The Waste Management Park, Waterbeach, Cambridge.

The Hammerhead: An Archaeological Excavation.

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Summary

An archaeological excavation was undertaken by Cambridge Archaeological Unit (CAU) at the Waste Management Park, Waterbeach, Cambridge (TL 486 688) in advance of the construction of a hammerhead turning area for emergency vehicles, associated with the new Mechanical Biological Treatment Plant at the site.

Excavations revealed relatively dense Romano-British remains comprising a rich midden deposit, the postholes of an aisled building and elements of a series of enclosure ditches. The features, particularly the midden deposit, produced a finds assemblage including over 3000 sherds of Roman pottery and 55 Roman coins, which suggest a 2nd-4th century AD date for the remains. The work is a continuation of a long running fieldwork programme on the Waste Management Park site and many of the features exposed relate directly to archaeological remains recorded during the excavation of an adjacent site in 2007. The site is located within a comparatively densely settled Romano-British landscape – as indicated by extensive cropmarks – and is located in close proximity to a temple site to the north-east.

1.0 INTRODUCTION

An archaeological excavation was undertaken by Cambridge Archaeological Unit (CAU) at the Waste Management Park, Ely Road, Waterbeach, Cambridge (TL 486 688) in January / February 2009 (Figure 1). The work was carried out in advance of the construction of a hammerhead turning area for emergency vehicles, associated with the new Mechanical Biological Treatment Plant at the site. The excavation area comprised a 0.05ha site immediately to the south of the Mechanical Biological Treatment Plant, adjacent to Beach Ditch.

The project was undertaken on behalf of BAM Nuttall Ltd for Donarbon Waste Management Ltd. Work was carried out in accordance with a project design specification (Beadsmoore 2008) produced by the CAU and approved by Andy Thomas of Cambridge Archaeology Planning and Countryside Advice.

1.1 Geology and topography

The site lies on the southern edge of the Cambridgeshire fens at a height of between 2.2m and 3.2m OD. The underlying geology comprises 1st and 2nd Terrace Gravels, overlying Kimmeridge Clay and Lower Greensand (British Geological Survey 1978).

The excavation area was situated in the northern corner of an open field, immediately adjacent to, and south of, the Mechanical Biological Treatment Plant. The field lay fallow at the time of excavation.

1.2 Archaeological Background

The site has been the subject of a long-running programme of archaeological investigation associated with the development of the Waste Management Park undertaken by the CAU between 1992 and the present (Wait 1992; Oswald 1992; Gibson 1999; Masser 2000; Cooper and Whittaker 2004; Ranson 2008, Slater 2009). The archaeological and historical background of the Ely Road site is detailed in the Desktop Assessment (Gibson 1999) and elaborated upon by Ranson (2008). The archaeological background is summarised below:

Prehistoric

Scatters of worked and burnt flint dating to the Mesolithic, Neolithic and Neolithic - Early Bronze Age periods are well documented in the surrounding 'fen edge' landscape, largely as a result of field walking projects. In addition a Neolithic flint scatter was identified at Gravel Diggers Farm, alongside a palaeochannel and potentially associated with a number of pits containing worked wood, bone and burnt flint (Oswald 1992). Further Bronze Age remains, including settlement and a number of potential barrows, have been recorded to the south of Waterbeach at Milton and Stow-Cum-Quay Fen.

Iron Age activity is recorded to the south and west of Waterbeach, where field systems with Iron Age origins, have been excavated along pipeline / cable routes between Histon and Waterbeach (Dickens et al 2003) and Cottenham and Landbeach (Hall 1999). Iron Age field systems and settlement have also been excavated at Milton (Diez 2005). Much of the evidence for Iron Age activity in the landscape has been encountered during the excavation of Romano-British sites, particularly field systems, which have been found to have Iron Age origins.

Romano-British

The 2nd century AD saw rapid expansion into the Cambridgeshire Fens and fen margins, and the establishment of extensive transport links and infrastructure (see Figure 2). The presence of the projected route of Akeman Street Roman road (the present day A10) and Car Dyke - a major Roman canal / drainage feature - to the south-east and south-west of the Ely Road site respectively, are a reflection of this expansion. Such newly established transport links and drainage systems facilitated the exploitation of a vast economic resource in the drained fenland and fen margins and areas such as the Ely Road site became prime locations along busy trade routes.

Extensive Romano-British settlement is recorded throughout the surrounding area and field systems, drove ways and settlement enclosures are visible as cropmarks on aerial photographs (Figure 3). To the north-west of the site, a well preserved Romano-British settlement has also been identified at Bullocks Haste, Cottenham and to the south and south-west, evidence of enclosures, drove ways and paddocks have been encountered along the cable / pipeline routes between Histon and Waterbeach (Dickens et al 2003) and Cottenham and Landbeach (Hall 1999).

The Ely Road site has also been identified as the former site of a Romano-British temple. The location and plan of the temple is known only from cropmarks visible on aerial photographs as the site was quarried in 1980 (Figure 3). Cropmarks suggest the temple comprised a cella - a central space or room - surrounded by an ambulatory which was in turn surrounded by a large blank area enclosed by a ditch, which has been interpreted as the temenos - a sacred precinct/enclosure (Evans and Hodder 2006). Little is known about the temple although more than 100 4th century AD Roman coins were recovered from the site in 1980 (Taylor 1985). The temple is thought to be the largest in the region, certainly much larger than potentially only seasonally used shrines such as that at Haddenham (Evans and Hodder 2006), and was probably an important ritual centre.

Recent excavations at the Waste Management Park (Figure 3)

Archaeological evaluation of the site by the CAU in 2000 recorded a field system with associated drove way and settlement related activity, including a possible midden (Masser 2000). In addition an undated cremation was recorded adjacent to the former temple site (*ibid.*).

Subsequent phases of open area excavation at the Ely Road site have revealed significant Roman remains. Excavations in 2007 (Ranson 2008) produced evidence of

occupation from the early 2nd century AD through to at least the late 3rd century AD. Archaeological features included a series of enclosures, part of a drove way with associated metalled surface, potential structures, quarry pits and a possible watering hole. Of greatest significance, however, was a rich midden deposit which yielded over 5000 sherds of mid to late Roman pottery as well as 75 Roman coins largely dated to the early to mid 4th century. In addition evidence of potential links with the temple site were recovered in the form of a votive copper alloy model of a human leg and the high occurrence of ovacropid and bird bone in the animal bone assemblage potentially indicating sacrifice.

Further excavations in 2008 (Slater 2009) prior to drainage ditch widening works exposed a series of Romano-British ditches, largely continuations of features identified in the 2007 excavations, as well as potential prehistoric ditches, to the south-west of the current excavation area.

Medieval

Seasonal flooding of the fens and the subsequent neglect of Roman drainage systems resulted in a retreat from the fen edge following the end of the Romano-British period. As such Saxon and medieval settlement activity in the area is largely focused around the present day villages of Waterbeach and Cottenham. One exception to this is Denby Abbey, to the south-east of the Ely Road site, which was founded in the 12th century and was originally built on a fen island. In addition Beach Ditch immediately to the north-west of the excavation area is thought to be of medieval origin (Ravensdale 1974).

2.0 METHODOLOGY

Topsoil and subsoil layers were removed using a 360° tracked excavator fitted with a toothless bucket and operating under direct archaeological supervision at all times. Soil stripping was undertaken in two phases in order to allow sample excavation and metal detector survey of the *in situ* midden and buried soil deposits.

The site was located using an advanced Global Positioning System (GPS) with Ordnance Datum (OD) heights obtained. Potential archaeological features were planned at a scale of 1:50 and subsequently sample excavated. All potential features were hand excavated and archaeological finds were retained. Environmental bulk soil samples were taken from selected features. A written record of archaeological features and *in situ* buried deposits was created using the CAU recording system (a modification of the MoLAS system) and sections were drawn at an appropriate scale.

Buried soil and midden deposits were sampled by excavating alternate 1m squares on a grid covering the extent of the deposits. Finds were collected and bagged separately for each 1m square in order to enable the future production of finds distribution plots.

Metal detector survey of *in situ* buried deposits as well as all archaeological features was undertaken using XP detectors by experienced detectorists from the Cambridge

Archaeological Unit. All metal finds recovered during the survey were 3D plotted using GPS.

3.0 RESEARCH AIMS

The aim of the excavation was to define the Romano-British settlement that extends into the area.

More broadly, the excavation aims were;

(i) To determine the extent, character and date of the archaeological deposits and features revealed throughout the designated area.

(ii) To determine, as far as possible, the origins, development, function, character and status of the site.

(iii) To establish the stratigraphic sequence of the site, the date of the features and the 'occupation' horizons, and the nature of the activities carried out at the site during the phases of its occupation.

(iv) To place the findings of aims (i) to (iii) in both regional and national research contexts.

4.0 RESULTS

Excavations exposed relatively dense Romano-British remains within the excavation area, especially given its limited size. The major archaeological feature encountered was a rich midden deposit which yielded the vast majority of the site's finds. Upon removal of the midden and buried soil deposits – which effectively masked further archaeological remains - a series of ditches, representing multiple phases of enclosures, as well as the remains of a substantial aisled building were revealed (see Figure 4).

All of the features on site fall within a broad 2nd-4th century AD date range with the only evidence of earlier prehistoric activity being a single residual worked flint flake (Billington, below).

4.1 Buried soil deposits

An underlying buried soil deposit, sealing the natural gravel deposits, was recorded over the northern part of the site. The buried soil **[1045]** comprised a light greyish orange brown silty sand and survived to a maximum depth of 0.3m. All of the archaeological features appeared to be cut through the buried soil [1045] which yielded 2nd-3rd century AD pottery (Anderson, below)

A second probable buried soil horizon **[1020]** was recorded overlying buried soil [1045]; this deposit was far richer, in terms of finds, and darker in colour than [1045],

and survived to a maximum depth of 0.2m. It was partially overlain by midden deposit F.233 (see below) and produced a total of 514 sherds of 2nd-3rd and 3rd-4th century pottery as well as ten Roman coins, five of which can be dated to the late 1st to 2nd century AD coins (Appleby and Hall, below).

Both buried soil deposits are considered to pre-date the majority of features on site, most notably Structure I and midden F.233 (see below), however, it is important to note that the buried soil was not a 'sealed context' until the site fell out of use. As such the incorporation of material from throughout the site's use, into the buried soil, has clearly occurred. This is evidenced particularly by the chronologically mixed finds assemblage from buried soil deposit [1020]. It also seems likely that the distinction between buried soils [1045] and [1020] is only as a result of the proximity of the latter to midden F.233 which effectively enriched the soil around it.

In the south of the site, to the south-east of F.235 buried soil was absent, apparently having been truncated by later ploughing.

4.2 Enclosures and ditches

A series of small enclosures, some of which clearly pre-date the aisled building and midden deposit (see below) were recorded. The layout of the ditches suggest at least three phases of enclosure are present, however, any attempt to identify the chronological development is hindered by the limited size and shape of the excavation area as well as a lack of closely dateable pottery. Ultimately, only two ditches were found to have a stratigraphic relationship and based on pottery assemblages all of the ditches fall into a 2nd-3rd or 2nd-4th century AD date bracket.

A number of features appear to relate to a large enclosure - which also forms the southern boundary of the potential temple temenos - visible on aerial photographs and identified during the 2007 excavation (Figure 5). Probable ditch **F.234,** which was only just visible on the edge of the excavation area, contained 2nd-3rd century pottery and potentially represents part of this enclosure. Although only partially exposed it can be speculated that F.234 is a continuation of F.20 / F.21 – identified as the main enclosure ditch in the 2007 excavation - which also contained 2nd-3rd century AD pottery (Ranson 2008).

A potential sub-division of the enclosure was created by ditch **F.235.** The ditch produced 2nd-4th century AD pottery and is a continuation of F.40 from the 2007 excavation which is thought to date to the 3rd century (Ranson 2008).

The large enclosure ditch **F.262** was further sub-divided to create a small enclosure or paddock in the northern corner and is potentially contemporary with the construction of Structure I (see below). F. 262 was only partially exposed within the excavation area and had no stratigraphic relationship with any other feature, consequently only a broad 2nd-4th century AD date can be assigned based on the pottery. The presence of a midden-like upper fill also suggests that the final in-filling of the feature occurred after the deposition of midden F.233 (see below).

Two further ditches may also represent sub-divisions of this large enclosure, however, given the lack of chronological definition it is also possible that they pre-date it and belong to an earlier field system layout. **F.238** was aligned north-west to south-east before turning at a right angle to the north-east, apparently forming the south-western corner of an enclosure. It produced broadly 2nd-4th century AD pottery and is the same feature as F.41 recorded in the 2007 excavation (Ranson 2008). F. 238 was truncated by **F.239** which extended across the excavation area on a north-west to south-east alignment, the ditch fills yielded 2nd-3rd century AD pottery.

Ditches **F.236**, **F.237**, **F.240** and **F.243**, located on the south-western edge of the excavation area are of unknown function and once again all fall within the same 2nd-3rd or 2nd-4th century AD date bracket. **F.236**, **240** and **243** were all ditch butt-ends, terminating just within the excavation area and F. 236 was notable for its rich finds assemblage which included 287 sherds of pottery largely dating to the 2nd-3rd century AD. Much of this material almost certainly derives from midden deposit F.233. **F.237** fell entirely within the excavation area and is potentially broadly contemporary with midden deposit F.233 (see below) and Structure I. Once again, the in-fill of the ditch appears largely to be made up of midden material which has slipped, or perhaps been deliberately dumped, into the ditch and included 177 sherds of largely 2nd-4th century AD pottery, quernstone fragments (Timberlake, below), animal bone and a worked bone pin (Appleby, below).

4.3 Structure I: The aisled building

The remains of an aisled building, partially exposed within the excavation area, were key to the development of the site and the location of the subsequent midden. Structure I (see Figures 6 and 7) was located in the northern part of the excavation area and extended beyond the edge of excavation to the north. The structural remains comprised eleven postholes (**Fs. 242, 245, 246, 251, 252, 253, 256, 257, 258, 263** and **264**) which formed the south-eastern wall and part of the north-eastern and south-western walls of the building. A further five post settings (**Fs. 241, 247, 248, 250** and **260**) clearly mark the position of central aisle posts. The true scale of the building is unknown; at most half of the structure was revealed within the excavation area, measuring 10m south-west to north-east and a minimum of 7.5m south-east to north-west.

Once again, pottery recovered from the structure provides only a broad indication of date. An approximate *terminus ante quem* for the feature is potentially provided by the presence of an almost complete mid 2nd-3rd century AD East Gaulish bowl deposited in posthole F.242, presumably after post removal. In terms of the overall site sequence, postholes F.260 and F.263 clearly cut and, therefore, post date ditches F.238 and F.239. The relationship with ditch F.234, which initially appears to truncate Structure I is, however, more ambiguous (see below).

Immediately to the north-east of Structure I, and on the same alignment as the north-eastern wall, two beam slots (or alternatively an interrupted gully), **F.261**, were recorded. While these may be associated with Structure I it is also possible that the beam slots belong to a further structure located to the north-east of the limit of excavation.

4.4 The midden

As described in the methodology, the midden deposit was sampled by excavating alternate 1m squares on a grid covering the extent of the deposit (see Figures 6 and 7). This sampling strategy allows for future analysis of distribution and density of finds within the midden deposit. In addition a series of bulk soil samples were taken for wet sieving in order to retrieve small animal and/or bird bones that may have been missed during on-site excavation.

The midden deposit, **F.233**, comprised a spread of rich dark grey to black sandy silt measuring approximately 13.5m by 8.5m (Figure 7). It survived to a maximum depth of 0.2m and yielded a rich finds assemblage including 1942 sherds of pottery, broadly dated to the 2nd-4th century AD, and 33 Roman coins, 23 of which can be confidently dated to the late 3rd to 4th century AD. A plot of the metal detector finds from the midden and other contexts is shown in Figure 8. Other finds comprised animal bone (Rajkovaca, below), oyster shell (Cox, below) and tile (Anderson, below) as well as further metalwork including a copper alloy finger ring and a copper alloy brooch (Appleby and Hall, below).

The extent of the midden appears to be determined by a number of other features on site suggesting some degree of contemporaneity. Most notably, the north-west edge of the midden coincides with the south-east wall of Structure I suggesting that the building existed in some form, possibly derelict, when the midden was deposited. To the south-west the midden appears to be bounded by ditch F.237 in to which midden deposits have slipped or been dumped. The south-eastern edge seems to be defined by ditch F.235 and the north east edge by 'beam slot' F.261. Hence the midden was deposited in a clearly defined space largely determined by the position of Structure I and a second possible structure indicated by beam slot F. 261.

4.5 Undated features

Two undated pits of unknown function were also recorded. **F.244** and **F.259** were located to the south-east and north-west of *Structure I* respectively. Neither produced any finds.

4.6 Discussion

Preservation

The excavation has yielded significant archaeological finds and features most notably the remains of an aisled building and an associated rich midden deposit. The preservation, particularly the depth of surviving *in situ* deposits was extremely good and in addition to the midden deposits, a depth of up to 0.3m of Romano-British buried soil deposits were recorded. The presence of such deposits, and conversely the absence of buried soil across much of the Waste Management Park site as recorded in the 2000 (Masser 2000) and 2007 (Ranson 2008) excavations, may well be due to the sites location at the edge of the field and adjacent to Beech Ditch. An increased depth of overlying deposits has protected the archaeological horizons in this area of the

Waste Management Park site from later ploughing and this could well be the result of the deposition of material dredged from Beach Ditch from the medieval period onwards, in the area adjacent to the ditch.

Site chronology

Any interpretation of the site's chronological sequence is hindered by the limited size of the excavation area and the lack of inter-relationships between the features exposed. In addition all of the features yielded pottery which falls within a 2nd-4th century AD date bracket with an emphasis on the 2nd-3rd century. However, the spatial relationships between various features, particularly with midden deposit F.233, allow a basic sequence to be suggested:

The earliest datable finds were five late 1st-2nd century AD coins recovered from buried soil [1020]. While they represent relatively early Roman activity, the coins were not associated with any feature. The earliest features on site are most likely to be ditches F.238 and F.239 which represent subsequent phases of enclosure in the 2nd-3rd century AD. The ditches clearly pre-date the midden and Structure I, both of which cut / sealed F. 238 and F.239. How these relate to the other ditches on site, particularly the elements of the large enclosure ditch visible on aerial photographs, is less clear. However, assuming that the large enclosure was fairly long lived, it seems likely that Fs. 238 and 239 were at different times contemporary with it and represent sub-division of the larger feature. This argument is strengthened by the fact that F.41, a continuation of F.238 recorded in the 2007 excavations (Ranson 2008), does not extend beyond the confines of the main enclosure.

Following this 'early' phase of 2nd-3rd century AD enclosure, F.239 – the later of the two ditches – appears to have been deliberately back-filled to allow for the construction of an aisled building (Structure I) also in the 2nd-3rd century AD. It is possible that ditch F.262 represents the re-location of the boundary marked by F.238 and F.239, slightly to the east. Associated with Structure I, ditch F.237, beam slot / gully F.261 and potentially F.235, appear to define a small plot to the rear of the building into which midden F.233 was subsequently dumped. The midden appears to be broadly contemporary with Structure I and the location of the deposit clearly respects the south-eastern wall. However, it seems likely that the building was not in use and was possibly even derelict when the midden was deposited. The Roman coin and pottery assemblages appear to confirm this; while coin deposition indicates that the midden continued to be utilised into the 4th century, the presence of late 3rd-4th century coins and pottery in the top of the in-filled postholes of Structure I (see Figure 8) suggest it had fallen out of use by this date. Likewise, ditch F.237 which although clearly bounding the midden to the south-west is largely in-filled by midden material and probably fell out of use prior to the 4th century.

Finally, the relationship of Structure I and the associated midden with enclosure ditch F.234, which potentially also marks the south-eastern side of a droveway (as recorded in the 2007 excavations; Ranson 2008), is problematic. No stratigraphic relationship was exposed on site and the pottery recovered from each feature is broadly contemporary. It does seem unlikely, that a structure would have been constructed on the unstable ground of a large silted up feature such as F.234 and Structure I is,

therefore likely to be the earlier feature. At the same time, however, it seems likely that Structure I was built along the route of the droveway - which may even represent a 'street' - that is thought to have led to the nearby temple (Ranson 2008). As such it is possible that a droveway, contemporary with Structure I, was located slightly to the north and that F.234 represents a later, slightly re-located, route.

Site context

Much of the significance of the Ely Road site hinges on its relationship with the probable temple site to the north and whether the site should be considered in a largely domestic context or if it has links with ritual activity at the nearby temple. Certainly, based on aerial photography and the results of the 2007 excavations (Ranson 2008), it can be hypothesised that Structure I occupied a position, possibly on the street frontage, along one of the main approaches to the temple. However, the primary evidence regarding the site's context, and of any possible links to the temple, comes from the finds assemblage recovered from midden deposits.

Although, in many ways typical of domestic middens, the finds assemblage from midden deposit F.14 - excavated during the 2007 excavations (Ranson 2008) - was certainly influenced by the proximity of the temple. The presence of metal finds such as a votive copper alloy model of a human leg, and a votive axe (found in the 2000 evaluation; Masser 2000) as well as a relatively high number of coins suggest links to the temple. In addition, the large quantity of animal bone, especially ovicaprid and bird bone is potentially an indication of possible sacrifice (Rajkovaca in Ranson 2008). The presence in the assemblage of wild fowl such as crane, goose and mallard duck in particular may be significant given their place in Romano-Celtic iconography (Beech in Evans and Hodder 2006).

In contrast, midden deposit F.233 appears more domestic in character. Although there was once again a high incidence of coins, there is an absence of votive objects as seen in midden F.14. Furthermore, the animal bone assemblage appears more domestic in character with, for example, much fewer bird bones (Rajkovaca, below). It would, therefore, appear that F.14 (2007 excavation) and F.233 (2009 excavation) are indeed different midden deposits with the remains of potentially different activities and patterns of deposition. F.14, whilst still typical of domestic middens, has evidence of ritual activity associated with the temple - which is not surprising given its location within the potential temple temenos. F.233 on the other hand, appears to be deposited to the rear of Structure I within a clearly defined, probably domestic, space and to be largely domestic in character.

4.7 Statement of potential

Although of limited size, the excavation of the hammerhead turning circle exposed significant Romano-British remains dating to the 2nd-4th century AD apparently peaking in the mid 2nd-3rd century AD. The site lies within an extensive cropmark site, characteristic of large scale settlement and associated field systems. The results of the excavation, together with the results of the 2007 excavations, provide the opportunity to date and characterise occupation in part of this extensive Romano-

British landscape. The presence of the partial remains of the aisled building and the associated midden, together with a rich finds assemblage are particularly important in this respect.

The results of the excavation also have the potential to further our understanding of the site in relation to the nearby temple. In this sense, comparison of the site - which appears to be outside the temple temenos - with the 2007 site - which appears to be largely within/on the edge of the temenos – is particularly important. Our limited understanding of the former temple site also increases the significance of both the 2007 and 2009 sites in terms of what they can tell us about activities at the temple. The midden deposit has a high potential in terms of interpreting on-site activities, both domestic and potentially temple-related, and the level of excavation and recording of the deposit enables detailed further analysis to be undertaken.

5.0 REVISED RESEARCH AIMS

The excavation of the hammerhead turning circle has elucidated a number of the original research aims of the project. However, the excavation results have the potential to address a series of revised research aims, particularly when combined with the results of the adjacent 2007 excavations:

- To further characterise the midden deposit in relation to the midden excavated in 2007 and in terms of potential links to the nearby temple site. The finds assemblage from the midden deposits recorded in both the 2007 and 2009 require further analysis and appraisal involving comparison of the two midden deposits and consideration of their possible relationship to the temple site.

- To consider the domestic and settlement related activity recorded on site in relation to the extensive settlement remains visible as cropmarks on aerial photographs and the nearby temple.

- To combine the results with those of the 2007 excavation in order to further characterise the economy, land use and environment of the fen edge zone during the 2nd-4th century AD.

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6.0 SPECIALIST STUDIES

The Flint - *Lawrence Billington*

A single secondary flake and 20 unworked burnt flints weighing 80.9g were recovered from the excavations (Table 1). All derived from the test pitting of the midden deposits, with the exception of a single burnt flint from F. 237. The flake from test pit 86 is a small hard hammer struck piece with a hinged termination. It has no distinctive diagnostic traits and probably represents residual prehistoric material. Small quantities of burnt flint were recovered from the test pits, all were relatively small fragments of gravel flint, fire crazed and thermally fractured. They are likely to be derived from the local gravels and to have been inadvertently caught up in fires before being deposited in the midden.

Test Pit/Feature	context	secondary flake	unworked burnt flints	weight burnt unworked flint (g)
TP. 1	1019		3	7.3
TP. 7	1019		1	9
TP. 42	1019		1	3.3
TP. 61	1019		3	22.6
TP. 64	1020		2	9.7
TP. 86	1019	1	1	3.4
TP. 87	1019		2	5.6
TP. 88	1019		1	1.1
TP. 89	1019		1	2.3
TP. 97	1020		1	8
TP. 106	1020		2	4.3
Bulk sample 31	1019		1	4
F. 237	1052		1	0.3
Totals		**1**	**20**	**80.9**

Table 1: The worked and burnt flint assemblage.

Roman Pottery - *Katie Anderson*

A substantial quantity of Roman pottery, totalling 3101 sherds, weighing 57729g, and with a mean weight of 18.7g, was recovered from the excavation. The majority of the assemblage was recovered from a large midden (1942 sherds, 28087g), with a buried soil layer producing a further 514 sherds, weighing 7819g. This material was scanned, and a small sub-sample assessed in order to characterise the assemblage, with full recording to be undertaken at a later date. Pottery from the remaining features totalled 591 sherds, weighing 21770g and representing 32.7 EVEs. All of this material was

fully analysed and details of fabric, form, decoration, usewear, and date were recorded, along with any other information deemed important.

Assemblage Composition (excluding midden and buried soil deposits)

The assemblage is characterised by coarseware, domestic vessels, of which the fabrics and forms present suggest a peak in the mid/late 2nd-3rd century AD, although there were some examples of both earlier and later dating material.

A range of vessel fabrics were identified in the assemblage (see Table 2). Coarsewares represented 88% of the recorded assemblage, which is typical of a Roman assemblage. Sandy greyware sherds dominated, representing 72% of the recorded assemblage. Of these most are unsourced, but are likely to be from within the local area, given the nature of Roman pottery production and supply. 129 greyware sherds (plus a further seven black-slipped sherds), were identified as coming from the Horningsea kilns which are located just three miles southeast of the site, and were a major source of greyware and, to a lesser extent, black-burnished ware, between the 2nd-4th century AD.

Fabric	**No.**	**Wt(g)**
Black-slipped	11	157
Buff sandy	1	19
Coarse sandy greyware	295	8411
Colour-coat	2	13
East Gaulish Samian	17	408
Fine sandy greyware	3	24
Fine sandy oxidised	3	46
Grog-tempered	1	31
Horningsea black-burnished	7	246
Horningsea greyware	128	7254
Micaceous black-burnished	9	57
Micaceous greyware	2	29
Nene Valley colour-coat	25	693
Nene Valley whiteware	13	1009
Oxidised sandy	1	3
Pakenham colour-coat	1	2
Shell-tempered	70	3368
TOTAL	**591**	**21770**

Table 2: All recorded pottery by fabric

Fineware vessels represented just 12% of the recorded assemblage, which included 17 East Gaulish Samian sherds, from a maximum of five vessels. This material dated later 2nd-3rd century AD and was the only evidence of imported wares at the site. Given the date of the pottery assemblage, the small number of imported wares is not unexpected. However, it should also be considered that the small number of imported wares is a reflection of the sites status/function/wealth. Romano-British finewares included 26 Nene Valley colour-coated sherds, one Pakenham colour-coated sherd

and two unsourced colour-coated sherds. The Romano-British finewares were broadly dated mid 2nd-4th century AD, although a lack of any definite late Roman forms or fabrics (Oxfordshire wares for example) suggest a decline in the mid-late 3rd century AD.

A range of vessel forms were identified, with jars dominating, as is typical of Roman assemblages (see Table 3). The jars were of varying size and included some large Horningsea greyware storage jars, with rim diameters in excess of 40cm. Other fabrics included shell-tempered wares and unsourced greywares. Other coarseware vessels included 13 mortaria sherds (from a maximum of 10 vessels), all of which were Nene Valley whiteware vessels.

Tablewares represented 28% of the recorded assemblage (excluding body sherds), and included two East Gaulish Samian Dr33 (mid 2nd-3rd century AD) cups and four Nene Valley colour-coated beakers (Mid 2nd-4th century AD). Bowls and dishes occurred in both coarseware and fineware fabrics, and included examples from Horningsea and East Gaulish Samian.

Form	**No.**	**Wt(g)**
Beaker/jar	1	99
Beaker	17	107
Bowl	39	2953
Cup	2	17
Dish	20	610
Jar	136	8348
Lid	1	51
Mortaria	13	1009
Storage jar	55	4009
Unknown/body	307	4567
TOTAL	**591**	**21770**

Table 3: All vessels by form

Feature Analysis

Roman pottery was recovered from 11 features, as well as a test pit (excluding the midden and buried soil).

Feature 234

Five sherds of pottery were recovered from ditch, Feature 5, weighing 263g and representing 0.3 EVEs. This included one fine sandy oxidised base sherd and one colour-coated body sherd. These sherds were dated 2nd-3rd century AD.

Feat.	No.	Wt(g)	EVE
234	5	263	0.3
235	10	266	0.29
236	287	13256	6.4
237	177	5389	8.69
238	10	285	0.18
239	7	124	0.07
240	4	54	0
241	8	107	0
242	41	958	0.65
243	29	790	0.2
262	11	150	0
TP75	2	128	0
TOTAL	**591**	**21770**	**16.78**

Table 4: All pottery by feature

Feature 235

Feature 235 produced ten sherds of pottery, weighing 266g and representing 0.29 EVEs. Four sherds were from a black-slipped cornice rim beaker, dating to the 2nd-early 3rd century AD. There was also a sherd from a large Horningsea greyware jar, dated 2nd-4th century AD.

Feature 236

Feature 236 contained the largest quantity of material from any feature (excluding the midden), totalling 287 sherds, weighing 13256g and representing 6.4 EVEs. The pottery from this feature had a very high mean weight of 46.2g, suggesting the material was freshly broken when deposited, although the presence of several large Horningsea greyware sherds does affect the overall mean weight.

The pottery was recovered from several different contexts, and included two Nene Valley colour-coated indented beakers, dating mid 2nd-3rd century AD. Other vessels included an East Gaulish Dr38 bowl (late 2nd-3rd century AD), as well as a Nene Valley colour-coated imitation Dr36. A Nene Valley convex dish was one of the latest dating vessels in the assemblage, dating to the 4th century AD. A large number of coarseware vessels were also recovered, comprising several Horningsea greyware sherds, and a small quantity of shell-tempered sherds.

The material from this ditch, broadly dates 2nd-4th century AD, although there was one late Roman vessel. Overall however, the bulk of the pottery dates mid 2nd-3rd century AD.

Feature 237

A large quantity of pottery totalling 177 sherds and weighing 5389g was recovered from Feature 237. A high EVE count of 8.69 and mean weight of 30g, suggests as with Feature 236, the pottery was relatively 'fresh' when deposited in this ditch.

A range of vessel forms and fabrics were present, which included two colour-coated beakers, two Central Gaulish Dr 33 cups 2nd century AD), three Nene Valley whiteware mortaria (mid 2nd-4th century AD) and a half complete Horningsea black-burnished jar (2nd-4th century AD), which supports the view of material being freshly deposited. Two Horningsea greyware beaded, flanged bowls were recovered from this feature, dating 3rd-4th century AD. As with feature 236, the pottery broadly dates 2nd-4th century AD, however, there were several examples of 3rd century material suggesting this as a probable date.

Feature 238

Ten sherds were recovered from Feature 238, weighing 285g and representing 0.18 EVEs. This included one Horningsea greyware base sherd, the remaining sherds comprising sandy body sherds. The pottery from this feature can therefore only be dated 2nd-4th century AD.

Feature 239

A total of seven sherds weighing 124g and representing 0.07 EVEs were collected from this feature. Sherds included one Horningsea greyware storage jar and a beaded bowl, dating 2nd-3rd century AD. This feature also contained one grog-tempered jar sherd, which dates Late Iron Age/early Roman, thus making it the earliest dated sherd in this assemblage. Given the date of the remaining sherds in this feature, it is likely that the grog-tempered sherd is residual.

Feature 240

Feature 240 contained four sherds of pottery weighing 54g, which included one Pakenham colour-coated body sherd and one Horningsea greyware, suggesting a date of 2nd-3rd century AD.

Feature 241

Eight sherds weighing 1079g were recovered from this posthole/pit. This included seven Horningsea greyware sherds, which are likely to all be from different vessels, and can only be dated 2nd-4th century AD.

Feature 242

A moderate assemblage of 41 sherds weighing 958g and representing 0.65 EVEs were collected from this feature (a possible posthole). 13 sherds were from a single vessel, an East Gaulish Dr38 bowl (mid 2nd-3rd century AD), which had interior wear, representative of a repetitive grinding process. Other finds included a Nene Valley colour-coated beaded bowl, with rouletting decoration, dating mid 2nd-3rd century AD. There were seven Horningsea greyware sherds from different vessels.

Feature 243

29 sherds of pottery weighing 790 and representing 0.02 EVEs were collected from this ditch. The relatively high mean weight of 27g was affected by the presence of three large Horningsea greyware body sherds from large storage jars. Other vessels included a greyware beaded, flanged bowl, dating 3rd-4th century AD and one flanged bowl, dating 2nd-3rd century AD.

Feature 262

11 sherds weighing 150g were recovered from this ditch. The vessels included one greyware beaded, flanged bowl, dating 3rd-4th century AD, as well as some slightly earlier dating sherds, comprising two greyware dishes dating 2nd-3rd century AD.

Test pit 75

Two sherds weighing 128g were recovered from remnant topsoil in Test Pit 75.

Buried soil and midden deposits

2456 sherds of Roman pottery weighing 35906g were recovered from the midden deposit [1019] and buried soil horizons [1020] and [1045]. Due to the quantity of material recovered, for the purposes of this assessment, the material as a whole was scanned and two or three test pits were selected from each layer for more detailed analysis in order to characterise the deposits.

Midden deposit [1019] (Test pits 33, 60 and 68)

Context [1019] contained pottery which was broadly dated 2nd-4th century AD. There were examples of beaded bowls, straight-sided dishes and mortaria dating 2nd-3rd century AD. There were a small number of vessels which could be dated 3rd-4th century AD, which included two beaded, flanged bowls. It is interesting to note that there were no definite 4th century AD vessels, such as convex dishes, Oxfordshire red-slipped wares and Hadham red-slipped wares, which are indicative of Late Roman activity.

Buried soil [1020] (Test pits 22 and 104)

The pottery from context [1020] was very similar in composition to that of [1019], with pottery predominately dating 2nd-3rd century AD, but with a small number of examples which dated 3rd-4th century AD. This similarity is to be expected from these two features given their nature and the close proximity to one another. It is highly likely that material from the later dating [1019] would have become incorporated into [1020] and visa versa.

Buried soil [1045] (Test pits 59 and 88)

[1045] contained pottery that was 2nd-3rd century AD in date, thus supporting the view that it was earlier in date than the midden [1019].

This evidence is comparable to that of the coin evidence (Appleby and Hall, see below), which showed no evidence of any post Late 3rd century AD activity, thus supporting the pottery evidence that certainly [1019] is a predominately 3rd century AD deposit. It should be remembered, however, that a sub-sample of pottery from these three features was examined.

Discussion

The recorded assemblage comprised the material from all features excluding the midden and buried soil. Pottery from the midden and buried soil deposits was scanned and a sub sample more closely examined in order to provide an overview of the deposits.

In many ways, in terms of vessel fabrics and forms, the assemblage is typical of a Roman rural site, dominated by locally produced coarseware vessels, occurring in a variety of forms. The fabrics and forms present in the recorded assemblage suggest a peak in activity between the mid/later 2nd century AD and the 3rd century AD.

In addition to the midden deposit two features, F.236 and F.237 stand out in terms of quantity of material. It is not just the quantity of pottery recovered from these features but also the condition of the material which marks these two features as being different from the others. However, it is of interest that there were not many refits within these feature, and that the brokenness score was relatively high at 34[1]. This therefore somewhat contradicts a view that that the pottery was deposited immediately after breakage, since more refits and a lower brokenness score might be expected had this been the case.

It therefore seems likely that a specific set of circumstance was involved in producing these deposits. The pottery was not worn in a way to suggest redeposition from earlier features. The pottery from these two features primarily dated mid 2nd-3rd century AD; with a small number of 3rd-4th century AD vessels in both. Therefore it appears that

[1] *Brokenness is a measure of Number of sherds divided by the EVE total. The lower the number the less 'broken' the assemblage is.

these two features were contemporary with one another, being filled sometime in the later 3rd century AD.

All of the features underlie the midden and appear to date no later than mid-late 3rd-early 4th century AD, and with the exception a single Late Iron Age/early Roman grog-tempered sherd, there was no evidence for pre mid 2nd century AD activity. The pottery evidence from the features gives a likely date for the midden as 4th century AD. It will be necessary to establish the date of all of the pottery from the midden to assess whether the material was generally the same date as the pottery from the cut features, thus suggesting the midden was comprised of redeposited pottery. In addition, the material from the Hammerhead excavation should be compared with that from the 2007 excavation (Ranson 2008) with particular emphasis on the midden deposits from each phase.

Roman Tile – *Katie Anderson*

Six pieces of Roman tile were recovered from the excavation. Two pieces were collected from Feature 237, comprising one tegula roof tile (92g) and a second probable tegula (44g). Three pieces of tile were recovered from the midden [1019], including two shell-tempered pieces from a tegula. Finally one tegula, weighing 172g was collected from context [1045].

Coins and Metalwork - *Grahame Appleby and Andrew Hall*

A total of 55 copper alloy coins were recovered from across F.233 (the midden spread) using a metal detector (Figure 8). As with the ERW07 coins (Ranson 2008), they were recovered in poor condition, with many encased in a hard, brown concretion. The coins are summarised within the following table:

Cat No.	Small find No.	Qty.	Weight (g)	Diameter (mm)	Notes	Date
349		1	2	20	Heavily worn and corroded. Recovered from F.233 [1020]	
350	1001	1	1	18	Worn.	
351	1002	3	7	21,20,18	Group of three coins corroded together in a stack, all radiates	late 3rd
352	1003	1	1	18	Broken and worn coin, possibly radiate	late 3rd
353	1004	1	2	16	Heavy worn and unidentifiable	
354	1005	1	2	16	Misshapen and worn, unidentifiable	
356	1007	1	4	18	Worn and clipped radiate	late 3rd
357	1009	1	2	17	Misshaped and worn radiate	late 3rd
359	1016	1	3	19	Misshaped and worn radiate	late 3rd
360	1019	1	1	8	Tiny coin, probably a 3rd-4th century copy	3rd-4thc
361	1013	1	1	15	Heavily worn and corroded, unidentifiable	
363	1017	1	3	18	Corroded radiate	late 3rd
364	1018	1	1	7	Tiny coin, probably a 3rd-4th century copy	3rd-4thc
365	1021	1	1	17	worn radiate	late 3rd
366	1022	1	1	14	Heavily corroded, unidentifiable	
367	1023	1	1	18	Heavily corroded radiate	late 3rd

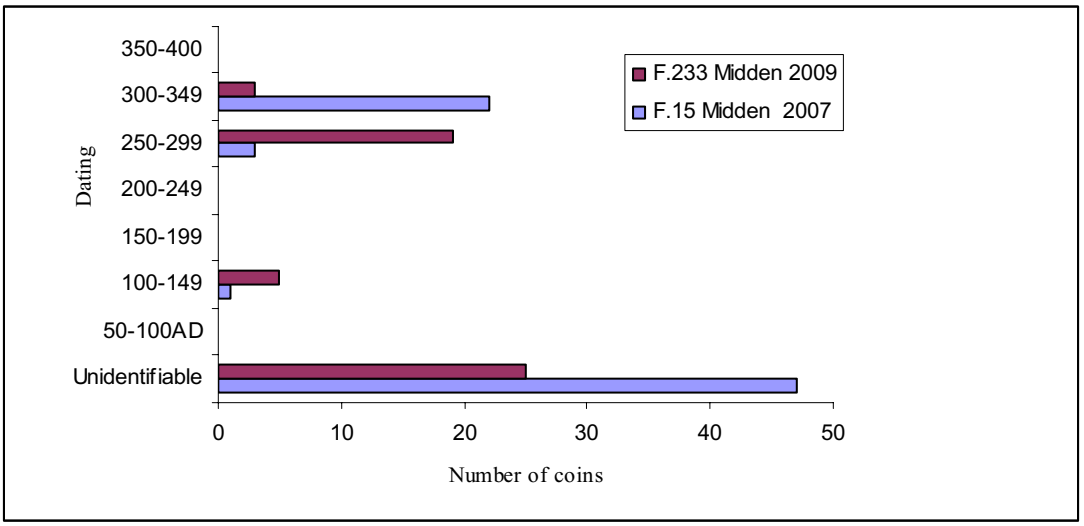
Cat No.	Small find No.	Qty.	Weight (g)	Diameter (mm)	Notes	Date
368	1024	1	18	32	Large coin, *Sestertius* of Antoninus Pius. Standing figure to reverse	138-161AD
369	1025	1	20	30	large coin. Portrait worn. Standing figure to reverse SC.	late 1st-2nd
370	1026	1	1	15	Corroded and worn. Unidentifiable	
371	1027	1	1	20	Misshaped radiate	late 3rd
372	1028	1	2	17	Heavily corroded radiate	late 3rd
374	1031	1	4	?	?	
375	1032	1	1	17	Heavily worn and corroded	
376	1033	1	4	20	Heavily worn and corroded	
377	1034	1	2	20	Heavily corroded radiate	late 3rd
378	1008	1	2	17	Corroded and worn. Unidentifiable	
379	1035	1	1	13	Radiate?	late 3rd
380	1037	1	1	15	Worn and clipped	
381	1038	1	1	17	Worn radiate	late 3rd
382	1039	1	1	14	Radiate	late 3rd
383	1040	1	2	16	Unidentifiable	
384	1041	1	2	20	Worn radiate	late 3rd
385	1044	1	1	6	Tiny coin, probably a 3rd-4th century copy	3rd-4thc
386	1045	1	1	?	heavily damaged and corroded coin	
387	1046	1	2	15	Heavily corroded and worn	
388	1047	1	1	14	Heavily corroded and worn	
389	1048	1	2	20	Heavily corroded radiate	late 3rd
390	1049	1	1	?	Heavily corroded, unidentifiable	
391	1050	1	2	17	Heavily corroded, unidentifiable	
392	1051	1	1	?	Heavily corroded, unidentifiable	
394	1054	1	25	30	Large coin 4mm thick, Portrait worn, Antoninus Pius. Sestertius?	138-161AD
395	1055	1	5	25	Corroded and unidentifiable	
396	1057	1	1	10	Corroded and unidentifiable	
397	1058	1	3	18	Corroded and unidentifiable	
398	1059	1	2	20	Corroded and worn. Unidentifiable	
399	1060	1	1	14	Corroded and worn. Unidentifiable	
400	1062	1	2	23	Heavily worn radiate	late 3rd
404	1064	1	2	18	Heavily corroded and worn	
405	1067	1	2	17	Radiate	late 3rd
406	1068	1	1	17	Radiate	late 3rd
407	1069	1	20	33	Large coin (Sestertius). Portrait heavily worn	late 1st-2nd
409	1072	1	20	32	Large coin (Sestertius). Portrait heavily worn, Antoninus Pius?	late 1st-2nd
410	1073	1	1	?	Fragmentary coin?	

Table 5: The Roman coin assemblage

The recovery of a group of three coins corroded together is of significance as it may suggest a purse loss. A similar stack of three coins was found during the 2007 midden excavations (Appleby and Hall in Ranson 2007).

These coins clearly fall into two groups; Group A, consisting of the five late 1st – 2nd century *Sestertii,* several of which have been tentatively dated to the reign of the Emperor Antoninus Pius (138-161AD). There is then a hiatus in coin loss activity

which last approximately 100 years. Group B consists of 19 coins, all late 3rd century radiates, which Reece dates from 260-296 AD (Reece 1986). Three tiny coins of 3rd to 4th century date complete the series. These two temporally distinct groups correspond to two distinct phases of deposition / middening. The Group A coins were recovered from the earlier, lower phase of the midden spread [1020] with the Group B coins all recovered from the upper, darker spread [1019]. It would be beneficial to carry out correspondence analysis with the ceramic assemblage to confirm this. The lack of 4th century coins is interesting to note, especially as they formed such a significant proportion of the assemblage from the 2007 midden excavations (Appleby and Hall in Ranson 2008). A comparison of the two coin assemblages is illustrated below:



Comparative coin data – midden spreads at Waterbeach

In addition to the coins, 33 pieces metalwork were recovered from the site. These include seven pieces of lead alloy, 14 pieces of iron (eight are hobnails from F.237, and a bezelled finger ring) and 12 artefacts in copper alloy.

Copper alloy

<355> SF 1006. Plain circular stud, 23mm in diameter, 0.47mm thick, and possessing a short, tapering square cross-section shank 11.88mm long; weight 3g. Similar examples are known on Roman sites such as those from Lion Walk site in Colchester (Crummy 1988) and found during excavations of the Legionary fortress at Wroxeter, Shropshire (Webster 2002).

<358> SF 1011. Small very corroded bezelled finger ring. The bezel is too corroded to identify any features; however, the hoop is decorated with a single line groove creating a triangular motif; possibly iron

<374> SF 1031. Curved, rectangular copper alloy sheet with irregular edges, with a brown patina. A single perforation is present at the rounded end. Measuring 31.75mm by 28mm and 0.77mm thick, this object is curved along its longer axis. It is possible this is part of a pendant or decorative item, or a vessel fragment. Weight 3g.

<393> SF 1052. A cast copper alloy brooch of the *split bow* type. The brooch is complete with the exception of the pin and measures 59mm in height. Below the spring casing, the bow divides into two

equal rectangular section bars before joining at a decorated junction with the foot, which is sheathed. A similar example is illustrated from Colchester. It is suggested that this type of brooch derives form Military sites and is of a 4th century date (Crummy 1988).

<401> SF 1061. Crudely made distorted copper alloy ring, with irregular thickness D-shaped cross-section. Split at one end, the terminals overlap. External dimension 22.26mm, internal 15.27mm.

<402> SF 1063. Small, bent triangular 'blade' shaped copper objects with irregular shaped tang. Weighing less than 1g, this object measures 24mm long (*c*. 32mm with tang). Probable trimming waste, it is unlikely this is a votive object.

<403> SF 1064. Circular plain mount or fitting with two equal sized rivets. Diameter 29.5mm, thickness 2.04mm; rivet head diameters 10.2mm & 10.4mm, thickness 1.9mm, height 7.7mm; weight 15g.

<408> SF 1071. Broken, corroded small rectangular cross-sectioned finger ring; two broken refitting fragments. The ring has a pale green patina; weight 1g, diameter 20.9mm; thickness 1.8-2.3mm.

<411> F. 237 [1048] SF 1074. Corroded and bent twisted copper alloy wire cable bracelet. The hook fastenings are broken, but otherwise the bracelet is complete, weight 3g. Estimating the diameter is problematic due to the distortion of the bracelet and is tentatively estimated at *c*. 70-75mm. Numerous examples are known from other Roman sites in Britain, including the Butt Road cemetery (Crummy 1988), Bancroft Villa, Bucks. (Williams & Zeepvat 1994)

<412> SF 1075. Bent copper alloy bead-head hair-pin, wider and slight flatter at the mid-point, 3.45mm. Weight 4g, length 67.45mm (reconstructed *c*. 90mm), bead diameter 6.29mm. Bead-headed pins are relatively common on Roman sites, with similar examples recovered from the Butt Road cemetery, Colchester (Crummy 1988) and the Roman shrine at Nettleton, Wilts. (Wedlake 1982).

Iron

<413> F. 237 [1057]. Fragment of heavily corroded slightly bent rectangular iron strip; length 60.5mm, width 29.6mm, thickness 3.3mm. A possible domed rivet is also present as a cry corroded raised circular, height *c* 6mm, is present on the outer surface with a flat circular disc, *c*. 26mm in diameter, present on the under surface. X-ray would verify this interpretation. Possible binding.

<414-417> Nails: all metal detector finds with the exception of <414>, recovered from F.238. Square cross-section, maximum surviving length between 31mm and 40.7mm. <416> is possibly a domed head from a hobnail

<460> F. 237 [1052]. Four small domed hobnails and four small tacks recovered from an environmental sample taken from the ditch. Maximum length 14.8mm; dome height *c*. 6mm. The domed hobnails are constructed in two parts (Manning 1985), the dome and square cross-sectioned shank. These items are from a piece of footwear, possibly and child's sandal or similar.

Lead & lead alloy

With the exception of <423> and <424> all of the lead and lead alloy pieces appear to be scrap, waste or melted; maximum weight 48g. Two pieces, <418> and <419> are corroded and delaminating and are possibly pewter, an alloy usually used in vessel or plate manufacture; however, the thickness of these items suggest they are not plate and the two fused pieces of <419> are also relatively thick *c*. 6.4mm and possibly from`1 the same object.

<423> SF 1066. Small globular object with a flat base 6.2mm in diameter and 6.6mm in height. Weighing 1g, identifying this item is problematic, scrap, a pin head or even a *scruple* (*c*. 1g) being distinct possibilities.

<424> SF 1070. Possible pewter or degraded lead domed stud weighing 11g, measuring *c*. 20mm in diameter and 10.7mm in height.

Excluding the coins discussed above, compared to the assemblage recovered in the 2007 season, this is a relatively small assemblage. Nonetheless, its composition is similar to that expected from midden type deposits, a mixture of personal, domestic and waste/broken items.

Worked bone – *Grahame Appleby*

<309> F.237 [1057] Worked pin with faceted cuboid head measuring 65.78mm long; the tip is missing. The surface of the bone is highly polished, indicative of some use (wear). Eight facets of unequal size are present and represent a considerable investment in time and patience in the production of this item. The manufacturing techniques required for this type of pin are discussed in detail by Crummy (1988: 22-23), with this pin conforming to a Crummy Type 4 (*ibid*. fig 20).

<463> F.233 [1020] Fragment of worked pin measuring 42mm long. Both the head and the tip of the pin are missing.

Glass – *Vicki Herring*

A single fragment of natural blue green glass (<145> [1019] TP.64) represents part of the concave base of a common Roman utility/storage vessel. The angle of the transition from base to body suggests that this is mostly likely a convex jar or flask, though the shard is small so other forms such as cylindrical bottles or jugs cannot be ruled out.

The date range for this vessel is uncertain, though plain convex jars were commonly in use in southern Britain in the 1st and 2nd centuries AD.

Worked stone and burnt clay – *Simon Timberlake*

Rotary quernstone (F.237)

Three very small abraded fragments of worn Millstone Grit quern were recovered from F.237 (total weight 238g). Whilst all three examples were all of fairly undiagnostic pieces, the association of these features suggests all are a category of late 1st – 3rd century Romano-British quern.

<302> F.237 [1055] x2 fragments: 60mm x 50 x 15mm (thick) + 50mm x 50mm x 23mm (thick), 184g. One very worn and thin rim fragment of quern composed of a relatively coarse non-pebbly gritstone. The extreme thinness of the stone suggests that this probably would have broken at this point in the course of its wear. No trace of the dressing furrows are evident on the smooth grind surface. However, the non-grinding surface and rim are fairly well shaped. The larger piece is probably from a different stone. This shows no distinctive features such as the presence of any grind surface or rim. However,

traces of pecking using a small dressing tool (such as the point work) is evident on at least one of the faces.

<283> F.237 [1048] x1 fragment 40mm x 40mm x 22mm (thick), 54g.
A similar worn and abraded fragment. The thickness of this and lack of obvious worn grinding surface suggests a similarity, if not identicality, with the thicker fragment from <302>. However, neither of these adjoin.

The use of rotary querns appears to be dominant even in these rural contexts, with common usage of stones such as Millstone Grit imported along road routes from the production sites in the Southern Pennines (Roman to Early Medieval quern stone quarries have been identified in North Derbyshire and South Yorkshire at sites such as Hathersage and Wharnecliffe Edge (see Peacock 1988).

The amount of quern recovered from this site is small compared to that from the adjacent site (ERW07) (see Timberlake in Ranson 2008). From the latter (earlier) excavation a much larger volume of Millstone Grit quern (and still higher proportion of quern made from Old Red Sandstone) was recovered. The diverse nature of this quern assemblage suggests that the finds from the most recent site are not necessarily representative of this settlement.

Stone bead

<461> F.237 [1052] Bulk sample 41: a single polished cylindrical bead made of jet (7mm x 3mm (wide) with a central round perforation <1mm diameter). This small cylindrical bead has x5 circumferential shallow scored lines around it spaced approximately 1mm apart. This was recovered from the >4mm sieve fraction of an environmental sample.

This isolated, yet quite rare find of a jet bead was probably originally part of a bead necklace, perhaps (given the Roman context for this) worn by a female. This may represent the chance loss of a necklace, or else of a bead from a necklace. If not meant as a decoration, then the score lines present on this bead could indicate that this was a polished but unfinished example of yet smaller beads – this particular example may have been cut into a further six small beads. The origin of this British jet would have been from outcrops on the coast at Whitby, North Yorkshire. Most likely the jet bead manufacture would have been finished off in workshops elsewhere.

Burnt clay/daub

Some seven samples of well burnt clay (total weight 264g) were recovered from four different excavated features (five contexts). Three of these samples (130g) came from F.233 [1019] and seemed to have been highly fired; one of these (<036>) had an appearance similar to that of a coarse and poorly fired brick (and may in fact have been so). Much of the burnt clay was brick-red in colour and contained small flint and chalk nodules suggesting its manufacture as a coarse daubed walling fabric; material subsequently burnt during the course of demolition, or else in the accidental firing of the structures.

Faunal remains - *Vida Rajkovača*

Introduction

Fieldwork at Ely Road Waterbeach Site represents a continuation of archaeological investigations in the area. These excavations have resulted in the recovery of 338 assessable fragments of animal bone. This includes the faunal material from hand-excavated deposits, material from bulk soil samples as well as animal bone recovered from the heavy residues of the environmental samples.

In addition to the hand-excavation, a series of bulk soil samples were taken from 1m sample squares in midden F.233. This has been employed to enable the recovery of bones of small mammals and, especially, birds.

Faunal analyses carried out on the material from 2007 campaign resulted in identification of high numbers of bird bones (*c.*100 fragments/ 4% of the assemblage). The 2009 faunal record, however, did not account for as many different bird species, but it did produce two species commonly found in Romano-British assemblages: chicken and pheasant. Moreover, a possible woodcock carpo-metacarpus recovered from the heavy residues of the environmental samples is another potentially interesting find.

The assemblage is predominantly made up of livestock species, but also includes remains of wild species (red deer, fox and pheasant). The majority of the assemblage was recovered from the midden (F. 233) which has been broadly dated to the 2nd – 4th century AD. Further, non-midden remains were recovered from features dated to the 2nd – 4th century AD, with an emphasis on the 2nd – 3rd century AD. For the purpose of this assessment, the assemblage will be considered and quantified as a whole.

Method

The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Ageing of the assemblage employed both mandibular tooth wear (Grant 1982, Halstead 1985, Payne 1973) and fusion of proximal and distal epiphyses (Silver 1969). Identification of the assemblage was undertaken with the aid of Schmid (1972), Hillson (1999) and reference material from the Cambridge Archaeological Unit, Grahame Clark Zooarchaeology Laboratory at the Department of Archaeology in Cambridge. Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident.

Preservation

The material demonstrated moderate state of preservation indicating that bone suffered some weathering or other erosive damage. However, the assemblage was highly fragmented. Actual figures show that 302 bones were moderately preserved, compared to 26 quite poorly preserved bone fragments. 15 (*c.* 4%) bones showed signs of gnawing, although dogs were not confirmed osteologically on this site.

Results

Species representation

Of the 338 bones, 310 (91%) were possible to assign to element and a further 78 (25%) to species. Hand recovered assemblages are typically biased in favour of the bones from larger species, whilst the bones from smaller species tend to be overlooked (Payne 1992). This assemblage is no exception with a high proportion of bones from common domestic species and a complete absence of small mammals. Two main 'meat species' are very well represented accounting for the majority of the assemblage. Ovicaprids seem to have the slight predominance over the cattle (Table 6). However, cattle are likely to have been more important livestock species, being the main providers of meat as well as of the other secondary products such as transport, traction and milk. This was followed by other main domesticates: horse and pig and the remains of domestic fowl are the only evidence for keeping and consuming poultry on site. There is some evidence that hunting was practiced on site; remains of pheasant, red deer and fox were positively identified.

Taxon	**NISP**	**NISP%**	**MNI**
Ovicaprid	31	40	2
Cow	23	30	3
Horse	8	10	1
Pig	6	8	1
Cat	1	1	1
Domestic fowl	4	5	1
Pheasant	3	4	1
Red deer	1	1	1
Fox	1	1	1
Cattle-sized	111	109 (Σ=232)	.
Sheep-sized	117	116 (Σ=232)	.
Mammal n.f.i.	28	3 (Σ=338)	.
Bird n.f.i.	4	4 (Σ=232)	.
Total	**338**	**100**	**.**

Table 6. Number of specimens identified to species (or NISP) and MNI count for Romano-British contexts from ERW09 (hand-recovered only). The abbreviation n.f.i. denotes that a specimen was or could not be further identified. *NB: Species percentages are out of 78. These differ from the unidentified counts as these are calculated on the basis of element identification (for UMM & ULM) and total fragments (for UUM) (corresponding to Σ in brackets).

There is almost a complete absence of cattle bones considered to represent joints of high meat value compared to a relatively high number of mandibular elements and bones from the lower limbs. It is possible that beef was exported from the site after initial dismemberment of the carcass accounting for the higher frequencies of cranial elements and bones from the hoof which would have been discarded as primary butchery waste. However, it should be noted that this was based on a small sample.

Butchery

Butchery marks were noted on *c.* 10% of the bones, chop and cleaver marks are more common than cut marks. General butchery pattern is in many respects Roman and consists of chop and cut marks on the diastema and ascending ramus of mandibles which can be attributed to disarticulation from the skull. A number of axially split long bone shaft fragments were recovered and it has been suggested that this represents waste from the processing of bones for marrow, marrow products, fats and these are not simply the waste from a soup kitchen (Stokes 2000). In addition to the butchery marks one worked bone was recorded. Medium-sized mammal limb bone fragment appears to have been fashioned into a pin (F. 233; [1020], see also Appleby and Hall, above).

Ageing and sexing

The ageing data of Silver (1969) was used to assess epiphyseal fusion of the post cranial skeleton. Tooth eruption/ wear and mandible wear stages were recorded following Grant (1982), Halstead (1985) and Payne (1973). Two ageable specimens were recorded in this assemblage: one ovicaprid calcalneum was aged to 0-2 years of age (Silver 1969) and one cattle mandible was aged to 18-30 months (Halstead 1985).

Sexing using morphological characteristics was only undertaken for pig canines. Boar canines can be differentiated from sow canines on the bases of their size and shape (Schmid 1972: 80). One canine was recovered within this assemblage and it was positively identified as a male individual.

Midden

Midden (F. 233) yielded 243 (72% of the assemblage) fragments of animal bone, 48 of which were identifiable to species. A similar midden was recorded during the 2007 excavations (Ranson 2007) on an adjacent site, where bone material recovered from the midden (F.14) accounted for 68% of the assemblage (Rajkovaca 2008). Midden F.233 showed a fairly varied representation of species with three main ‘food species’ dominating the sub set: ovicaprids (NISP=18), cattle (NISP=13) and pigs (NISP=6). This was followed by three domesticates: horse, chicken and cat. Two specimens were identified as the remains of fox and red deer. Unidentified mammal counts show that the category of medium-sized mammals such as sheep/ goat and pig is the predominant one. This, coupled with the prevalent ovicaprid cohort, might suggest that there was an emphasis on a sheep based economy. The results from 2007 and those from a second excavation close by undertaken in 2008, demonstrate a somewhat similar representation of species (Rajkovaca 2008; Seetah in Slater 2009).

It has been suggested previously (Rajkovaca 2008) that the great quantities of the material recovered from midden deposits at the Ely Road site, coupled with high numbers for ovicaprids and birds could be indicative of votive activities associated with temple. Most of the temple assemblages in Roman Britain have a high sheep/goat numbers (King 2005: 332, Fig.3). The selection of species for sacrifice was clearly a significant part of a cult, and may be linked to an association between the deity venerated and with goat/sheep and birds. The evidence for animal sacrifice at the temples in Britain is relatively rare and the surviving evidence needs to be valued accordingly.

Based on a sheer quantity of the material it produced compared to the rest of the assemblage, it would be important for the midden to be considered and quantified both separately and within the whole assemblage.

Faunal material from the heavy residues

Three processed samples (sample no.31, sample no. 38 from F. 233; sample no. 41 from F. 237) have yielded a total of 30 bone specimens, the majority of which was assigned to a size-category. Remains of sheep/ goat and rat were identified, followed by a number of unidentifiable bone crumbs. A single bird specimen has been recovered from F. 237. This specimen was a fragmented carpo-metacarpus of a wader bird, most likely woodcock.

Conclusion

Significant amount of bird bones (crane, partridge, goose, duck and chicken) was recovered from the site in 2007, the majority of which came from the midden (Rajkovaca 2008). The 2009 assemblage did not produce the same results with regards to the varied representation of bird species, but did yield several domestic fowl (chicken) and pheasant specimens. Domestic fowl was recorded from a number of Roman sites in the region: Stonea (Stallibrass 1996) and Orton Hall Farm (Harman 1996) as well as on almost all Romano-British sites (Parker 1988: 209) in the country. Pheasant has also been commonly found on Roman sites in the region which is significant as it was a Roman introduction and chicken were introduced as farm animals at the same time (Parker 1988: 210).

The assemblage is quantitatively inadequate to sustain propositions about animal use but it does provide some basic information for comparison on a superficial level. It is well-known that Iron Age economy favoured mutton to beef (Cunliffe 2005: 415) and the preference for beef is believed to have come from the continent, with Roman legions populating Britain (King 1999: 180). There is a slight predominance of cattle on this site when NISP calculations are considered, but when MNI counts are taken into account, ovicaprids are the predominant species. Many aspects of the assemblage have been characterised as distinctly Roman, but more information is needed if we were to resolve to which extent this site was Romanised as well as whether it just continued with a more native Iron Age traditions.

Shell - *Frankie Cox*

A small assemblage of 140 shell fragments weighing a total of 1117g was recovered from the 2009 excavations at the Ely Road Waterbeach. Of the material recovered, 88.5% of the shell was found in the Roman midden F.233 and buried soil deposit [1045] and [1063]. After being washed and catalogued all shell remains were counted, weighed and recorded separately to establish the full range of species present and quantities found.

The assemblage shows good preservation for its type with most of the fragmentation occurring post excavation. Approximately half of the remains were complete shell halves and there were no unidentifiable fragments.

Results

All of the shell was identified as edible oyster with 67 base and 59 top halves with the remaining 8 fragments were unidentifiable. Almost all were collected by hand and a fragment was recovered from each of the two processed samples <31> and <41>. All shell was found within the Roman midden F.233, two ditches F.236 and F.237 and the buried soils [1045] and [1063] (Table 7).

Location	Quantity	Weight (g)	Percentage of total
F.233 [1019]	62	396	44.3%
F.233 [1020]	23	146	16.4%
[1045]	37	394	26.4%
[1063]	2	8	1.4%
F.236	8	95	5.7%
F.237	8	78	5.7%

Table 7: All shell by context

A total of 60.7% of the assemblage was found within the test pitted midden and only trace quantities found in ditches F.236, F.237 and buried soil horizon [1063]. Buried soil [1045] produced a substantial amount of shell similar to the quantities found within the two midden contexts. Almost exactly equal numbers of whole top and base halves were recovered (see Table 8), fragmented shell pieces were also found to be virtually equal in numbers. Minimal quantities of small fragments were unidentifiable.

Location	Top half	Base half
Midden [1019]	29	27
Midden [1020]	11	11
Buried soil [1045]	122	21
Buried soil [1063]		1
Ditch F.236		2
Ditch F.237		5

Table 8: Whole oyster shell type by location

Midden deposit F.233

The presence of oyster shell in the midden deposit is to be expected indeed oysters were the most commonly consumed shellfish in Roman Britain (Cool 2006). Of all the shells within the midden, almost exactly equal numbers of whole top and base halves were identified representing a full range of processing, eating and discarding. The proximity of the midden to a temple cannot be overlooked although the shell assemblage shows stronger evidence as general kitchen / domestic waste rather than as food preparation in association to activities at the temple. Other ritual sites that had small collections of oyster shell, such as Henley Wood temple, recorded just six shells (Watts & Leach 1996) and at Haddenham; no shells were recorded at all (Evans & Hodder 2006).

Buried soil [1045] and [1063]

Context [1045] contained a large number of shells similar to the quantities found within the midden although the shell was found in a discrete cluster within Test Pit 81 rather than as an accumulated deposit. Horizon [1063] contained two fragments of shell.

Ditches F.236 and F.237

These features were both within close proximity to the midden and only contain a very small relative amount of shell probably derived from the nearby midden.

Conclusions

As this was a relatively small collection of a single species within only a few features and deposits, no definitive conclusions can be drawn. It is well documented that the consumption of shellfish, especially oyster was common in the Roman period and so they are often present within domestic deposits (Cool 2006). It is most probable that the shell recovered from this site was not associated with ritual activities at the temple but suggests the consumption of shellfish in a more domestic context.

Assessment of Bulk Environmental Samples - *Anne de Vareilles*

Methodology

Five Romano-British samples were chosen for analysis and processed using an Ankara-type flotation machine. The flots were collected in 300µm aperture meshes and the remaining heavy residues washed over a 1mm mesh. Both the flots and heavy residues were dried indoors prior to analysis. The >4mm fractions of the heavy residues were sorted by eye by F. Cox and all finds have been added to Table 9. Sorting of the flots and identification of macro remains were carried out under a low power binocular microscope (6x-40x magnification). Identifications were made using

the reference collection of the G. Pitt-Rivers Laboratory, university of Cambridge. Nomenclature follows Zohary and Hopf (2000) for cereals, Stace (1997) for all other flora and an updated version of Beedham (1972) for molluscs. All environmental remains are listed in Table 9

Preservation

Unlike the contexts sampled during the 2007 phase of excavation, this area does not appear to have been much affected by alternating water-table levels. Only the odd untransformed seed was recovered and these are more likely to be modern intrusions than remnants of a waterlogged past. All samples had modern rootlets indicative of a low level of bioturbation. The overall preservation of charred botanical remains is quite good with many small and fragile seeds surviving. The cereal grains however are mostly dirty (fine clay adhering to their surfaces) and a little abraded from physical erosion, which has made identification to species difficult. Mollusc shells were infrequent and larger samples should be wet-sieved for the recovery of meaningful assemblages.

Results and Discussion

Ditch, F.237 [1052]

The ditch, which appears to be broadly contemporary with the aisled building (Structure I), contained some glume wheat and hulled barley grains (*Triticum spelta/dicoccum* and *Hordeum vulgare sensu lato*.), and almost 12 times as many wild plant seeds (a maximum of 104). Chaff is almost non-existent with only a fragment of straw and one wheat glume base present. This arable weed seed rich assemblage seems to represent coarse-sieving, the first stage of cleaning after winnowing and before the grains are released from their glumes. 46% of the total number of wild plant seeds are of mallow, most probably common mallow (*Malva sylvestris*). Some of the seeds still adhere to one another as in the sea-head. This plant grows well on disturbed, sunny, open land of nutrient-rich loams and sandy soils (Hanf 1983). Other seeds in the assemblage are also typical of sandy soils, such as the vetches or wild peas (*Vicia/Lathyrus* sp.), and of nutrient-rich soils, such as oraches (*Atriplex prostrata/patula*) and red bartsia (*Odontites verna*) (*ibid.*). The common Romano-British crop weed corncockle (*Agrostemma githago*) is represented by one seed. This weed is poisonous in large quantities and notoriously difficult to remove from the crop because of its grain-sized seeds. Interestingly the assemblage also had three seeds of plants from damp/wet soils: buttercup (*Ranunculus bulbosus/acris/repens*), spike rush (*Eleocharis* sp.) and great fen sedge (*Cladium mariscus*). These may point to wetter agricultural margins or might originate from entirely different sources.

Posthole of the aisled building (Structure I), F.260 [1108]

The eight litre sample contained a maximum of eight cereal grains, no chaff and 14 wild plant seeds. The latter are from damper, more clay-rich soils than those

evidenced in F.237. Compared to the other four samples the quantity of plant remains in this assemblage is moderate, which suggests that some crop processing activities (at least the burning of its waste) probably occurred in the vicinity of the posthole.

Midden F.233 [1019]

Perhaps unsurprisingly, the sample from the midden was quite rich. This sample contained the most cereal grains and, although not as many wild plant seeds as F.237 above, more wild plant seeds than caryopses. Hulled barley and spelt and/or emmer continued to be the main crops with perhaps a little rye (*Secale cereale*), as was also noted in the 3rd century AD F.185 of the 2007 excavation phase. The wild seeds represent at least two areas of agriculture: one of noticeably damp, nutrient rich soils represented by blinks (*Montia fontana*), spike rushes, stinking chamomile (*Anthemis cotula*) and cleavers (*Galium aparine*), and another area of free-draining soils which is presumably where all the wild/garden peas grew (*Vicia/Lathyrus/Pisum* sp.). The assemblage is a mix of various crops and their arable weeds. Once again, very little chaff was recovered and most of the arable weed seeds are large, which seems to reflect the early stages of crop cleaning.

Probable buried soil, [1020]

Unlike the sample from the midden very few plant remains were recovered. A little charcoal dust, two or three cereal grains and one medic or clover seed (*Medicago/Trifolium* sp.) were found. The contrast of this assemblage to the one described above indicates that [1020] is not a midden and is more likely to be a buried soil. Context [1019] also contained other consumption debris, such as bone fragments, broken shells (oysters?) and fish scales, that [1020] did not.

Ditch, F.239 [1102]

No archaeobotanical finds other than a little fine charcoal were found in this 10 litre sample.

Conclusion

Although from the same settlement as that excavated in 2007, the samples from this season differ in a number of ways. The levels sampled in 2009 do not appear to have been as affected by the fluctuating water-table and the concentration of plant remain deposits seems to be higher. In 2007 only two of the 11 samples had rich assemblages, whereas three of the five samples from this season were of botanical interest.
The final stages of crop processing, where the grains are removed from their glumes prior to consumption, are represented in the gully F.185 from the 2007 excavations. The samples from this season however, did not contain such remains but rather waste from cleaning stages earlier in the crop processing sequence. Despite the lack of clear evidence for threshing and winnowing, the archaeobotanical remains do show that

crops were almost fully processed at this site. More extensive spatial analysis may reveal discreet areas for specific stages of the processing routine.

All the arable seeds from Waterbeach indicate that both wet, clay- but nutrient-rich soils and dryer, sandier soils were exploited for the production of hulled barley, spelt and/or emmer wheat, possibly rye and possibly peas.. The important presence of common mallow in F.237 may be indicative of a warmer climatic period.

Table 9: Charred Plant Macro-Remains and Mollusca from the Bulk Soil Samples

Sample number		**41**	**47**	**31**	**38**	**46**
Context		1052	1108	1019	1020	1102
Feature		237	260	233		239
Feature type		Ditch	post-hole	Midden	midden/ buried soil	Ditch
Sample volume – litres		7	8	14	13	10
Flot volume - mililitres, estimates		20	8	20	10	10
Flot fraction examined - %		100	100	100	100	100
large charcoal (>4mm)		+++	+	+++		
med. charcoal (2-4mm)		+++	++	+++		-
small charcoal (<2mm)		+++	+++	+++	++	++
parenchyma frags - undifferentiated plant storage tissue			+			-
Cereal grains and chaff						
Hordeum vulgare sensu lato	hulled barley grain	1		5		
Triticum spelta / diccocum	spelt or emmer grain	6	4	14		
Triticum sp.	indet. wheat grain			8	1	
Triticum / Hordeum sp.	wheat or barley grain	2	1	13		
Triticum / Secale sp.	wheat or rye grain			2		
cereal grain fragments indet.		5	3	41	2	
Total grains excluding fragments		**9**	**5**	**42**	**1**	**0**
T. spelta/dicoccum glume base - spelt / emmer chaff		1				
T. spelta/dicoccum spikelet fork - spelt / emmer chaff				1		
indet. cereal culm node - straw node		1				
Non Cereal seeds						
Ranunculus acris/repens/bulbosus L.	Meadow / Creeping / Bulbous Buttercup	1				
Chenopodium sp.	Goosefoots	1				
Atriplex patula L./*prostrata* Boucher ex DC	Oraches	3				
Montia fontana ssp. minor Hayw.	Blinks			1		
Agrostemma githago L.	Corncockle seed	1				
R. conglomeratus/obtusifolius/sanguineus	Dock	10	1			
Rumex sp.	Dock	12		2		
Malva sylvestris L.	Common Mallow	14				
Malva sp.	Mallows	34				
Vicia / Lathyrus sp. <2mm	Vetches / Wild Pea	1		4		
Vicia / Lathyrus / Pisum sp.	Vetches / Wild Pea / Pea	2		23		
Medicago / Trifolium sp.	Medics or Clover	2	2	5	1	
Euphorbia sp.	Spurge	1				
Prunella vulgaris L.	Selfheal			1		
Odontites verna (Bellardi) Dumort.	Red Bartsia	1	2	2		

Galium aparine L.	Cleavers			1		
small *Galium* sp.	Cleavers	1				
Anthemis cotula L.	Stinking Chamomile		2	3		
Eleocharis sp.	Spike Rushes	1	1	9		
Cladium mariscus (L.) Pohl	Great Fen Sedge	1				
Large Poaceae	large wild grass seed	1	1	3		
Medium Poaceae	medium wild grass seed	4		2		
Small Poaceae	small wild grass seed	2	1	1		
Indet. Poaceae fragment - wild or cultivated seed		2	1	5		
Indet. seed		9	3	21		
Total seeds, excluding Poaceae fragments		**102**	**13**	**78**	**1**	**0**
Fresh water mollusca						
Lymnaea truncatula Müller			+	-	-	+
Lymnaea peregra Müller		-		-		+
Physa fontinalis L.						-
Anisus leucostama Millet		+		+	-	-
Damp / Shade loving species						
Vallonia excentrica / pulchella			+	+	-	+
Vertigo sp.						-
Oxychilus / Aegopinella sp.		-				
Open, dryer landscapes						
Pupilla muscorum L.				-		
Vallonia costata Müller					-	
Catholic species						
Trichia sp.		-	+	+	+	-
Ceciloides acicula –Blind burrowing snail		-	+			++
bone fragments		+++	+	++		
small whole bones		+	-		-	
proximal right carpo-metacarpus of a wading bird		1				
shell fragments - oyster?		-		-	-	-
fish scale		+		+		
pottery sherds		+		++		
baked clay				+		
burnt flint		-		-		
metal		+				
stone bead		1				
Modern intrusions (rootlets, seeds, etc.)		P	P	P	P	P

Key: '-' 1 or 2, '+' <10, '++' 10-50, '+++' >50 items. P = present.

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APPENDIX A

Feature Descriptions

General Description		
Area contained twenty eight features which included: nine ditches, the postholes of an aisled building (Structure I), a midden deposit, one gully, one discrete pit and one isolated posthole. The underlying natural subsoil comprised orange brown sandy gravel which was overlain by two buried soil horizons.	**Avg. Topsoil Depth (m)**	0.3
	Avg. Subsoil Depth (m)	0.20
	Max. width (m)	28
	Max. length (m)	37
	Area (ha)	0.05

Contexts

Feature No.	Feature Type	Context No.	Cut/Fill/ Layer	Width (m)	Depth (m)	Selected Artefacts	Comments
233	Midden	1019	Layer	13.5	0.2	Pottery, coins, animal bone, worked bone, worked stone	2nd-4th century AD
234	Ditch, NE-SW	1021	Fill			Pottery	2nd-4th century AD
		1022	Fill				
		1023	Fill				
		1024	Fill				
		1025	Fill				
		1026	Fill				
		1027	Cut	6	0.65		
235	Ditch, NE-SW	1028	Fill			Pottery	2nd-3rd and 2nd-4th century AD
		1029	Fill				
		1030	Fill				
		1031	Fill				
		1032	Fill				
		1033	Fill				
		1034	Cut	2.2	0.64		
236	Ditch, NE-SW	1035	Cut	1.1	0.47	Pottery	2nd-4th century AD
		1036	Fill				
		1037	Fill				
		1038	Fill				
		1039	Fill				
		1040	Fill				
		1041	Fill				
		1042	Fill				
		1043	Fill				
		1044	Cut	N/A	0.46		
		1065	Fill				
		1066	Fill				
		1067	Fill				
		1068	Cut	1.3	0.6		
237	Ditch, NW-SE	1048	Fill			Pottery	2nd-4th century AD
		1049	Fill				
		1050	Fill				
		1051	Fill				
		1052	Fill				
		1053	Cut	1	0.49		
		1054	Fill				
		1055	Fill				
		1056	Fill				

		1057	Fill				
		1058	Fill				
		1059	Cut	0.9	0.48		
238	Ditch, NW-SE	1104	Cut	0.55	0.24	Pottery	2nd-4th century AD
		1105	Fill				
		1124	Fill				
		1125	Fill				
		1126	Fill				
		1127	Fill				
		1128	Cut	0.62	0.28		
239	Ditch, NW-SE	1101	Cut	1.1	0.47	Pottery	2nd-3rd century AD
		1102	Fill				
		1103	Fill				
		1133	Fill				
		1134	Fill				
		1135	Cut	1.05	0.5		
240	Ditch, NW-SE	1046	Cut	0.73	0.47	Pottery	2nd-3rd century AD
		1047	Fill				
241	Post hole	1120	Cut	1.35	0.5	Pottery	Structure I, 2nd-4th century AD
		1121	Fill				
		1122	Fill				
		1123	Fill				
		1040	Fill				
		1071	Fill				
242	Post hole	1063	Fill				Structure I
		1069	Fill				
		1070	Cut	0.6	0.17		
243	Ditch, NE-SW	1074	Fill			Pottery	2nd-3rd and 2nd-4th century AD
		1075	Fill				
		1076	Cut	1	0.35		
244	Pit	1089	Fill				
		1090	Cut	0.65	0.35		
245	Post hole	1087	Fill			Pottery	Structure I, mid 2nd-3rd century AD
		1088	Cut	0.39	0.11		
247	Post hole	1091	Fill				Structure I
		1092	Cut	0.57	0.32		
248	Post hole	1093	Fill				Structure I
		1094	Cut	0.56	0.21		
250	Post hole	1141	Fill				Structure I
		1142	Fill				
		1143	Fill				
		1144	Fill				
		1145	Cut	1.22	0.14		
251	Post hole	1083	Fill				Structure I
		1084	Cut	0.19	0.12		
252	Post hole	1131	Fill				Structure I
		1132	Cut	0.5	0.18		
253	Post hole	1081	Fill				Structure I
		1082	Cut	0.45	0.1		
256	Post hole	1079	Fill				Structure I
		1080	Cut	0.18	0.08		
257	Post hole	1077	Fill				Structure I
		1078	Cut	0.42	0.19		
258	Post hole	1095	Fill				Structure I

		1096	Cut	0.55	0.12		
259	Pit	1097	Fill				
		1098	Fill				
		1099	Fill				
		1100	Cut	1.82	0.44		
260	Post hole	1106	Cut				Structure I
		1107	Fill				
		1108	Fill				
		1109	Fill	0.65	0.22		
261	Gully	1110	Fill				Possible beam slot
		1111	Cut	0.19	0.03		
262	Ditch, NW-SE	1114	Fill			Pottery	2nd-3rd and 2nd-4th century AD
		1115	Fill				
		1116	Fill				
		1117	Fill				
		1118	Fill				
		1119	Cut	1.3	0.6		
263	Post hole	1112	Fill				Structure I
		1113	Cut	0.43	0.15		
264	Post hole	1136	Cut	0.15	0.1		Structure I
		1137	Fill				
	Buried Soil	1020	Layer		0.2	Pottery and coins	2nd-3rd and 3rd-4th century
	Buried Soil	1045	Layer		0.3	Pottery	Cut by all archaeological features

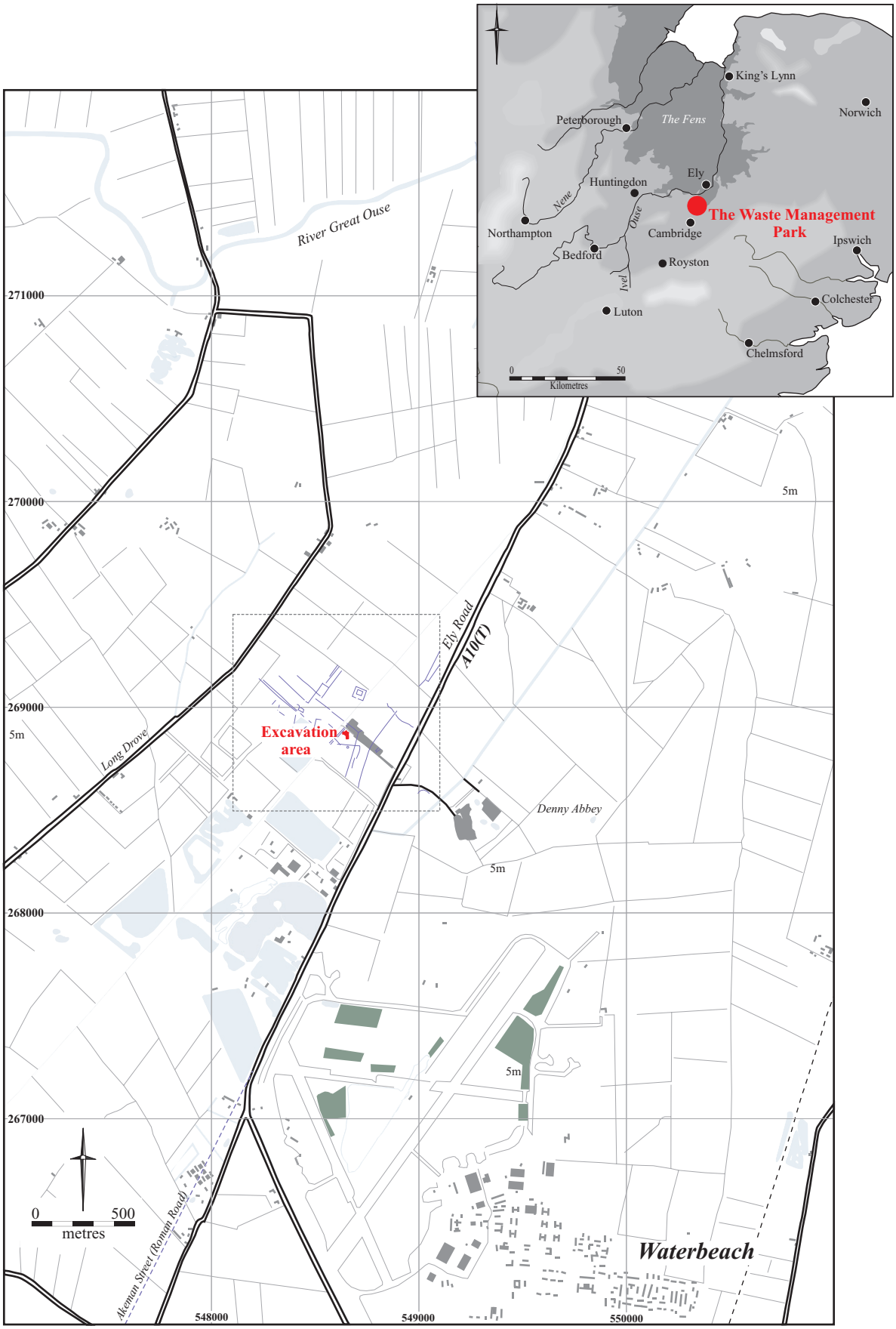

Figure 1. Location map.

Figure 2. Major Roman roads and canals in the southern fens

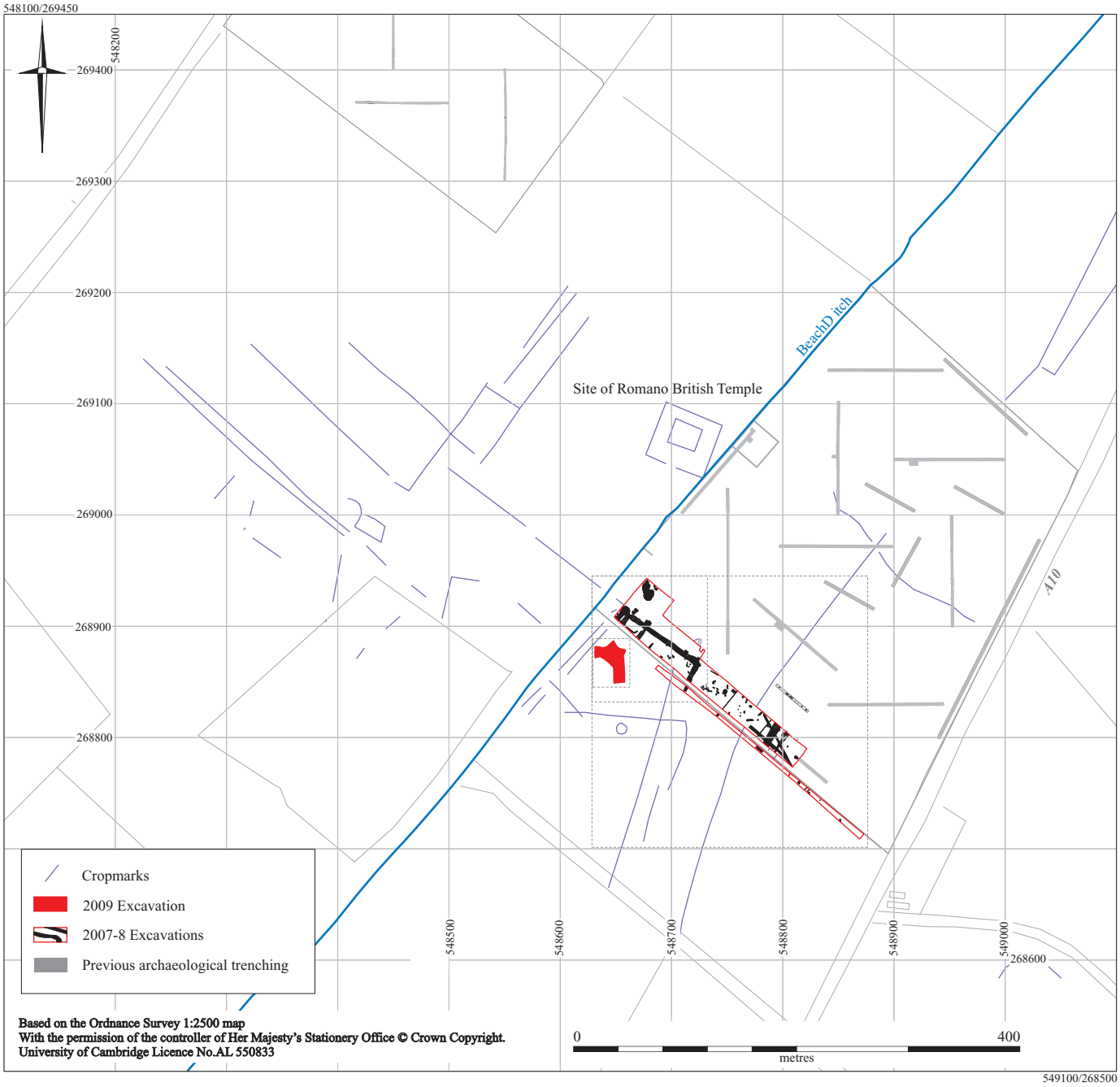

Figure 3. Previous archaeological work at The Waste Management Park and cropmarks

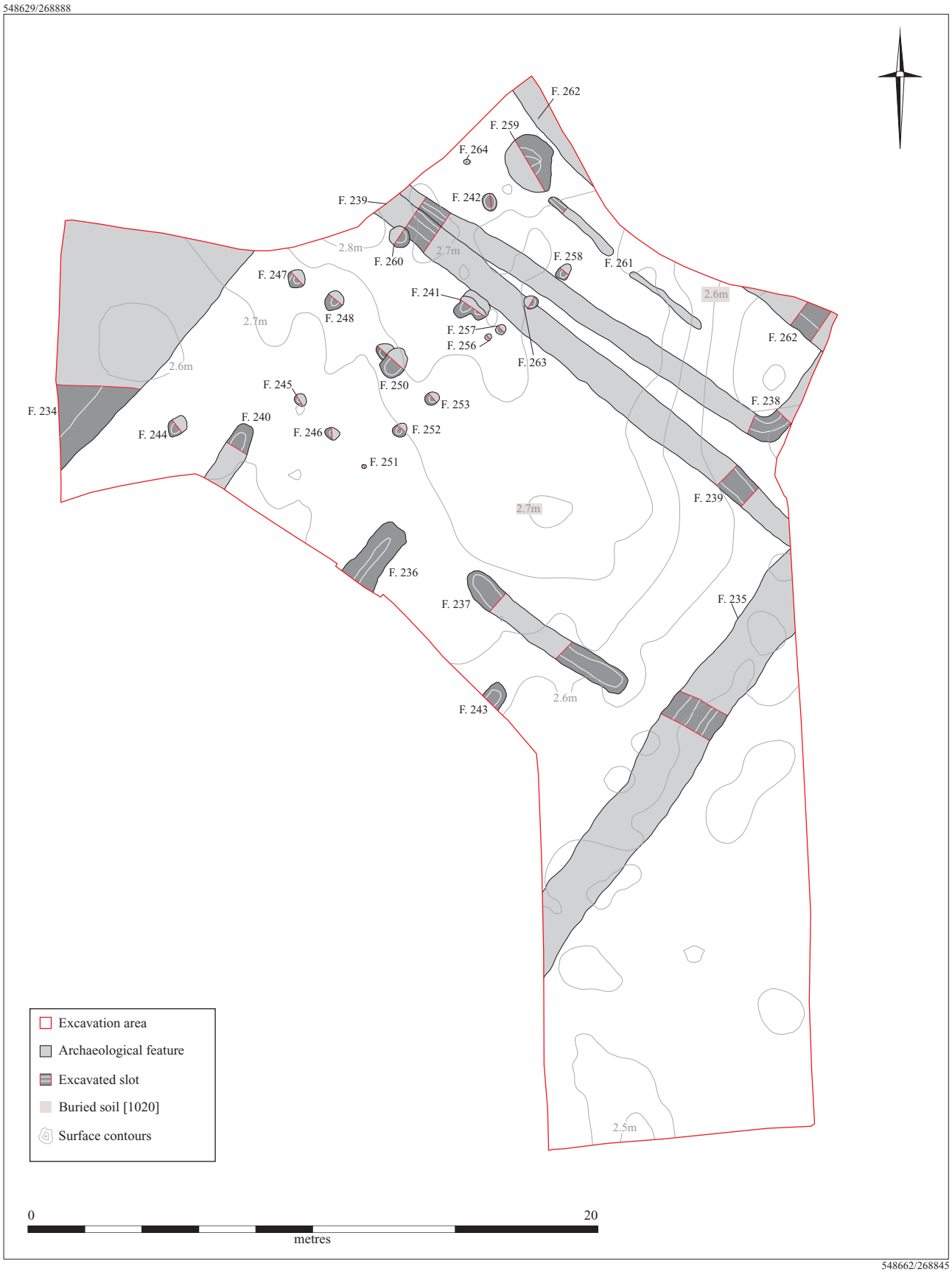

Figure 4. Plan of features.

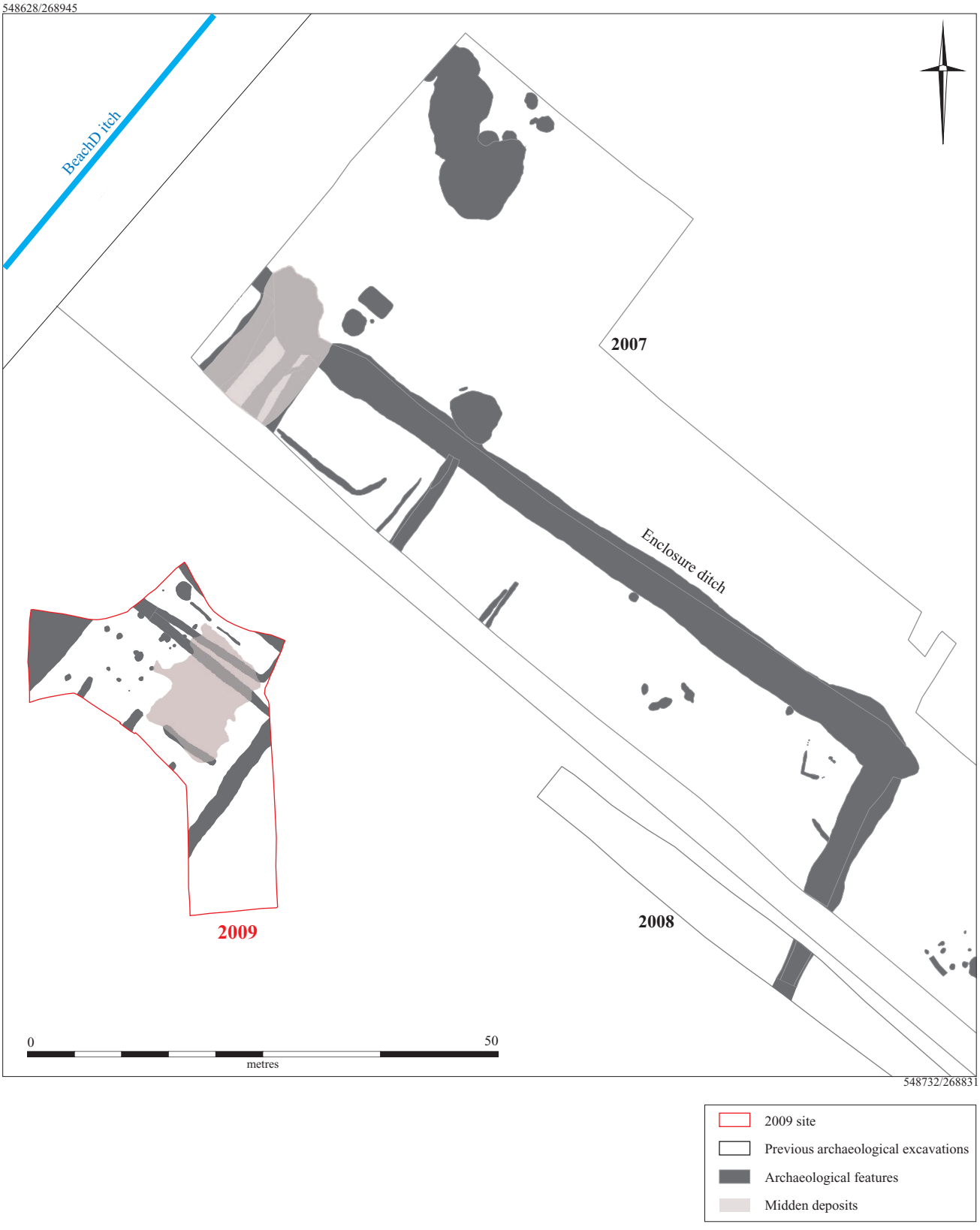

Figure 5. Plan of 2009 excavations and adjacent 2007 and 2008 excavation areas.

Figure 6. Structure I (top) and sample excavation of midden F. 233 (below).

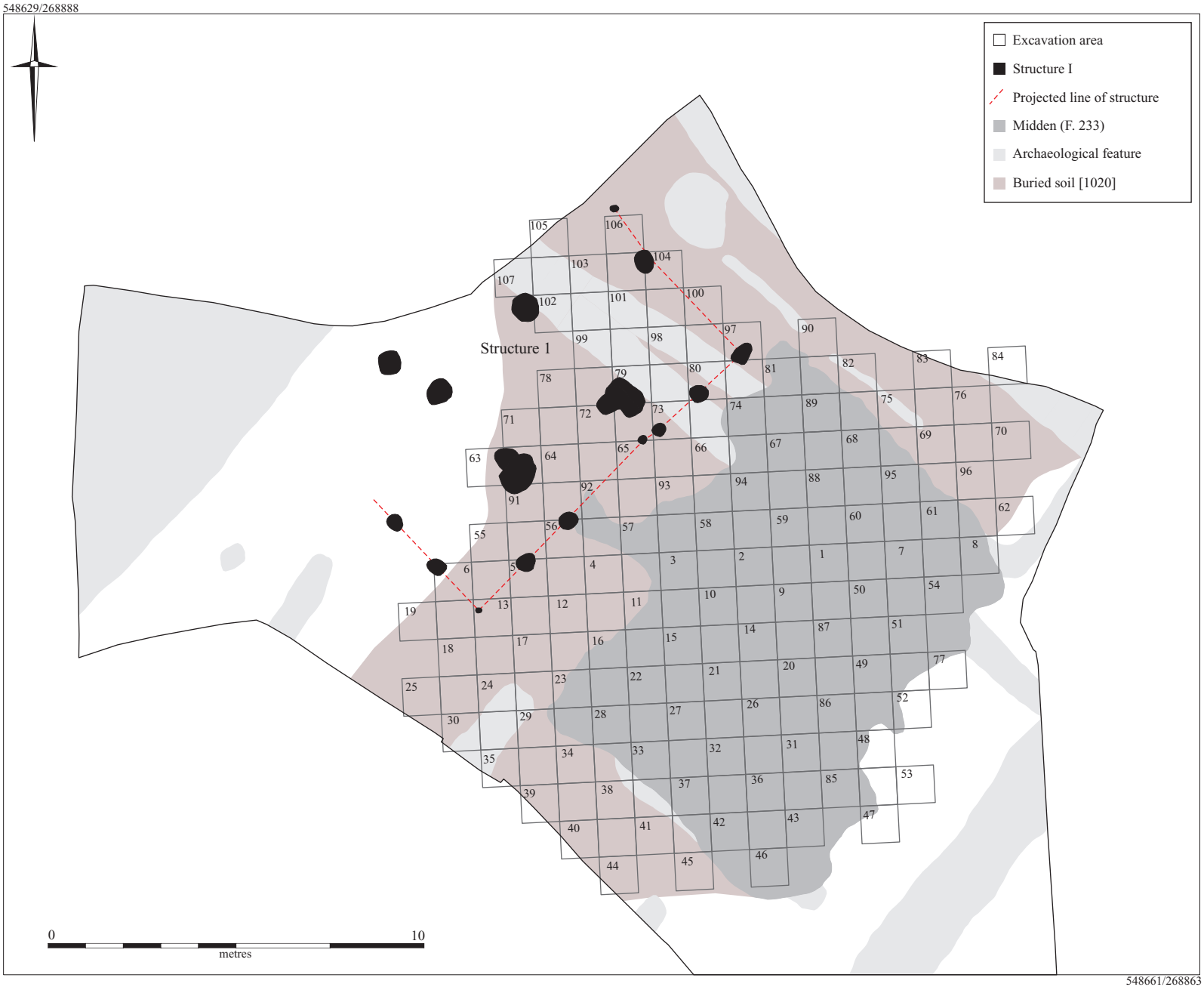

Figure 7. Plan of midden F.233 and Structure I.

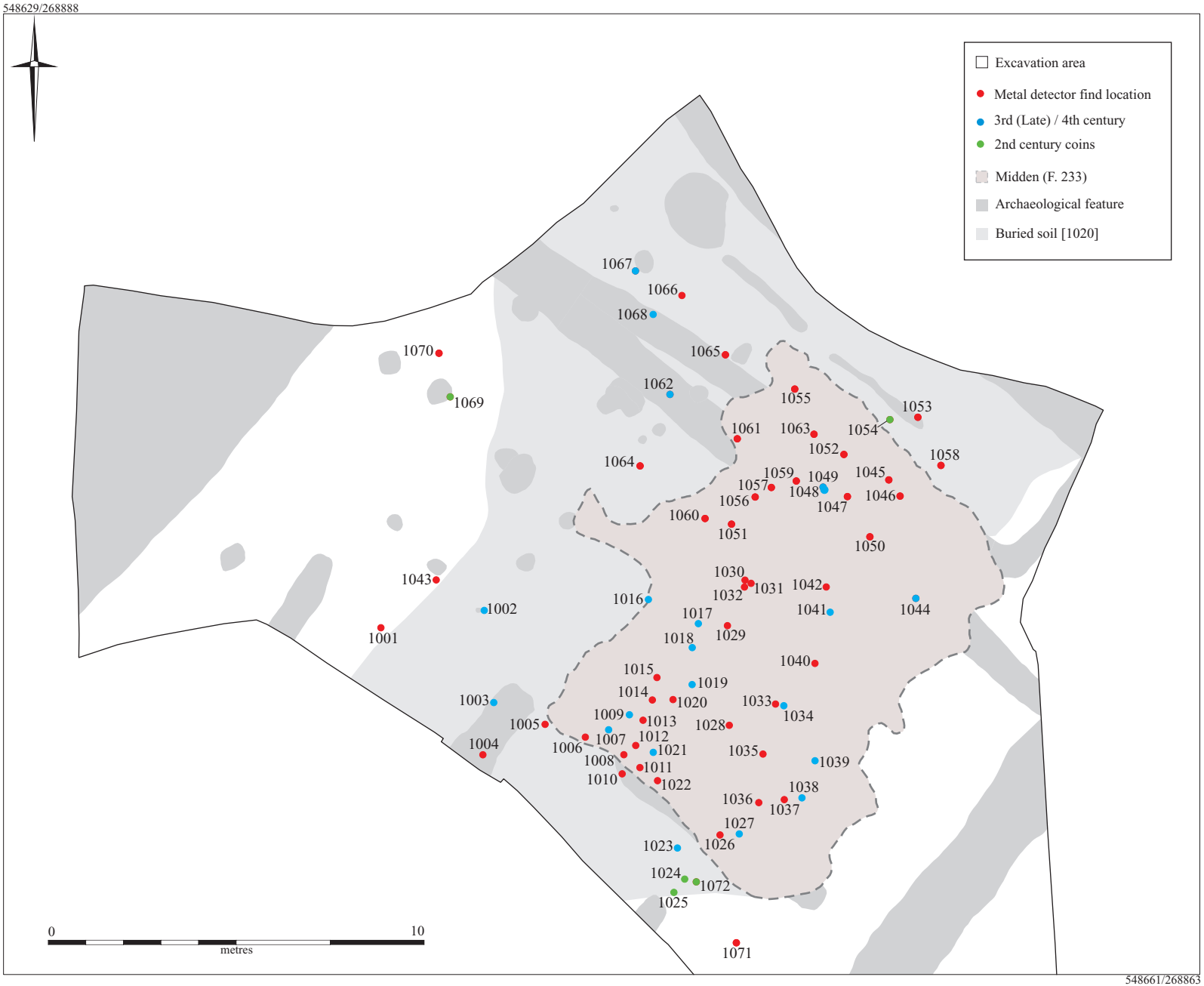

Figure 8. Metal detector finds plot.

Add or e

OASIS DATA COLLECTION FORM: England

List of Projects

Main

This is the main page of the OASIS form, the form is split into sections as listed below.

You can fill as much or as little of each section in at any one time. Once you have filled in a section completely, please tick the **completed** box at the bottom of that section. The form will then check to see that all the mandatory fields (marked with a *) have been completed. If this is the case it will return to this page, if not it will ask you complete the missing fields.

There are some fields that **must** be filled in: the project name, the location and your name and email address.

Please note: the form entries are only saved when the **Save record** has been pressed. If you leave the form inactive for over 30 minutes any entries will be lost, this is to retain the security of your username and password.

OASIS ID: cambridg3-74142

Project details

Add or edit entries

Project name	The Waste Management Park, Waterbeach, Cambridge. The Hammerhead: An Archaeological Excavation
Short description of the project	An archaeological excavation was undertaken by Cambridge Archaeological Unit (CAU) at the Waste Management Park, Waterbeach, Cambridge (TL 486 688). in advance of the construction of a hammerhead turning area for emergency vehicles, associated with the new Mechanical Biological Treatment Plant at the site. Excavations revealed relatively dense Romano-British remains comprising a rich midden deposit, the postholes of an aisled building and elements of a series of enclosure ditches. The features, particularly the midden deposit, produced a rich finds assemblage including over 3000 sherds of Roman pottery and 55 Roman coins, which suggest a 2nd-4th century AD date for the remains. The work is a continuation of a long running fieldwork programme on the Waste Management Park site and many of the features exposed relate directly to archaeological remains recorded during the excavation of an adjacent site in 2007. The site is located within an apparently densely settled Romano-British landscape - as indicated by extensive cropmarks - and is located in close proximity to a probable temple site to the north-east.
Project dates	Start: 26-01-2009 End: 25-12-2009
Previous/future work	Yes / Not known
Any associated project reference codes	ERW09 - Sitecode

Any associated project reference codes	ECB 3061 - HER event no.
Type of project	Recording project
Site status	None
Current Land use	Vacant Land 2 - Vacant land not previously developed
Current Land use	Industry and Commerce 1 - Industrial
Monument type	AISLED BUILDING Roman
Monument type	DITCH Roman
Monument type	MIDDEN Roman
Significant Finds	POTTERY Roman
Significant Finds	COINS Roman
Significant Finds	ANIMAL BONE Roman
Significant Finds	WORKED BONE Roman
Significant Finds	METALWORK Roman
Significant Finds	GLASS Roman
Significant Finds	QUERNSTONE Roman
Investigation type	'Full excavation'
Prompt	Direction from Local Planning Authority - PPG16
Status	Incomplete

Project location

Add or edit entries

Site location	CAMBRIDGESHIRE SOUTH CAMBRIDGESHIRE WATERBEACH The Waste Management Park, Ely Road, Waterbeach
Postcode	CB25 9PG
Study area	0.05 Hectares
Site coordinates	NGR - TL 486 688 LL - 52.2967804586 0.179368850654 (decimal) LL - 52 17 48 N 000 10 45 E (degrees) Point
Height OD / Depth	Min: 2.20m Max: 3.20m
Status	Incomplete

Project creators

Add or edit entries

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Local Authority Archaeologist and/or Planning Authority/advisory body
Project design originator	Emma Beadsmoore
Project director/ manager	Emma Beadsmoore

Project supervisor	Jonathan Tabor
Type of sponsor/ funding body	Developer
Name of sponsor/funding body	Donarbon Waste Management Ltd.
Status	Incomplete

Project archives Add or edit entries

Physical Archive recipient	Cambridge Archaeological Unit
Physical Archive ID	ERW09
Physical Contents	'Animal Bones','Ceramics','Environmental','Glass','Metal','Worked bone','Worked stone/lithics'
Digital Archive recipient	Cambridge Archaeological Unit
Digital Archive ID	ERW 09
Digital Contents	'Animal Bones','Ceramics','Environmental','Glass','Metal','Survey','Worked bone','Worked stone/lithics'
Digital Media available	'Database','Images raster / digital photography','Spreadsheets','Survey','Text'
Paper Archive recipient	Cambridge Archaeological Unit
Paper Contents	'Animal Bones','Ceramics','Environmental','Glass','Metal','Stratigraphic','Survey','Worked bone','Worked stone/lithics'
Paper Media available	'Aerial Photograph','Context sheet','Correspondence','Photograph','Plan','Report','Section','Survey ','Unpublished Text'
Status	Incomplete

Project bibliography 1 Grey literature (unpublished document/manuscript) Add or edit entries

Title	The Waste Management Park, Waterbeach, Cambridge. The Hammerhead: An Archaeological Excavation
Author(s)/Editor (s)	Tabor, J.L
Other bibliographic details	Report No. 931
Date	2010
Issuer or publisher	Cambridge Archaeological Unit
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