686	1	186	Teg	Tegula (TFH: 38mm), groove at base of flange. Broken almost at the cutaway but it is just showing	
20696	10	722	Box	Various frags from box tile all same frabric but I can't make them join. Heavily combed patten	Pit with in small sub-rectangular enclosure (possible shrine)
20696	10	504	Box	Various frags from box tile all same frabric but I can't make them join. Very soft soapy (orange) fabric, frags v. abaded, combing worn.	
20696	1	24	Box	Small fragment from the corner of a box tile. Combing pattern on one face	
20696	1	286	Box	Damaged corner fragment from a box tile with faint combing pattern on one face	
20696	17	108	Misc	-	
20696	1	42	Plain	-	
20696	1	148	Plain		

20816	1	240	Box	Frag of box tile with combing pattern on one face	Large pit outside possible shrine
20816	4	152	Misc		
20816	1	48	Plain		
20816	1	62	Plain		
20816	1	52	Plain		
20816	1	1744	Plain (floor)	Fragment from a large plain floor tile	

Statement of Potential and further work

The ceramic building material assemblage although small does contain a variety of tile types that can help to inform us about the nature of the possible structures on the site. A full catalogue of the identifiable fragments should be produced including a detailed analysis of the fabrics. A short report should be produced for the publication report and the full catalogue stored with the site archive.

Resources and timings

- Catalogue of identifiable fragments - 1 day
- Analysis of the fabric types of the identifiable fragments -0.5 days
- Production of a short report - 0.5 days.

Appendix 8: The Glass

By Kelly Powell

A total of four small fragments of glass were recovered from the excavation. Fragments from contexts 20647 and 20074 were identified as modern and discarded. A sherd from context 14003 appears to have been window glass but its date is uncertain. The fragment from context 20429 may have been a fragment of early window glass, however it has little analytical potential as a result of its size. Overall, the glass assemblage is of limited value due to its mainly modern nature and the small sherd size. No further work is recommended, although the glass should be incorporated into the final publication if appropriate.

Appendix 9: The Fired Clay

Cynthia Poole

Introduction

A total of 33 fragments (956g) of fired clay was recovered from ten contexts within the excavation. The majority was found in a range of contexts including pits and ditches. The condition of the material is moderately to highly abraded and has a mean fragment weight (MFW) of 29 g, which is surprisingly high. A further 42 fragments (33 g) (MFW 0.8 g) was recovered from sieved samples. The assemblage is summarised in table 1.

Methodology

The assemblage has been visually examined and fully recorded onto an Excel spreadsheet, which forms part of the archive. Fabrics have been characterised on the basis of visible macroscopic characteristics and with the use of a x10 hand lens.

Fabrics

The fabrics have been broadly differentiated into five categories.

A yellowish brown, (grey-black core) fine clay, sometimes laminated; no inclusions.
B red, reddish yellow, buff and grey in colour, laminated/mottled ferruginous clay may sometimes be slightly sandy and generally contains maroon and brown ferruginous clay pellets up to 4 mm.
C yellowish brown, buff, grey sandy clay containing fine-medium quartz sand.
D mid-light orange, red, grey-black fine clay (similar to fabric A) containing angular burnt flint grit 1-8 mm in moderate to high density.
E light orange, pale grey sandy clay, slightly porous, containing calcareous pellets [R] 2-4 mm.

Most of the fabrics have the appearance of locally available clays. Only fabric D has been subjected to a greater level of preparation with the addition of burnt flint grit temper.

Description of the Forms

Only one diagnostic form was identified, the remainder being allocated to either unidentified category (generally amorphous) or utilised (with a plain flat surface). The diagnostic pieces were all identified as fragments of triangular oven brick ('loomweight'). The best preserved came from context 20768, which retained the corner and evidence of two perforations. No complete dimensions were recorded but widths were estimated at c. 70 mm and c. 85-90 mm suggesting two different sizes were in use. The perforations on the smaller size measured 12 mm diameter and those on the larger c. 15-18 mm. The majority were made in fabric B with one in fabric A.

Table 1: Quantification of fired clay forms and fabrics.

		Fabric						
Form	Data	**A**	**B**	**C**	**D**	**E**	Grand Total	%
Triangular Oven Brick	Sum of Nos	1	15				16	48.5
	Sum of Wt (g)	13	813				826	86.4
Unidentified	Sum of Nos	2	3	3	1	3	12	36.4
	Sum of Wt (g)	6	22	12	16	29	85	8.9

Utilised	Sum of Nos			1	2	2	5	15.2
	Sum of Wt (g)			6	17	22	45	4.7
Total Sum of Nos		3	19	5	3	3	33	
Total Sum of Wt (g)		19	841	29	38	29	956	

Discussion

The fired clay provides evidence for the use of triangular bricks, probably as oven or hearth furniture. Though traditionally regarded as loomweights evidence for such a function is conspicuously lacking, whilst an association with kilns or oven debris has been noted (Poole, 1995). One of the fragments found in context 20647 was found in a layer of burnt debris in shallow pit with in situ burning suggesting that the brick was directly associated with an oven base. Another fragment (20713) came from a shallow rectangular pit that would be compatible in form with small Roman ovens. The triangular bricks are in use through out the Iron Age and continue in use into the early Roman period.

The non-diagnostic fragments of fired clay are all likely to derive from hearth floors or oven type structures of a domestic or agricultural character. No evidence for industrial high temperature activity was present.

Poole, C. 1995 Study 14: Loomweights versus oven bricks in *Danebury: an Iron Age hillfort in Hampshire Volume 6 A hillfort community in perspective* (B Cunliffe) CBA RR102

Recommendations

No further work is necessary on the collection; this report may be integrated into any final publication in relation to contextual information.

Appendix 10: The Slag

By Luke Howarth

Only two contexts produced material identified as slag. Both contexts have been phased as Romano-British.

Context: 20816
Two fragments of a pale grey- green colour which is highly vesicular. They are not magnetic. There is no diagnostic form or structure and the fragments contain no inclusions. Material of this type is referred to as Fuel Ash Slag (FAS).

Context: 20217
Three fragments weighing 64g. These fragments are tabular in form, with no lobes or similar features. The fragments look like they may have at some point been one piece. Two distinct surfaces can be identified, one which is highly oxidised, where the slag has partly fused to the underlying surface. The slag shows a chilled margin while the fused sediment is partly baked/ vitrified. In cross section there is a concentration of vesicles close to the upper free surface. The slag has a matt to metallic lustre with a fine crystalline texture. The fragments have variable magnetism, localised spots that are very magnetic and others that are not magnetic at all. Overall these are probably fragments of a smithing slag cake.

Summary:
The fuel ash slag is not very informative, as this can be produced via a number of processes, not necessarily relating to metalworking. The fragments from context 20217 however do actually signify metalworking (most probably smithing). The limited remains would suggest that metal working was quite limited in the area excavated and that this may represent a 'one off'. It may be of use, helping us build a clearer story, to study the residues from the environmental samples from related contexts. Any further work beyond this will probably not be required.

Appendix 11: The Charred Plant Remains and Charcoal

by Wendy Smith

Oxford Archaeology evaluation excavations in 2005 and full excavation in 2007 at Hassocks, West Sussex (NGR TQ 3100 1630) included sampling for the recovery of charcoal and other charred plant remains. Features on site span the Bronze Age through Roman periods. A total of ten samples of between 3 to 10 L volume were sampled from the 2005 evaluation excavations and previously reported on by Seren Griffiths and Professor Mark Robinson (2005). This report includes these results with the assessment of a further 70 samples, ranging in volume from 5 to 40 L.

Sampling on site was carried out to address the following questions:

- Are charred plant remains (including charcoal) present and of interpretable value?
- Do the plant remains provide information on economic plants used? and/ or agricultural activities?
- Do the plant remains provide information on the surrounding environment?
- Does the data indicate changes in the use of plants/ wood fuel over time?
- Does the charcoal provides information on wood fuel selection?
- Do the plant remains provide information on patterns of rubbish disposal on site?

Method

Sample volumes ranged for 5–40 litres and were processed using a modified Siraf flotation machine. Flots were sieved to 0.25 mm and heavy residues were retained in a 0.5 mm mesh. Heavy residues were wet sieved through 4 mm, 2 mm and 0.5 mm graduated mesh sieves. The author assessed charred plant remains (including charcoal) from the 2007 flots using a low-power binocular microscope at magnifications between x12 and x40. The flots were rapidly scanned and, therefore, smaller seeds and plant parts may be under-represented. Unless otherwise stated in Tables 1–4, the entire flot was scanned for charred plant remains and/or charcoal. Identification of charcoal to an individual genus or group was made at x40 magnification; based on the transverse section, using existing breaks. In all cases, only a small sub-sample of charcoal was scanned. Radial and tangential features on the charcoal, which would require higher powers of magnification, were not examined for this assessment. As a result, wood charcoal identifications should be seen as an indication of whether assemblages are varied. Comparative material was not consulted for charcoal and other plant macrofossils identifications during this assessment. As a result, all of the identifications presented here should be seen as highly provisional. In addition, quantification is subjective and likely to underestimate smaller-sized plant macrofossils.

Results

The assessment results for charred plant remains (including charcoal) from both the 2005 evaluation excavations and the 2007 excavation at Hassocks are presented in Tables 1–4. Charcoal and/or charred plant remains were observed in the flots and/or heavy residue fractions; no animal bone was noted and only small quantities of molluscs (all land snails) are present. Nomenclature for economic plants follows Zohary and Hopf (2000) and nomenclature for indigenous taxa follows Stace (1997). The traditional binomial system for the cereals has been maintained here, following Zohary and Hopf (2000: p. 28, Table 3 and p.

65, Table 5).

Table 1, reiterates the assessment results for charred plant remains (including charcoal) from the 2005 evaluation excavation (Griffiths and Robinson 2005). Only one sample from the evaluation excavations was productive. Sample <30>, from the fill of a Bronze Age roundhouse gully produced a relatively abundant charcoal assemblage and frequent remains of Celtic bean (or horse bean – *Vicia faba* L. var *minor*). Robinson (Griffiths and Robinson 2005) also noted possible insect damage on some of the charred beans.

Table 2 presents the assessment results for charred plant remains (only summarising charcoal) from the 2007 excavation. Charred plant remains (eg seeds, nuts, fruits, etc., but excluding charcoal) were particularly scarce. Only trace of cereal grain, cereal chaff and a few weed seeds were noted. As a result, no further analysis of charred plant remains (excluding charcoal) is recommended for the 2007 samples.

Table 3 presents more specific assessment results for charcoal from the 2007 excavation. Charcoal from the 2007 excavations was not particularly diverse, but in some cases was directly associated with structures. As a result, selection of samples for further analysis was based on those samples with a wider that usual range of taxa present or those samples directly associated with a structure (from a post hole, for example). In addition, some samples were rich, but clearly secondary and, therefore, not directly associated with any particular activity. As a result, these samples are probably worth scanning.

Table 4 summarises those charcoal samples from the 2007 excavation recommended either for full analysis or for a rapid scan. In total, 9 samples (from Bronze Age and Roman pits, post-holes and a stake hole) are recommended for full analysis and a further 9 samples (all from pits and mostly Roman) are recommended for a rapid scan to generally characterise the range of taxa present.

Potential

The recovery of Celtic bean/ horse bean (*Vicia faba* L. var. *minor*) has already been identified by Griffiths and Robinson (2005) to be of regional, and indeed national, importance. Recovery of this crop is limited to a handful of sites in southern England; such as Black Patch, Lewes, East Sussex (Hinton 1982); Brean Down, Weston-super-Mare, Somerset (Straker 1990) and Rowden, near Dorchester, Dorset (Carruthers 1991). The recovery of this crop close to another site with such finds alters our understanding of the use of this crop, suggesting that it's rarity from archaeological sites is less likely to indicate unusual use/ cultivation, but instead may be more likely to be due to factors such as limited sampling or taphonomy. Therefore, although it is only one sample, it is strongly recommended that sample <30> from the 2005 evaluation excavations is fully analysed.

Charcoal remains from Hassocks were not particularly rich or diverse; however, occasionally samples produced large quantities of charcoal. Sample <30> from the 2005 evaluation has produced close to 100 fragments of charcoal and is associated with a building. Analysis of this sample, therefore, is likely to provide information either related to the destruction of building or disposal of spent fuel/ hearth sweepings into the roundhouse gully. A further 9 samples from the 2007 excavation have produced good to rich assemblages, frequently associated with structures, which are provisionally dated to the early Bronze Age, Middle Bronze Age and Roman periods. Analysis of these deposits should provide information about the selection of wood fuels, and possibly building materials, used and may provide information on changes in woods selected over time. A further 9 samples, all from pits and primarily of Roman date, have produced rich assemblages that are not particularly diverse. It is recommended that rapid scanning of these assemblages by an experienced charcoal specialist should be carried out in order to establish the range of taxa in use and to provide a

wider comparison to the data generated from the samples selected for full analysis.

Resources required for further charcoal analysis

Task	No. of days required	Personnel	Daily rate	Total Cost
Detailed analysis of 10 EBA-ROM charcoal samples	7.5	Specialist	£170	£1275.00
Rapid analysis of 9 LIA/ RB & MED charcoal samples – to generally characterise fuel use on site	2.5	Specialist	£170	£425.00
Preparation of report	1.5	Specialist	£170	£255.00
Total Cost				**£1955.00**

Resources required analysis of sample <30> from the evaluation

Task	No. of days required	Personnel	Daily rate	Total Cost
Sorting sample <30> for charred plant remains	0.5	specialist	£196	£97.50
Identification and quantification of charred plant remains	0.5	Specialist	£196	£97.50
Preparation of publication quality report	0.5	Specialist	£196	£97.50
Total Cost				**£292.50**

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Table 1: Evaluation results for charred plant remains and charcoal from 2005 evaluation excavations at Hassocks, West Sussex (after Griffiths and Robinson 2005)

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
2	2908	?cremation	Bronze Age	10	No flot									no flot	
3	2908	?cremation	Bronze Age	10	No flot									no flot	
4	2908	?cremation	Bronze Age	10	No flot									no flot	
5	2907	?cremation	Bronze Age	2	No flot									no flot	
6	2907	?cremation	Bronze Age	3	No flot									no flot	
7	2406	ditch	Roman	40	20	+		+	+				c80% modern plant matter- inc modern cereal glume bases, modern insect frags., modern weed seeds. Some vitrified material. Spelt (*Triticum spelta* L.) glume bases observed.	C	No
16	5408	layer, flint materials	Prehistoric	40	15	+			+				c80% modern plant matter, modern weed seeds, worn eggs, insect frags. Some evidence of iron panning	C	No
25	2811	Post hole	?Bronze Age	10	n/a	++							Modern weed seeds, iron panning	C	No
26	2816	Ditch fill	?Bronze Age	40	40	++							Some evidence of iron panning, modern weed seeds.	C	No
30	1423	roundhouse gully fill	Bronze Age	40	80	+++			+	+++			Frequent *Vicia faba* L. var. *minor* (Celtic/Horse bean) observed. Mark Robinson noted B. rufimanusis (bean beetle) damage? Modern weed seeds present.	A	Yes - both CPR & charcoal

Key: + = present (<5 items), ++ = frequent (5-25 items), +++ = common (25-100 items), ++++ = abundant (>100 items)
Potential: A = rich and interpretable assemblage (>300 possible identifications), B = good assemblage (ca. 100-200 identifications possible)
Grey shading indicates sample recommended for further CPR and Charcoal analysis

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1000	20061	post hole		5	<5 ml	+	-	-	-	-	-	-	Only a few fragments of charcoal recovered. No CPR observed. CPR assessed as POOR.	C	No
1001	20072	post hole		10	25 ml	+++	-	-	-	-	-	-	Abundant charcoal recovered. No CPR observed. CPR assessed as POOR.	C	No
1002	20134	Pit		20	<5ml	-	-	-	-	-	+ (in 2-0.5 HR)	-	Modern root. A few small fragments of charcoal - all <2mm. No CPR observed. CPR assessed as POOR.	C	No
1004	20095	Pit		40	10 ml	++++	+	-	-	-	-	-	Modern root present. A few large fragments of charcoal in flot and abundant in 10-4 mm HR fraction. A few indeterminate charred cereal grains also present. CPR assessed as POOR.	C	No
1005	20087	Pit		30	40 ml	++++	-	-	-	-	-	-	Abundant charcoal recovered. No CPR observed. CPR assessed as POOR.	C	No
1006	20136	Pit		40	75 ml	+++	+	-	-	+ (tuber)	-	-	Abundant modern root and some modern wood. Abundant charcoal - mostly <2mm. A few charred grains, some of which is possibly wheat (*Triticum* sp.) present. Part of a tuber observed. CPR assessed as POOR.	C	No
1007	20080	Pit		40	90 ml	+++	-	-	-	+ (hazel nutshell)	-	-	Abundant modern root and charcoal present in flot. Charcoal also present in 10-4mm HR. A few hazel (*Corylus avellana* L.) nutshell fragments present. CPR assessed as POOR.	C	No

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1008	20081	Pit		40	200 ml	++++	+	+	-	++ (hazel nutshell)	-	-	Abundant charcoal recovered. Indeterminate cereal grain, wheat (*Triticum* sp.) free-threshing rachis node and hazel (*Corylus avellana* L.) nutshell fragments observed. CPR assessed as POOR to FAIR/GOOD.	B/C	?No
1009	20082	Pit		40	10 ml	+	-	-	-	-	-	-	Abundant modern root and some charcoal in flot. No CPR observed. CPR assessed as POOR.	C	No
1010	20229	Possible house		40	< 5ml	+	-	+	-	-	-	-	Modern root and a few fragments of charcoal present. An indeterminate emmer/ spelt (*Triticum dicoccum* Schübl./ *spelta* L.) spikelet fork observed. CPR assessed as POOR.	C	No
1011	20235	Pit		20	No flot										
1012	20238	Pit		40	25 ml	+++	-	-	-	-	-	-	Charcoal present in flot and in 10-4mm HR fraction. No CPR observed. CPR assessed as POOR.	C	No
1013	20240	Pit		40	25 ml	+++	-	-	-	-	-	-	Charcoal present in flot and in >10mm & 10-4mm HR fraction. No CPR observed. CPR assessed as POOR.	C	No
1016	20284	Pit		10	no flot	++							no flot		
1017	20273	post hole	?BA	ws 10	no flot	+							no flot		
1018	20275	post hole	?BA	ws 10	no flot	+							no flot		
1019	20279	post hole	?BA	ws 10	No flot	++							no flot		

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1020	20265	Pit		10	220 ml	++++	-	-	-	-	-	-	ca. 25% of flot scanned. No CPR observed. Abundant charcoal - almost entirely oak (*Quercus* sp.). CPR assessed as POOR.	C	No
1021	20286	Pit		20	< 5ml	+	-	-	-	-	-	-	Modern root present. A few flecks of charcoal observed. No CPR observed. CPR assessed as POOR.	C	No
1024	20318	Ditch		8	25 ml	+++	-	-	-	-	-	-	Some modern root. Abundant charcoal in flot and 10-4mm HR fraction - all appears to be oak. No CPR observed. CPR assessed as POOR.	C	No
1025	20326	post hole		10	no flot	+							no flot		
1026	20356	Pit		10	<5 ml	-	-	-	-	-	-	-	Modern root and seed present. A few small flecks of charcoal present. CPR assessed as POOR.	C	No
1027	20358	Pit		20	<10 ml	+	-	-	-	-	-	-	Modern root and seed present. A few charcoal fragments present. No CPR observed. CPR assessed as POOR.	C	No
1028	20074	Pit		30	<10 ml	+++	-	-	-	-	-	-	Modern root and seed present. Charcoal present in flot primarily <2mm. No CPR observed. CPR assessed as POOR.	C	No
1029	20075	Pit		20	<5 ml	++	-	-	-	-	-	-	Only charcoal present in flot. No CPR observed. CPR assessed as POOR.	C	No
1030	20076	pit (bottom)		20	no flot	+							no flot		

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1032	20419	Pit		20	10 ml	++	+	-	-	-	-	-	Modern root. Charcoal present in flot and HR fractions. A few barley grains observed. CPR assessed as POOR.	C	No
1033	20410	Pit		40	50 ml	++++	-	-	-	-	-	-	Modern root. Charcoal present in flot and HR fractions. No CPR observed. CPR assessed as POOR.	C	No
1034	20429	Pit		40	60 ml	++++	-	-	-	-	-	-	Modern root. Charcoal present in flot and HR fractions. No CPR observed. CPR assessed as POOR.	C	No
1035	20427	Pit		40	220 ml	++++	-	-	-	-	-	-	ca. 25% of flot scanned. No CPR observed. Abundant charcoal - almost entirely hawthorn group (POMOIDEAE) and diffuse porous charcoal. CPR assessed as POOR.	C	No
1036	20466	Pit		40	<10 ml	+	-	-	-	-	-	-	Abundant modern root and a few flecks of charcoal observed. No CPR present. CPR assessed as POOR.	C	No
1037	20470	Pit		40	<10 ml	+	-	-	-	-	-	-	Abundant modern root and a few flecks of charcoal observed. No CPR present. CPR assessed as POOR.	C	No
1039	28076	pond fill			no flot	+							no flot - handwriting difficult to read - context could be 20076		
1040	20514	pit		30	no flot	++							no flot		
1041	20515	pit		20	no flot	+							no flot		
1044	20498	pond fill		20	No flot										

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1045	20499	pond fill		10	< 10 ml	+	+	+	-	-	-	-	Modern root present. A few indeterminate cereal grains and 3 indeterminate emmer/ *spelt (Triticum dicoccum* Schübl./ *spelta* L.) glume bases observed. CPR assessed as POOR.	C	No
1048	20518	post hole		30	no flot										
1049	20538	post hole		20	10 ml	+	+	-	+	-	-	-	Modern root present. One indeterminate cereal grain and a few goosefoot (*Chenopodium* sp.) seeds, possibly sub-fossil observed. CPR assessed as POOR.	C	No
1050	20533	post hole		10	25 ml	++	+++	-	-	-	-	-	Abundant modern root. Wheat grain, some of which clearly emmer/ spelt, present as well as indeterminate cereal grain. Preservation is poor. No other CPR other than grain observed. CPR assessed as POOR to GOOD.	B/C	?No
1051	20535	post hole		15	10 ml	+	-	-	-	-	-	-	Abundant modern root. Charcoal present is primarily <2mm. No CPR observed. CPR assessed as POOR.	C	No
1052	20540	post hole		20	< 10 ml	+	-	-	-	-	-	-	Abundant modern root. Small quantity of charcoal present. No CPR observed. CPR assessed as POOR.	C	No

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1053	20546	small pit		10	25 ml	+	+	-	+	-	-	-	Modern root present. Some charcoal present. A single indeterminate cereal grain present. A goosefoot (*Chenopodium* sp.) seed observed, but may be sub-fossil. CPR assessed as POOR.	C	No
1058	20555	small post hole		20	10 ml	+	-	-	+	-	-	-	Modern root present. Some charcoal present. A goosefoot (*Chenopodium* sp.) seed observed, but may be sub-fossil. CPR assessed as POOR.	C	No
1059	20557	Pit		10	< 10 ml	-	-	-	-	-	+	-	Abundant modern root and weed seeds present. Charcoal present all <2mm. Two land snails observed.	C	No
1062	20575	stakehole		10	no flot										
1063	20565	post hole		20	no flot	+							no flot		
1064	20577	post hole		30	20 ml	+++	-	-	-	-	-	-	Abundant modern root. Charcoal present. No CPR observed. CPR assessed as POOR.	C	No
1065	20339	Pit		30	10 ml	++	-	-	-	-	-	-	Abundant modern root. Charcoal present. No CPR observed. CPR assessed as POOR.	C	No
1066	20341	Pit		15	no flot	+							no flot		

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1067	20605	post hole		15	160 ml	++++	-	-	-	-	-	-	Approximately 1/3 of flot scanned. Abundant modern root. Charcoal present. No CPR observed. CPR assessed as POOR.	C	No
1068	20607	post hole		5	10 ml	++	-	-	-	-	-	-	Abundant charcoal in flot, most <2mm. No CPR observed. CPR assessed as POOR.	C	No
1069	20553	Pit		20	20 ml	++	-	-	-	-	-	-	Abundant charcoal in flot, most <2mm. No CPR observed. CPR assessed as POOR.	C	No
1073	20713	Pit		20	10 ml	++	-	-	-	-	-	-	Abundant charcoal in flot, most <2mm. No CPR observed. CPR assessed as POOR.	C	No
1075	20744	Pit		30	175 ml	++++	-	-	-	-	-	-	Charcoal-rich flot. No CPR observed. CPR assessed as POOR.	C	No
1076	20777	Pit		40	225 ml	+++	-	-	-	-	-	-	25% of flot scanned. Charcoal-rich flot, but most charcoal <2mm. No CPR observed. CPR assessed as POOR.	C	No
1077	20781	stakehole		5	100 ml	+++	-	-	-	-	-	-	25% of flot scanned. Charcoal-rich flot. No CPR observed. CPR assessed as POOR.	C	No
1078	20796	Pit		40	200 ml	++++	-	-	-	-	-	-	25% of flot scanned. Charcoal-rich flot. No CPR observed. CPR assessed as POOR.	C	No

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1079	20797	Pit		20	20 ml	+++	++	-	-	-	+	-	100% of flot scanned. Abundant modern root. Charcoal present in flot, but primarily <2mm. Indeterminate wheat (*Triticum* sp.) grain and indetermiante cereal/ Large grass (POACEAE) present. CPR assessed as POOR.	C	No
1080	20772	Pit		10	no flot	+++							no flot - database note that this flot was not located after processing dated 31/8/08		
1082	12025	Pit		40	80 ml	++	-	-	-	-	-	-	25% of flot scanned. Charcoal-rich flot, but most charcoal <2mm. No CPR observed. CPR assessed as POOR.	C	No
1083	12014	Pit		20	200 ml	++++	-	-	-	-	-	-	25% of flot scanned. Charcoal-rich flot and some in HR fractions. No CPR observed. CPR assessed as POOR.	C	No
1084	12035	Pit		30	725 ml	++++	-	-	-	-	-	-	25% of flot scanned. Charcoal-rich flot and some in HR fractions. No CPR observed. CPR assessed as POOR.	C	No
1085	20787	post hole		10	No flot	+							No Flot		
1086	20785	post hole		10	No flot								No flot		
1087	20675	post hole		10	<5 ml	+	-	-	-	-	-	-	100% of flot scanned. A few flecks of charcoal in flot, some recovered from HR fractions. No CPR observed. CPR assessed as POOR.	C	No

Table 2: Charred plant remain assessment results from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal >2mm	Grain	Chaff	Weeds	Other Charred	Molluscs	Bone	Comments	Potential	Further Analysis
1088	20678	post hole		40	<5 ml	+++	-	-	-	-	-	-	100% of flot scanned. A few flecks of charcoal in flot. No CPR observed. CPR assessed as POOR.	C	No
1090	20717	post hole		20	10 ml	+++	-	-	-	-	-	-	100% of flot scanned. Charcoal from flot is primarily <2mm, charcoal from HR fractions present but <30 items overall. No CPR observed. CPR assessed as POOR.	C	No
1091	20674	post hole		30	28 ml	++	-	-	-	-	-	-	100% of flot scanned. A few flecks of charcoal in flot, some recovered from HR fractions. No CPR observed. CPR assessed as POOR.	C	No
1093	20672	post hole		10	26 ml	++	-	-	-	-	-	-	100% of flot scanned. Some large fragments of charcoal present in flot. No CPR observed. CPR assessed as POOR.	C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1000	20061	post hole		5	<5ml	+	++	+++		+++				+++		All looks to be ring porous hard wood, with large rays. It is likely to be oak, but fragments were highly encrusted.	A/B	?Y
1001	20072	post hole		10	25 ml	+++	-	++++	-	++++				++++		All looks to be ring porous hard wood, with large rays. It is likely to be oak, but fragments were highly encrusted. (A few fragments fractured for clearer view of transverse section at x40 mag. Preservation is odd, possibly part-mineralised, very glassy look to charcoal fragments.	A	?Y
1002	20134	Pit		20	<5ml	-	-	+	++	++							C	No
1004	20095	Pit		40	10 ml	+	-	++++	+	++++	+	+	+	+		Much of the charcoal is encrusted, but from the few fragments where the transverse section could be examined it was clear that a range of taxa - oak (*Quercus* sp.), Hawthorn group (POMOIDEAE), hazel/ birch type (*Corylus avellana* L./ *Betula* spp.) and possibly other ring porous hardwood (although slow or fast growing oak cannot be ruled out) were present.	A	Yes

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1005	20087	Pit		30	40 ml	+++	-	+++	-	++++					++++	All charcoal appears to be diffuse porous, with thin rays. Much of it is clearly from roundwood.	A	?Y
1006	20136	Pit		40	75 ml	++	-	+++	-	+++						Less than 100 items of identifiable charcoal present.	C	No
1007	20080	Pit		40	90 ml	+	-	+++	-	+++	+++					All charcoal is heavily encrusted but those examined all appear to be oak.	B	No
1008	20081	Pit		40	200 ml	++++	-	++++	+	++++	++++					All charcoal is heavily encrusted but those examined all appear to be oak.	A	?Y
1009	20082	Pit		40	10 ml	+	-	+	-	++						Less than 10 items of identifiable charcoal present. Unlikely to be interpretable.	C	No
1010	20229	Possible house		40	< 5ml	+	-	-	-	-						Less than 5 items of identifiable charcoal present. Unlikely to be interpretable.	C	No
1011	20235	Pit		20	No flot	-	-	+	+	+						Less than 10 items of identifiable charcoal present. Unlikely to be interpretable.	C	No
1012	20238	Pit		40	25 ml	++	-	+++	-	-	+	+	-	+		Much of the charcoal is encrusted by a few fragments were identified as oak (*Quercus* sp.), hawthorn group (POMOIDEAE) and hazel/ birch type (*Corylus avellana* L./ *Betula* spp.).	B	?Y

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1013	20240	Pit		40	25 ml	++	+	+++	-	+++	?+				+++	Primarily unidentified diffuse porous type hardwood charcoal fragments, some possible oak also observed.	B	No
1016	20284	Pit		10	no flot	-	-	+	+	++	?+				+	Both diffuse porous type hardwood charcoal fragments and possible oak charcoal observed.	C	No
1017	20273	post hole	?BA	ws 10	no flot	-	-	+	+	+						<3 items of charcoal >2mm - not interpretable.	C	No
1018	20275	post hole	?BA	ws 10	No flot	-	-	+	++	++						ca. 20 fragments of charcoal >2mm - unlikely to be interpretable.	C	No
1019	20279	post hole	?BA	ws 10	No flot	-	-	+	-	+						<5 items of charcoal >2mm - not interpretable.	C	No
1020	20265	Pit		10	220 ml	++++	-	-	++	++++	++++					Charcoal from flot appears to be almost entirely oak (*Quercus* sp.).	A	?No
1021	20286	Pit		20	<5 ml	+	-	-	++	+						<10 items of charcoal >2mm - unlikely to be interpretable.	C	No
1024	20318	Ditch		8	25 ml	+++	-	+++	++	+++	+++					Charcoal from flot and heavy residue fractions all appears to be oak (*Quercus* sp.).	B	No
1025	20326	post hole		10	no flot			+								3 fragments of charcoal in 10-4mm HR fraction - unlikely to be interpretable.	C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1026	20356	Pit		10	<5 ml											all charcoal <2mm and only from flot	C	No
1027	20358	Pit		20	<10 ml	+	-	++	-	++	+				+	Most charcoal is <2mm and certainly <20 items of identifiable charcoal are present - unlikely to be interpretable.	C	No
1028	20074	Pit		30	<10 ml	++	+	+++	++	+++	+				++	ca. 25-35 identifiable fragments of charcoal in flot and HR fractions. Most is ring porous type hardwood. A few fragments of oak (*Quercus* sp.) observed.	C	No
1029	20075	Pit		20	<10 ml	++	-	-	-	++				+	+	Only a few fragments of charcoal present in flot. No charcoal recovered from HR. Unlikely to be interpretable.	C	No
1030	20076	pit (bottom)		20	no flot	-	-	+	-	+						Only three fragments of charcoal >2mm recovered - unlikely to be interpretable.	C	No
1032	20419	Pit		20	10 ml	++	+	+++	-	+++	+				+	Oak and diffuse porous hardwood observed in flot. 10-4mm HR fraction charcoal still damp at time of assessment - but seems to have a similar limited range of taxa.	B/C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1033	20410	Pit		40	50 ml	+++	-	+++	-	++++	+	+	+++		+++	Range of taxa present includes oak (*Quercus* sp.), Hawthorn Group (POMOIDEAE), Hazel/ Birch and Unidentified Diffuse Porous Taxa. A possible beech (*Fagus sylvatica* L.) fragment was also present in the 10-4mm HR fraction - however, only 1 annual ring preserved.	A/B	Yes
1034	20429	Pit		40	60 ml	+++	++	+++	-	++++	+++				+++	Much of the charcoal is highly encrusted - but those fragments which could be examined appear to be a fairly even mixture of oak (*Quercus* sp.) and diffuse porous type hardwood.	A	?No
1035	20427	Pit		40	220 ml	++++	++	+++	-	++++		+++			+++	Charcoal appears to be a fairly even mixture of Hawthorn Group (POMOIDEAE) and diffuse porous type hardwood.	A	?No
1036	20466	Pit		40	<10 ml	+	+	+		+						<5 items of identifiable charcoal present. Unlikely to be interpretable.	C	No
1037	20470	Pit		40	<10 ml	+	-	+								<5 items of identifiable charcoal present. Unlikely to be interpretable.	C	No
1039	28076	pond fill			no flot	-	-	-	+	+						<5 items of identifiable charcoal present. Unlikely to be interpretable.	C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1040	20514	pit		30	no flot			++								Only 6 fragments of charcoal recovered - unlikely to be interpretable.	C	No
1041	20515	pit		20	no flot			+								Only 3 fragments of charcoal recovered - unlikely to be interpretable.	C	No
1044	20498	pond fill		20	No flot													
1045	20499	pond fill		10	< 10 ml	+	-	-	-	+						Small quantity of >2mm charcoal in flot, but unlikely to be interpretable.	C	No
1048	20518	post hole		30	no flot													
1049	20538	post hole		20	10 ml	+										A few fragments of charcoal >2mm present in flot, but unlikely to be interpretable.	C	No
1050	20533	post hole		10	25 ml											Small quantity of >2mm charcoal in flot, but unlikely to be interpretable.	C	No
1051	20535	post hole		15	10 ml	+				+						Most of the charcoal in flot is <2mm - unlikely to be identifiable.	C	No
1052	20540	post hole		20	<10 ml	+		+								Only a small quantity of charcoal in flot and 10 - 0.5mm HR fraction >2mm, unlikely to be interpretable.	C	No
1053	20546	small pit		10	25 ml	+				+						Only a small quantity of charcoal in flot >2mm, unlikely to be interpretable.	C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1058	20555	small post hole		20	10 ml	+				+						Most of the charcoal in flot is <2mm - unlikely to be identifiable.	C	No
1059	20557	Pit		10	<10 ml											Only flot present. All charcoal within flot <2mm.	C	No
1062	20575	stakehole		10	no flot													
1063	20565	post hole		20	no flot			+								3 charcoal fragments present in 10-4mm HR fraction only. Unlikely to be interpretable.	C	No
1064	20577	post hole		30	20 ml	+++/ ?+++		Retained		+++	+++			?+		Abundant oak charcoal present. Possible elm (*Ulmus* sp.) charcoal observed.	B	No
1065	20339	Pit		30	10 ml	++	-	++		++						<15 identifiable fragments of charcoal in flot and 10-4mm HR. Unlikely to be interpretable.	C	No
1066	20341	Pit		15	no flot					+ (in 2-0.5 HR)						On fragment of charcoal recovered in 2 - 0.5 mm HR fraction. Unlikely to be interpretable.	C	No
1067	20605	post hole		15	160 ml	++++		10-0.5 mm Retained		++++	++++					Approx. 1/3 of flot scanned. All large fragments of charcoal from flot appears to be oak.	A	?No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1068	20607	post hole		5	10 ml	++		++		+++	++			?+		Charcoal appears to be primarily oak. There is some charcoal with extremely close rings, which could be another form of ring porous hardwood charcoal or could simply be slow-growing oak.	C	No
1069	20553	Pit		20	20 ml	++		++		+++	++			?+		Charcoal in flot largely <2mm. >2mm charcoal fragments in flot and HR 10-4mm fraction both appear to be dominated by oak (*Quercus* sp.) type charcoal. However, a few fragments may be beech (*Fagus sylvatica* L.). Some of the charcoal was quite encrusted, so identified pieces at assessment were limited in this sample.	C	No
1073	20713	Pit		20	10 ml	+	-	++	++	++						<25 identifiable items of charcoal present in flot and HR fractions. Unlikely to be interpretable.	C	No
1075	20744	Pit		30	175 ml	++++	+	++++	-	++++	+++		++			Charcoal somewhat encrusted and eroded, so most fractions could not be examined. Oak (*Quercus* sp.) and hazel/ birch (*Corylus avellana* L./ *Betula* spp.) charcoal present.	A	Yes

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1076	20777	Pit		40	225 ml	++	+	+++	-	+++	++	++	++			Charcoal somewhat encrusted and eroded, so most fractions could not be examined. Oak (*Quercus* sp.),hawthorn group (POMOIDEAE) and hazel/ birch (*Corylus avellana* L./ *Betula* spp.) charcoal present.	B	?Y
1077	20781	stakehole		5	100 ml	+++	-	-	++ (4-0.5 mm HR retained)	+++	++		++	+		Charcoal highly encrusted, but those fragments that could be examined were primarily oak (*Quercus* spp.) or hazel/ birch (*Corylus avellana* L./ *Betula* spp.) type. Possible elm (*Ulmus* spp.) was also observed.	A/B	?Y
1078	20796	Pit		40	200 ml	++	++	+++	++	++++	++	++	++			Much of the charcoal is encrusted, but from those fragments which could be examined, it does appear to be a fairly even mix of oak (*Quercus* sp.), Hawthorn Group (POMOIDEAE) and hazel/ birch (*Corylus avellana* L./ *Betula* spp.) type charcoal.	A	?Y
1079	20797	Pit		20	20 ml	++	-	++								<30 identifiable fragments of charcoal in flot and 10-4mm HR fraction. Unlikely to be interpretable.	C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1080	20772	Pit		10	No flot	-	++	++		+++	+++					ca. 50 fragments of charcoal recovered in heavy residue fractions. No flot. Most of the charcoal recovered is encrusted, but does appear to all be oak (*Quercus* spp.). Some of the oak is very slow-growing.	B	No
1082	12025	Pit		40	80 ml	+	-	++								<25 identifiable items of charcoal present in flot and HR fractions. Unlikely to be interpretable.	C	No
1083	12014	Pit		20	200 ml	++++	++	++++	-	++++	+++	+++				Most of the charcoal is encrusted, but those fragments examined were either oak (*Quercus* sp.) or hazel/ birch (*Corylus avellana* L./ *Betula* L.) type.	A	?No
1084	12035	Pit		30	725 ml	+++	+++	+++	++	++++	+++					Most of the charcoal is encrusted, but those fragments examined were all oak (*Quercus* sp.). (2-0.5mm HR fraction also retained)	A	?No
1085	20787	post hole		10	No flot											A few fragments of charcoal in 10-4 mm fraction Too few to be interpretable.	C	No
1086	20785	post hole		10	No flot													
1087	20675	post hole		10	<5	+										A few fragments of charcoal in flot - unlikely to be interpretable	C	No

Table 3: Assessment of charcoal from 2007 excavations at Hassocks, West Sussex continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1088	20678	post hole		40	<5	+	+	++								ca. 30 fragments of identifiable charcoal - unlikely to be interpretable.	C	No
1090	20717	post hole		20	10 ml	+	-	+++								ca. 30 fragments of identifiable charcoal - unlikely to be interpretable.	C	No
1091	20674	post hole		30	28 ml	+	-	++								ca. 10 items of identifiable charcoal in flot and HR fractions. Unlikely to be interpretable.	C	No
1093	20672	post hole		10	26 ml	+++			Retained		+					ca. 50-70 identifiable fragments of charcoal in flot - unlikely to be interpretable. All charcoal examined from the flot was oak.	B/C	?Y

Table 4: Samples selected from 2007 excavations at Hassocks, West Sussex for further charcoal analysis

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
Samples recommended for full analysis																		
1000	20061	post hole	MBA	5	<5ml	+	++	+++		+++				+++		All looks to be ring porous hard wood, with large rays. It is likely to be oak, but fragments were highly encrusted.	A/B	?Y
1001	20072	post hole	MBA	10	25 ml	+++	-	++++	-	++++				++++		All looks to be ring porous hard wood, with large rays. It is likely to be oak, but fragments were highly encrusted. (A few fragments fractured for clearer view of transverse section at x40 mag. Preservation is odd, possibly part-mineralised, very glassy look to charcoal fragments.	A	?Y
1004	20095	Pit	MBA	40	10 ml	+	-	++++	+	++++	+	+	+	+		Much of the charcoal is encrusted, but from the few fragments where the transverse section could be examined it was clear that a range of taxa - oak (*Quercus* sp.), Hawthorn group (POMOIDEAE), hazel/ birch type (*Corylus avellana* L./ *Betula* spp.) and possibly other ring porous hardwood (although slow or fast growing oak cannot be ruled out) were present.	A	Yes

Table 4: Samples selected from 2007 excavations at Hassocks, West Sussex for further charcoal analysis continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1005	20087	Pit	?EBA	30	40 ml	+++	-	+++	-	++++					++++	All charcoal appears to be diffuse porous, with thin rays. Much of it is clearly from roundwood.	A	?Y - only if EBA
1033	20410	Pit	Roman	40	50 ml	+++	-	+++	-	++++	+	+	+++		+++	Range of taxa present includes oak (*Quercus* sp.), Hawthorn Group (POMOIDEAE), Hazel/ Birch and Unidentified Diffuse Porous Taxa. A possible beech (*Fagus sylvatica* L.) fragment was also present in the 10-4mm HR fraction - however, only 1 annual ring preserved.	A/B	Yes
1067	20605	post hole	undated	15	160 ml	++++		10-0.5 mm Retained		++++	++++					Approx. 1/3 of flot scanned. All large fragments of charcoal from flot appears to be oak.	A	?No
1075	20744	Pit	Roman	30	175 ml	++++	+	++++	-	++++	+++		++			Charcoal somewhat encrusted and eroded, so most fractions could not be examined. Oak (*Quercus* sp.) and hazel/ birch (*Corylus avellana* L./ *Betula* spp.) charcoal present.	A	Yes

Table 4: Samples selected from 2007 excavations at Hassocks, West Sussex for further charcoal analysis continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1077	20781	stakehole	undated	5	100 ml	+++	-	-	++ (4-0.5 mm HR retained)	+++	++		++	+		Charcoal highly encrusted, but those fragments that could be examined were primarily oak (*Quercus* spp.) or hazel/ birch (*Corylus avellana* L./ *Betula* spp.) type. Possible elm (*Ulmus* spp.) was also observed.	A/B	?Y
1093	20672	post hole	Roman	10	26 ml	+++			Retained		+					ca. 50-70 identifiable fragments of charcoal in flot - unlikely to be interpretable. All charcoal examined from the flot was oak.	B/C	?Y
Samples recommended for rapid scanning																		
1008	20081	Pit	Roman	40	200 ml	++++	-	++++	+	++++	++++					All charcoal is heavily encrusted but those examined all appear to be oak.	A	?Y
1012	20238	Pit	undated	40	25 ml	++	-	+++	-	-	+	+	-	+		Much of the charcoal is encrusted by a few fragments were identified as oak (*Quercus* sp.), hawthorn group (POMOIDEAE) and hazel/ birch type (*Corylus avellana* L./ *Betula* spp.).	B	?Y
1020	20265	Pit	undated	10	220 ml	++++	-	-	++	++++	++++					Charcoal from flot appears to be almost entirely oak (*Quercus* sp.).	A	?No

Table 4: Samples selected from 2007 excavations at Hassocks, West Sussex for further charcoal analysis continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1034	20429	Pit	Roman	40	60 ml	+++	++	+++	-	++++	+++				+++	Much of the charcoal is highly encrusted - but those fragments which could be examined appear to be a fairly even mixture of oak (*Quercus* sp.) and diffuse porous type hardwood.	A	?No
1035	20427	Pit	Roman	40	220 ml	++++	++	+++	-	++++		+++			+++	Charcoal appears to be a fairly even mixture of Hawthorn Group (POMOIDEAE) and diffuse porous type hardwood.	A	?No
1076	20777	Pit	Roman	40	225 ml	++	+	+++	-	+++	++	++	++			Charcoal somewhat encrusted and eroded, so most fractions could not be examined. Oak (*Quercus* sp.),hawthorn group (POMOIDEAE) and hazel/ birch (*Corylus avellana* L./ *Betula* spp.) charcoal present.	B	?Y
1078	20796	Pit	Roman	40	200 ml	++	++	+++	++	++++	++	++	++			Much of the charcoal is encrusted, but from those fragments which could be examined, it does appear to be a fairly even mix of oak (*Quercus* sp.), Hawthorn Group (POMOIDEAE) and hazel/ birch (*Corylus avellana* L./ *Betula* spp.) type charcoal.	A	?Y

Table 4: Samples selected from 2007 excavations at Hassocks, West Sussex for further charcoal analysis continued...

Sample	Context	Feature Type	Date	Sample Volume (L.)	Flot Volume (ml)	Charcoal Present in flot	Charcoal present in >10 mm Fraction HR	Charcoal present in 10-4mm fraction HR	Charcoal present in 4-2mm fraction HR	Total charcoal >2mm	Oak (*Quercus* spp.)	Hawthorn Group (POMOIDEAE)	Hazel/ Birch Type (*Corylus avellana* L./ *Betula* L.)	Other Ring Porous Hardwood	Unident Diffuse Porous Hardwood	Comments	Potential	Further Analysis
1083	12014	Pit	?MBA	20	200 ml	++++	++	++++	-	++++	+++	+++				Most of the charcoal is encrusted, but those fragments examined were either oak (*Quercus* sp.) or hazel/ birch (*Corylus avellana* L./ *Betula* L.) type.	A	?No
1084	12035	Pit	undated	30	725 ml	+++	+++	+++	++	++++	+++					Most of the charcoal is encrusted, but those fragments examined were all oak (*Quercus* sp.). (2-0.5mm HR fraction also retained)	A	?No

Scale 1:25,000

Figure 1: Site location

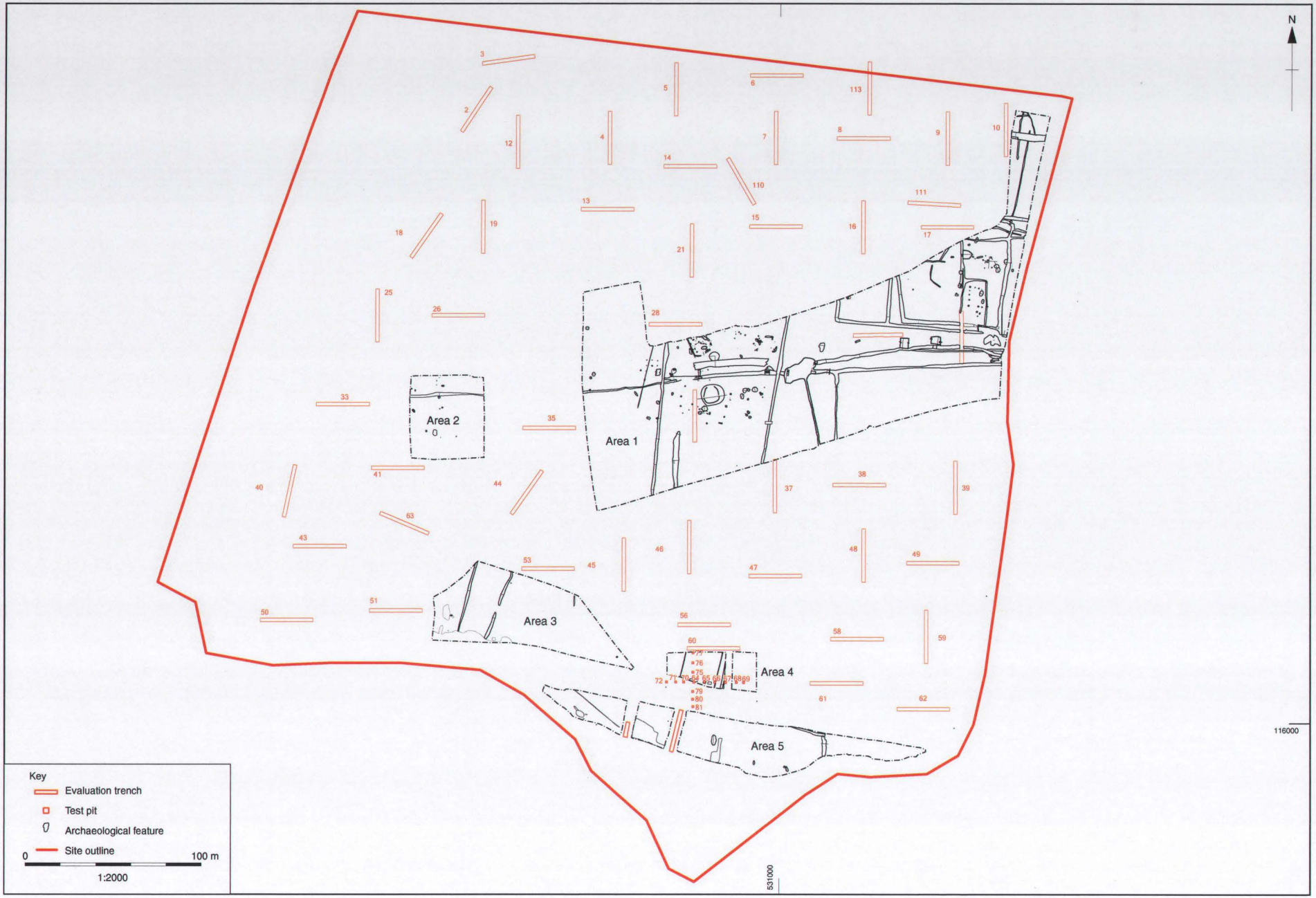

Figure 2: Trench location

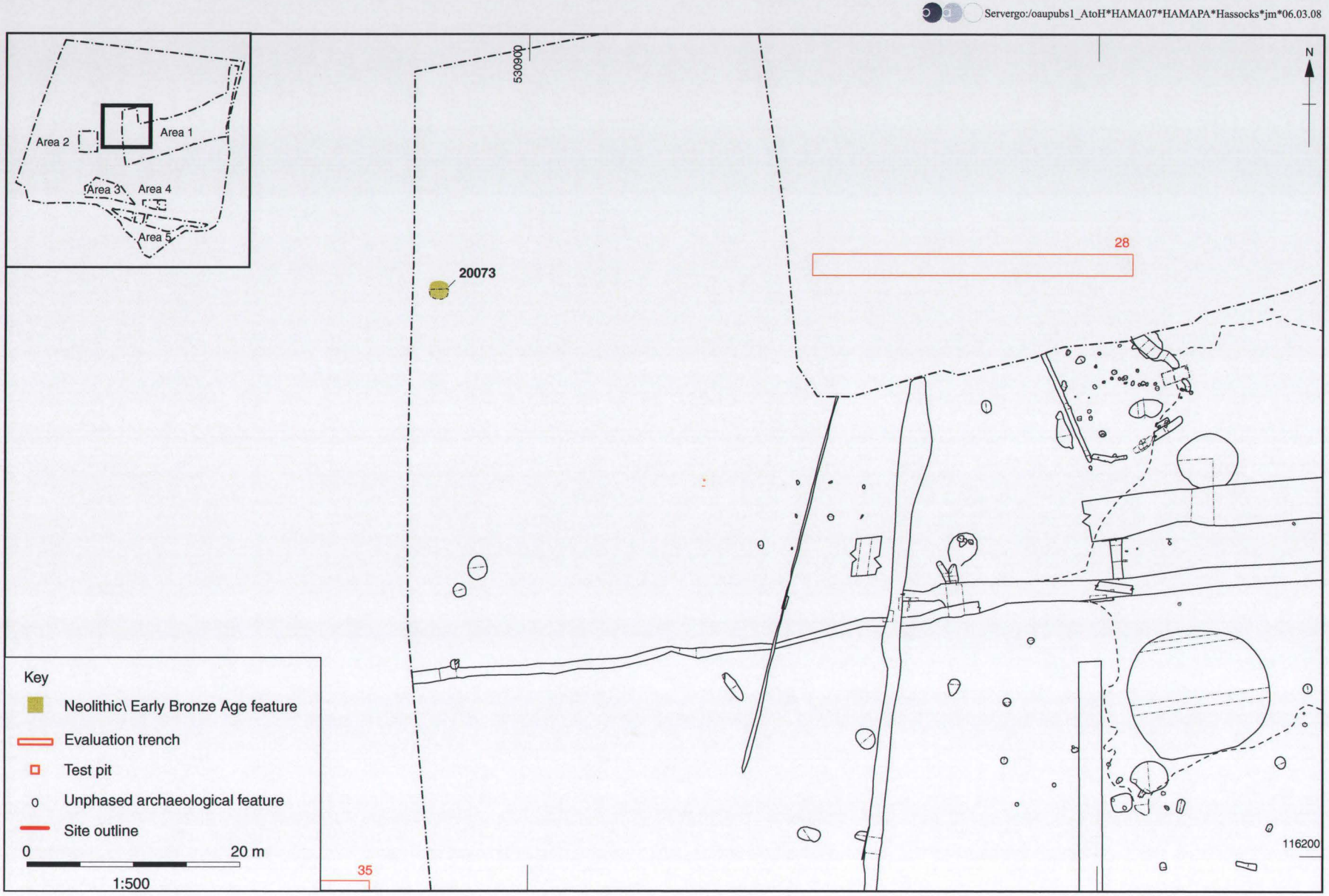

Figure 3: Neolthic\Early Bronze Age features

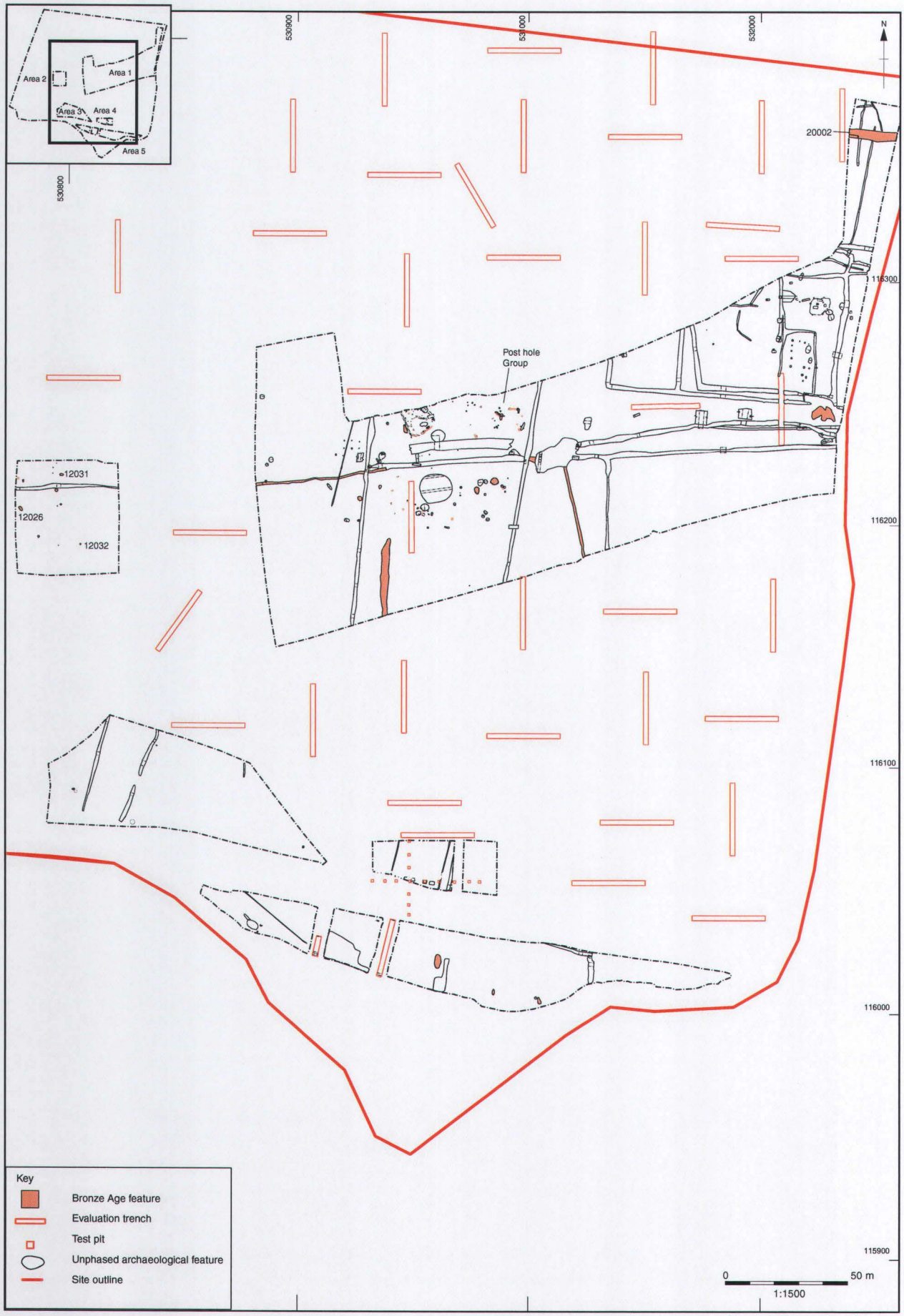

Figure 4: Bronze Age features

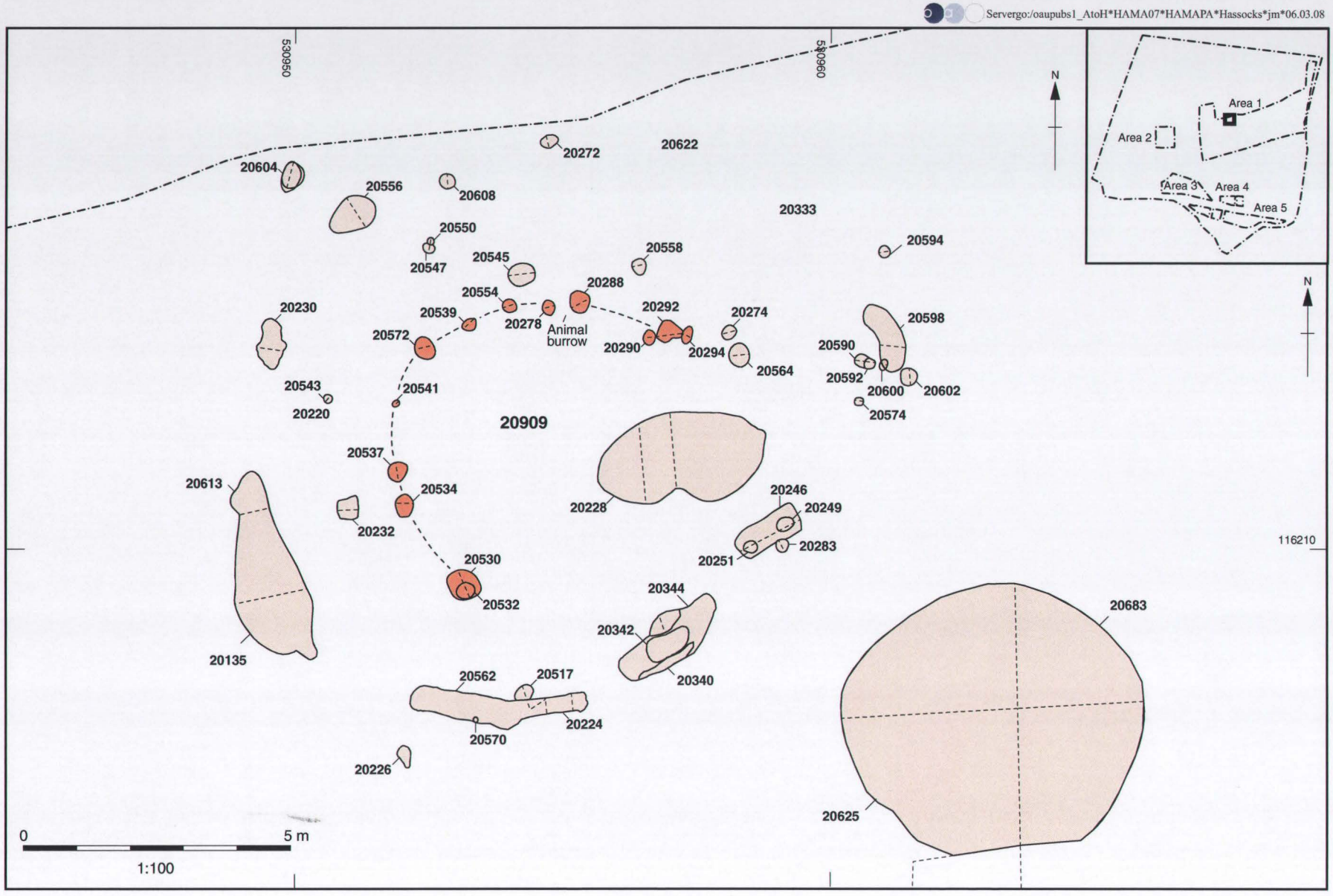

Figure 5: Bronze Age roundhouse 20909

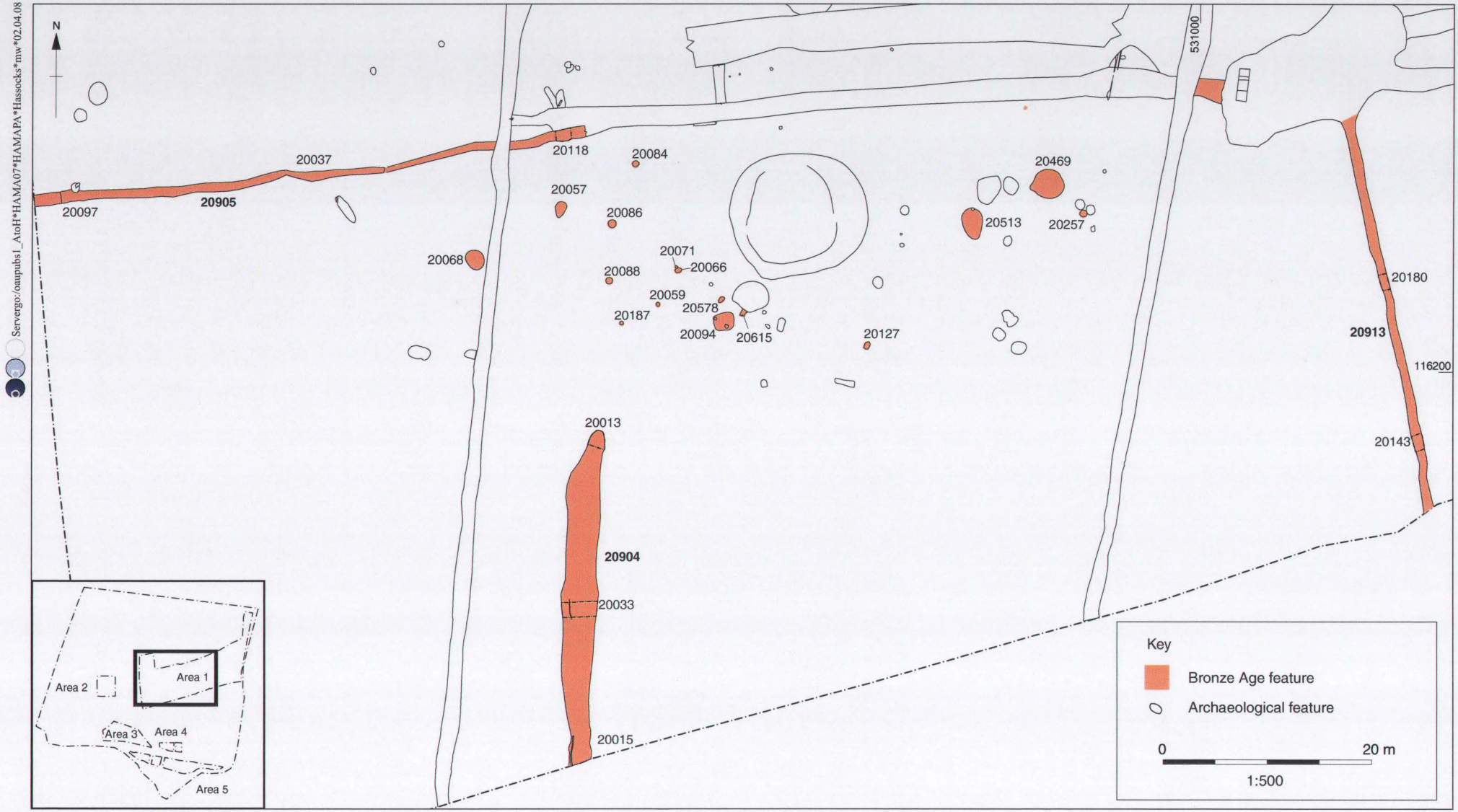

Figure 6: Bronze Age pits and ditches

Figure 7: Roman features

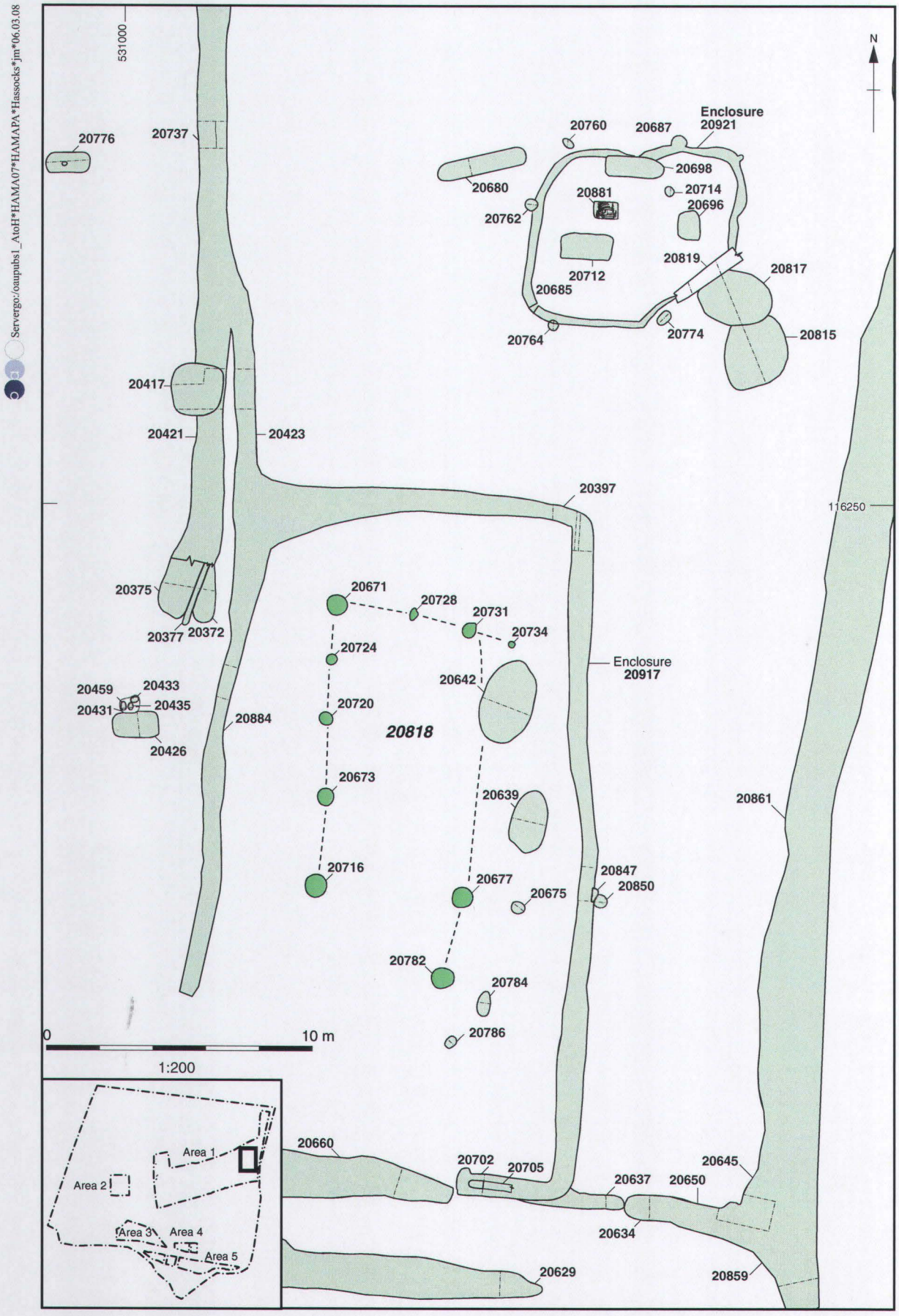

Figure 8: Roman enclosures

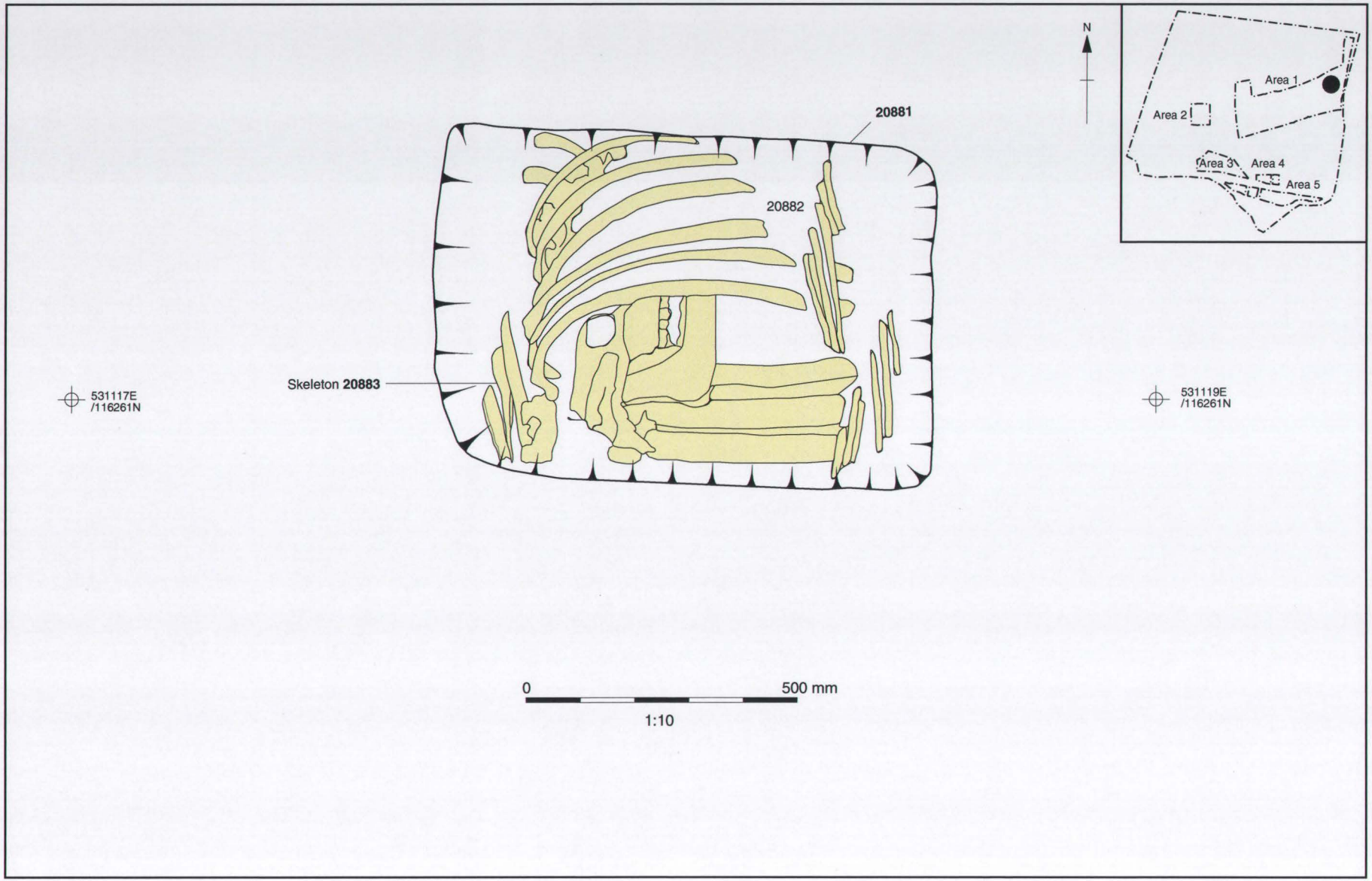

Figure 9: Roman animal burial

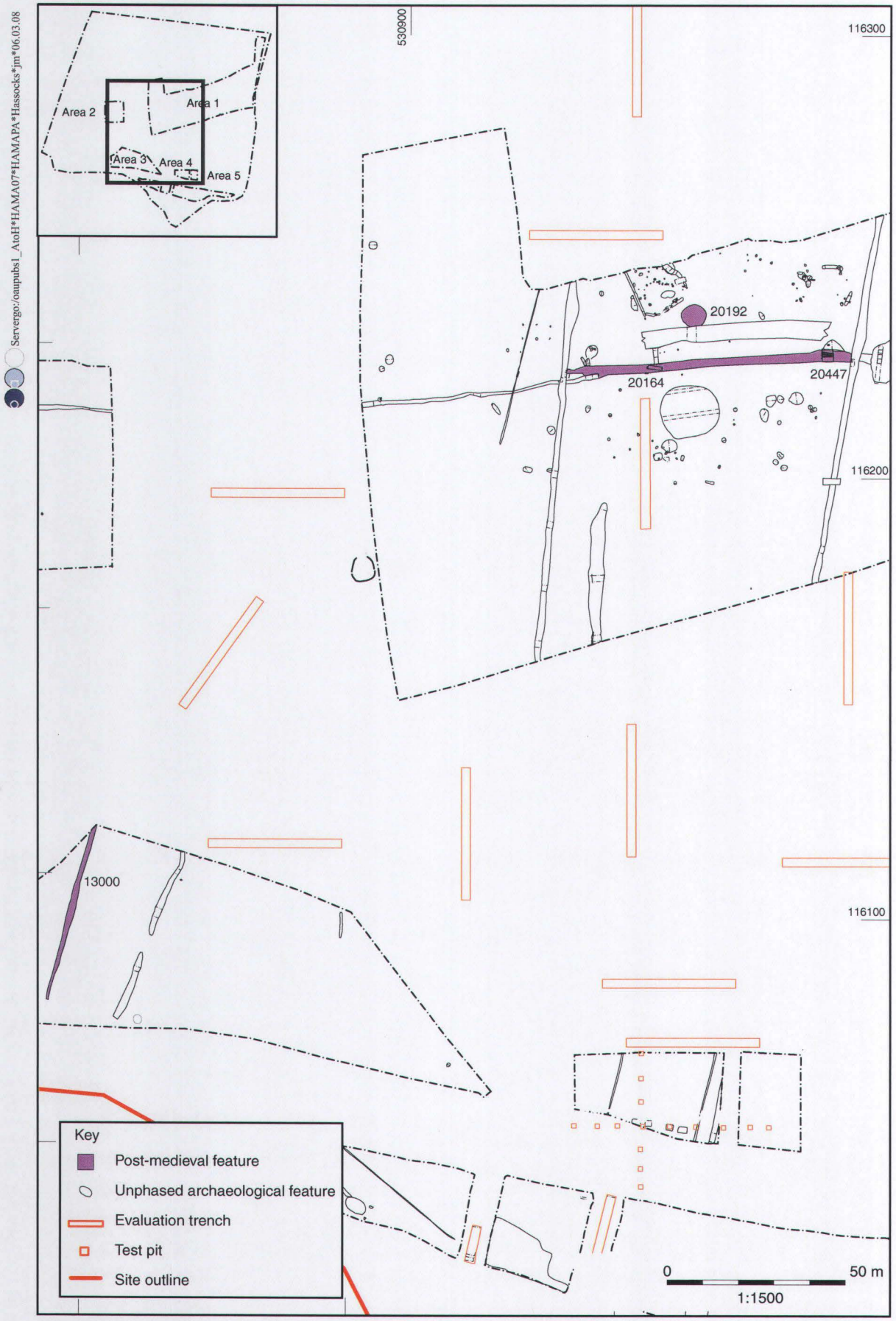

Figure 10: Post medieval features

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