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Post-Excavation Assessment and Updated Project Design

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Monk's Farm, Kelvedon, Essex

Post-Excavation Assessment and Updated Project Design

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Contents

List of Figures

List of Plates

List of Tables

Summary

Between 7th September and 30th October 2020, Oxford Archaeology East carried out archaeological excavations at Monk's Farm, Kelvedon, Essex ahead of the construction of a residential development. The excavation was preceded by geophysical survey and trial trenching which had revealed several areas of archaeological activity within the 10ha development area. These remains were targeted by three separate excavation areas (A, B and C), covering a total area of 1.4ha within a wider development area covering some 10ha.

A small number of Late Neolithic and Early Bronze features were found across the site, but the earliest phase of sustained activity was during the Iron Age. In Area B, a small C-shaped enclosure, a larger sub-circular enclosure and a relatively large number of pits were exposed, variously associated with Early and Middle Iron Age pottery. Elsewhere, in Area B, an isolated cremation burial of Late Iron Age or Early Roman date was found.

Evidence for intensive Romano-British activity dating to the 2nd and 3rd centuries AD was revealed in Area A. The Romano-British remains consisted of a system of boundary ditches which enclosed a complex of small rectilinear enclosures. No structures and few discrete features were found within the enclosures, but a large watering hole was revealed, which had been backfilled with deposits which produced very substantial finds assemblages, including over 14kg of Roman pottery, alongside ceramic building material, metalwork and a fragment of an unusual ceramic figurine. Substantial quantities of Roman finds were also recovered from the various enclosure/boundary ditches, with some evidence for industrial-type activities in the form of briquetage and iron slag. In Areas B and C, poorly dated linear features on the same alignment as the Roman features in Area A probably represent elements of a wider field system and the Iron Age C-shaped enclosure in Area B appears to have been reused at this time, with finds of iron smelting slag and furnace lining associated with small quantities of Roman pottery and ceramic building material from its upper fills material hinting that the area may have been used for metalworking during this period.

There was no evidence for Anglo-Saxon or medieval activity on the site and post-Roman remains were limited to a modern field boundary and extraction pits.

The site lies less than 500m to the north-west of the known Roman town at Kelvedon, and the results of the excavation are of considerable significance in terms of providing information on Roman activity in the hinterland of the town and on the extent and character of earlier Iron Age activity in the area.

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1 INTRODUCTION

1.1 Background

1.1.1 Between 7th September and 30th October 2020 Oxford Archaeology East (OA East) carried out excavations at Monk' Farm, Kelvedon, Essex (centred on TL 8606 1932; Fig. 1; Plates 1-2). The project was commissioned by RPS Consulting on behalf of CALA Homes, ahead of development of the land for residential dwellings and associated amenities (Planning reference 17/00418/OUT).

1.1.2 The development area itself covers approximately 10ha and had been subject to an earlier programme of geophysical survey and trial trenching. Based on the results of this earlier work and following discussion between Essex Place Services (EPS) and RPS, three areas within the site were designated for excavation, covering a total area of 1.4ha. The work was carried out in accordance with a Written Scheme of Investigation (WSI) prepared by OA East and approved by EPS (Moan 2020).

1.1.3 This assessment has been conducted in accordance with the principles identified in Historic England's guidance documents *Management of Research Projects in the Historic Environment*, specifically *The MoRPHE Project Manager's Guide (2006) and PPN3 Archaeological Excavation* (2008).

1.2 Geology and topography

1.2.1 At the time of the excavation the site lay in a single field under arable use (Plates 1 and 2). To the south and west, the field was bounded by hedgerows and boundary ditches whist to the north and north-east the field ran up to the rear gardens of residential properties along Observer Way (Fig. 1).

1.2.2 The site les on the western side of the valley of the River Blackwater at a height of between c. 30-35m OD. The underlying bedrock geology of the area is London Clay, but the site lies upon an area of extensive terrace gravel deposits on the western side of the valley.

1.3 Archaeological background

1.3.1 A full Historic Environment Desk-Based Assessment (DBA) by was carried out for the development area in 2015 (Rudge 2015). For the purposes of this assessment report only a very brief background is provided here, based on the DBA and the Kelvedon Historic Towns Assessment Report (Medlycott 1999), with an emphasis on the evidence for Iron Age and Roman activity which is directly relevant to the remains encountered during the excavations. Figure 2 shows the site in relation to the extent of the Roman town at Kelvedon alongside selected Essex Historic Environment Record (EHER) numbers referred to in the text.

1.3.2 The site lies less than 300m to the north-west of the route of the Roman road between Colchester and London, which is here followed by the modern course of Kelvedon High Street (the B1024). To the south-east of the Roman road, on the gravel terrace adjacent to the River Blackwater, lies the site of the Roman town of Kelvedon (EHER 18764), identified as *Canonium* in the Antonine Itinerary (Rodwell 1988, 3).

1.3.3 The results of numerous small-scale excavations undertaken within the extent of the town (Rodwell 1988, Eddy and Turner 1982) suggest that the Roman occupation of the area was preceded by extensive, but dispersed Iron Age activity (EHER 18765), which included a set of Late Iron Age enclosures, one associated with a roundhouse, revealed during residential development little more than 100m to the south of Monk's Farm (Clarke 1988). The Roman town itself appears to have originated as a military fort (EHER 8762) in the mid-1st century AD, which was succeeded by an extensive civilian settlement (EHER 18764), part of which was later enclosed by a major earthwork boundary (EHER 18763). Small-scale excavations within the core of the Roman town have revealed at least one major masonry building, interpreted as a mansio and another circular building interpreted as a shrine (EHER 18766; 18767). Prior to the excavations described here there was no evidence for Roman (or Iron Age) activity extending to the north of the Roman road (Medlycott 1999, 11). The town appears to have declined over the course of the 4th century, but there is some evidence for Early Saxon activity within the area of the town and an Early Saxon cemetery is known to the north-east of the town (EHER 8238, not illustrated).

1.3.4 The Domesday Survey (1086) records the landholdings of Kelvedon at the end of the Saxon period. The medieval town was under the control of several different manors, with Church Hall and Felix Hall holding the majority of the High Street properties. The original focus of the settlement is thought to have been around the church, with a second smaller focus at the river crossing-point at Easterford over a kilometre to the east.

1.3.5 In the post-medieval period Kelvedon developed its current linear form with the merging of the medieval settlement foci at the Church Street/High Street junction and Easterford. In the modern period Kelvedon and the neighbouring village of Feering have effectively merged, being separated only by the river and the water-meadow. Until the 20th century Kelvedon was essentially an agricultural community although it also had an economic role as a staging-post town and a provider of accommodation for travellers.

Previous work (Fig. 3)

1.3.6 Prior to the work reported here, only one entry in the EHER was recorded within the site, an undated linear feature recorded from cropmarks (EHER 42761). A geophysical survey has taken place on the site (Fig. 3; Sumo 2019). This identified a small number discrete anomalies of uncertain status and a series of linear anomalies/trends, generally aligned north-west to south east or north-east to south-west (see Fig. 3). None of these were of clear archaeological significance, and several were interpreted as representing recent field boundaries (the location of some of which was corroborate by historic mapping).

1.3.7 Following the geophysical survey, a programme of trial trenching was undertaken in June 2019 (Knight 2019). A total of 47 trenches were excavated within the development area (Fig. 3), which revealed several areas of archaeological significance, including a set of Roman enclosure ditches on the eastern side of the development area and a curvilinear ditch associated with Anglo-Saxon pottery, thought to represent part of a ring ditch, in the southern part of the development area. Some of these

features, especially the Roman ditches in the eastern part of the site, corresponded to linear anomalies recorded by the geophysical survey and in some cases, anomalies suggested to represent recent field boundaries correlated with Roman enclosure ditches (see Fig. 3). Elsewhere, however, particularly in the south-eastern part of the development area, many of linear trends/anomalies identified by the geophysics did not correlate with any cut features.

1.4 Original research aims and objectives

1.4.1 The overall aim of the investigation was to preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development, and investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed, and place these in their local, regional and national archaeological context

1.4.2 On the basis of the results of the trial trench evaluation, the following suite of specific aims and research objectives were formulated for the excavation and set out in the WSI (Moan 2020):

Prehistory

- Investigate the presence or absence of prehistoric remains on the site.
- Clarify the extent of the prehistoric activity.
- Can anything be ascertained about the type or character of activity being undertaken?
- What was the local landscape like during the Neolithic and Bronze Age periods?
- Is the ring ditch containing Anglo-Saxon pottery truly of this date or could it a prehistoric feature which has been reused later on? If it is a Bronze Age barrow then this could provide an opportunity to investigate the relationship between settlement and burial sites, as highlighted in the Revised Research Framework (Medlycott 2011, 20).
- Is there any evidence for settlement-related activity on the site?

Roman

- An underlying theme in the Research Framework is the need to examine the regional and local variations in Roman activity (Medlycott 2011, 47).
- How does the Roman activity compare to other known Roman sites in the area and how does it tie into the other known contemporary remains within Kelvedon itself?
- What are the forms and sizes of enclosures at the site, and to what extent can their functions be discerned?
- Define the character of the Roman beamslot building
- Evidence for manufacturing and the organisation of industry needs collation and synthesis (Medlycott 2011, 48), therefore the presence of a possible

structure on the site as well as metalwork in its immediate surroundings could provide information on this topic

- How extensive is the industrial activity? Can the purpose and function of this activity be elucidated?
- The large quantity of pottery, along with the metalwork and the fragment from a ceramic figurine suggest this is a fairly affluent community, can information be collated about how and where this wealth has come from?
- Are the Roman cremations isolated examples or do they form part of a wider cemetery? And how do they relate to the Roman town of Kelvedon?

Anglo-Saxon

- There appears to be a hiatus of activity on the site between the late Roman and Anglo-Saxon periods, can a reason for this be ascertained?
- Is the ring ditch containing Anglo-Saxon pottery truly of this date or is this a case of reuse of an earlier enclosure?
- If the ring ditch is an Anglo-Saxon stock enclosure, then what other evidence is there on the site for associated activity/settlement?

1.5 Fieldwork methodology

1.5.1 All works were carried out in accordance with the WSI approved by Essex Place Services prior to commencement of works on site and with the Chartered Institute for Archaeologists' (2020) *Standard and guidance for archaeological excavation*.

1.5.2 Excavation was undertaken using a 20-tonne tracked 360^0 type excavator using a 2.2m wide ditching bucket. All machine excavation was monitored by a suitably qualified and experienced archaeologist.

1.5.3 Features were excavated by hand in accordance with the WSI. All archaeological features and deposits were recorded using OA East pro-forma sheets and plans and sections were drawn at appropriate scales. Site photos were taken of all features using a digital SLR camera.

1.5.4 Site survey was conducted using a Leica GS08 GPS system and photogrammetry using a pole cam or drone.

1.5.5 All features across the site were metal detected and all metalwork retained.

1.5.6 Bulk samples were taken from a range of features within the excavated area and processed at OA East's processing facility at Bourn.

1.6 Project scope

1.6.1 The features and deposits recorded during the evaluation phase of work (Knight 2019) have been amalgamated with those of the excavation and, where possible, the results of the evaluation have been incorporated into the stratigraphic summary provided in Section 2 of this report. Where possible, the finds and environmental assessments have also incorporated the assemblages excavated during the evaluation phase of the

investigation. However, in the case of some assemblages this approach has not been possible, with incorporation of material deferred until the analysis stage of the post-excavation programme.

2 FACTUAL DATA: STRATIGRAPHY

2.1 General

2.1.1 The following stratigraphic records were created during the excavation:

Record type	Number
Contexts	748
Section drawings	279
Environmental bulk samples	48
Photographs (shots)	219

Table 1. List of records created

Phasing

2.1.2 For the purposes of initial assessment, the archaeological remains across each of the three excavation areas have been attributed to four broad periods of activity, with one of these periods subdivided into two phases:

- Period 1 – Neolithic to Bronze Age (c. 4000-800 BC)
- Period 2 – Iron Age (c. 800 BC – AD 50)
- Period 3- Romano-British (c. AD 50-410)
  - Period 3.1
  - Period 3.2
- Period 4 – Post Roman (c. AD 410-modern)

2.1.3 At this stage of the post-excavation programme an inclusive approach has been taken to phasing, with many otherwise undated features attributed to these periods on the basis of the spatial relationship/proximity to dated features, although a small number of features (especially in Area C) do remain unphased.

Presentation

2.1.4 The stratigraphic summary provided below is organised by Period (1-4) and Area (A-C). A full inventory of excavated contexts is provided in Appendix A, and full specialist reports on the associated finds and environmental evidence are reproduced in Appendices B and C respectively. Plans of all features and excavated interventions for each Area are provided in Figs 4-6, and phased plans in Figs 7-9. Selected photographs of the excavations are included as Plates 1-15.

2.1.5 Where multiple interventions were excavated through a single feature, the feature as a whole is generally referred to by its lowest intervention number. In some cases, discrete features have been (provisionally) grouped together and these too are referred to by the lowest intervention number in that group. Throughout the text, intervention/cut numbers and group/feature numbers are rendered in **bold** type.

2.2 Period 1: Neolithic-Bronze Age

2.2.1 A small number of features in Areas A and C have been attributed to the Neolithic or Early Bronze Age on the basis of their association with small quantities of prehistoric pottery.

Area A (Figs 4 and 7)

2.2.2 Three widely dispersed small pits in Area A (**1020**, **1030** and **1365**) produced small quantities of Beaker pottery (dated c. 2400-1800 BC), accompanied in some cases by worked flint. Pit **1020** produced only a single sherd of Beaker (4g), which may be residual, and a similarly small sherd (3g) of Beaker came from pit **1030**, although here it was accompanied by 19 pieces of worked flint consistent with a later Neolithic/Early Bronze Age date and small quantities of hazelnut shell were recovered from a sample of its fill. A slightly more substantial assemblage of five sherds of Beaker pottery (52g), alongside a single flint flake, was recovered from pit **1365**.

2.2.3 Pit **1041** has also been provisionally assigned to this phase, but in this case, it is far from certain that it represents a prehistoric feature. Alongside a single secondary flint flake (probably of Neolithic/Early Bronze Age date), this feature produced a Lower/Middle Palaeolithic handaxe, in a condition indicating that it comes from a fluvial gravel context (see App. B.3; Plate 16), but which may have been deposited in this feature during the later prehistoric or Romano-British occupation of the site.

Area B (Figs 5 and 8)

2.2.4 A single small pit (up to 1.4m across and 0.4m deep) close to the eastern edge of Area B (**2194**) produced two sherds (7g) of Beaker pottery.

Area C (Figs 6 and 9)

2.2.5 Of the three Period 1 features exposed in Area C, two (pit **97** and gully **113**) were investigated during the evaluation (Trenches 24 and 32; Knight 2019). Pit **97** was a small sub-circular feature (0.8m in diameter, 0.2m deep) which produced two sherds (23g) of Beaker pottery and a small but coherent assemblage of 16 worked flints. Curvilinear gully **113** was a somewhat irregular feature, measuring 1.5m long, and may in fact represent part of a natural tree throw feature. It produced a single small sherd (5g) of Late Neolithic Grooved Ware pottery (c. 2900-2400 BC). During the excavation phase a third probable prehistoric feature was exposed: a small pit (**3041**; 0.9m diameter, 0.17m deep) which had been backfilled with a deposit rich in burnt stones and charcoal (Plate 3).

2.2.6 Some of the relatively large number of undated features in this area (see Section 2.6, below) may also relate to activity during this broad period, but none produced significant finds.

2.3 Period 2: Iron Age

2.3.1 Evidence for Iron Age activity was concentrated in Area B. Although a large number of the features attributed to this period in Area B did not produce datable finds, the Iron Age activity appears to be multi-phase, with a C-shaped enclosure ditch producing a

substantial quantity of Middle Iron Age pottery (c. 350-50 BC), whilst pottery from a series of discrete features was overwhelmingly dominated by Early Iron Age material (c. 800-350 BC). Elsewhere, Middle to Late Iron Age pottery was also recovered from a pair of pits in Area A.

Area A (Figs 4 and 7)

2.3.2 Leaving aside a single Late Iron Age/Early Roman cremation burial (assigned here to Period 3; see Section 2.4, below) the only demonstrable Iron Age features in Area A were a pair of small pits in the northern part of the site (**127** and **1120**). Pit **127** was recorded during the evaluation (Trench 17; Knight 2019) and produced two sherds (17g) of Late Iron Age pottery, whilst pit **1120** produced a more substantial assemblage of 35 sherds (476g) of Middle Iron Age pottery, as well as an intrusive fragment of clay tobacco pipe.

2.3.3 A very small quantity of grog tempered pottery dating to the 1st century AD was also recovered as a residual element within later (Period 3.1) features in Area A and may relate to Late Iron Age/Early Roman activity (see App. B.6).

Area B (Figs 5 and 8)

C-shaped ditch

2.3.4 In the centre of Area B, a C-shaped ditch (**2148**) was exposed. With its open side to the east, this feature measured approximately 12m across its long, north-south, axis and is of a size which could have enclosed a typical roundhouse structure (projected internal diameter of c. 9.3m). Measuring between 1.2 and 1.6m in width, this ditch varied considerably in depth, from up to 0.6m at its centre (Plate 4) to less than 0.2m at its northern terminus (Plate 5). Adding together the finds from the evaluation and excavation phases of work, this feature produced 59 sherds (1603g) of Middle Iron Age pottery, including a relatively high proportion of large and well-preserved sherds (overall mean sherd weight 27g), alongside a very small quantity of daub (8g). However, a small quantity of Roman finds including two sherd of grey ware pottery (mid-1st century to 4th century AD) and two tegula fragments were recovered from its upper fills, attesting to an episode of later activity during the Roman period, when a gully and large pit were cut though it (see Period 3, Section 2.4, below). It also seems probable that three pieces (672g) of metalworking residue recovered from these upper fills, which include material derived from iron smelting (App. B.3) also relates to this later, Roman, activity, although an Iron Age date for this material cannot be ruled out at this stage. Extensive sampling of the enclosure ditch fills yielded only occasional charred grains (barley and wheat) and weed seeds.

Enclosure 2092

2.3.5 To the west of C-shaped ditch **2148**, partly exposed against the edge of excavation was an enclosure (2092), defined by a single ditch comprising three relatively straight lengths, giving a somewhat polygonal plan-form and enclosing an area of some 250m^2 within the limits of excavation. The ditch measured between 0.8 and 1.2m wide and up to 0.4m deep which produced no finds whatsoever; its dating remains uncertain.

No internal features appeared to be associated with the enclosure and the fills of the ditch were cut by several of the features belonging to Period 2 Pit/Posthole Group **2054** (see below). This enclosure was not identified by the geophysical survey, but no features were revealed in Trenches 29 and 30, located to the north-west of Area B (see Fig. 3), perhaps suggesting the enclosure did not extend much more than c. 20m beyond the western edge of excavation.

Pits and postholes

2.3.6 A large number of discrete features were recorded in Area B, and although 76 of these have been attributed to Period 2, very few contained any dateable finds. Although some are likely to have been associated with the Middle Iron Age activity represented by C-shaped ditch **2148**, it is notable that the pottery from discrete features was almost exclusively of Early Iron Age date and many of these features probably belong to an earlier phase of activity.

2.3.7 Covering an area of approximately 11m x 13m to the 'rear' (west) of C-shaped ditch 2148 was loose cluster of 29 small pits and postholes (Pit/Posthole Group **2054**), some of which cut, and thus postdate, the infilled ditch of Enclosure **2092**. Rarely more than 0.2m deep, and filled with light to mid grey silty sand, only five of these features produced finds in the form of small quantities of fired clay/daub (11 pieces, 140g), including a possible loomweight fragment from posthole **2072**.

2.3.8 Immediately to the north of Enclosure **2092** was a further spread of features, including a cluster of three pits immediately adjacent to the edge of excavation (Pit Group **2182**), and a group of nine postholes (Posthole Group **2000**) which may have formed a rectilinear post-built structure of some kind. The only finds from features in this area were small quantities of cattle bone (151g) from Pit Group **2182** (pit **2182**) and a single worked flint from Posthole Group **2000** (posthole **2006**), whilst a sherd (5g) of Early Iron Age pottery came from pit **2020**, just south of Pit Group **2182**.

2.3.9 In the eastern half of the site, the most significant set of features was Pit Group **2076**, consisting of a set of six intercutting features, one of which (**2076**) produced a large portion of an Early Iron Age vessel (Plate 6). These features were relatively shallow, infilled with mid grey/brown sandy silts (Plate 7) and, including the vessel from pit **2076**, produced a substantial assemblage of 298 sherds (4478g) of Early Iron Age pottery, and a possible fragment of fired clay loomweight. Environmental sampling of the fill of pit **2076** yielded only sparse charcoal.

2.3.10 Very few of the other discrete features in the eastern part of Area C produced finds, essentially limited to very small quantities of Iron Age pottery from pits **2140** (Plate 8; two sherds, 8g) and **2150** (three sherds, 77g).

2.4 Period 3: Romano-British

2.4.1 Remains attributed to Period 3 were encountered across the site, but the focus of activity during this period was clearly in Area A, where a set of boundary and enclosure ditches and a waterhole were associated with major finds assemblages. For the purposes of assessment, the vast majority of the Roman remains have been assigned to Period 3.1, although there is clearly potential to separate this period into multiple

sub-phases of activity on the basis of stratigraphic relationships and finds dating. The only features assigned to Period 3.2 are a set of boundary ditches in Area A which cut across the earlier Roman remains on markedly different alignment and seem likely to relate to major change in land use/organisation.

Period 3.1

Area A (Figs 4 and 7)

2.4.2 The Period 3.1 remains in Area A were dominated by ditched boundaries and enclosures, with relatively few discrete features, although a large waterhole was revealed - from which very substantial assemblages of pottery and ceramic building material were recovered. Several of the ditches were also associated with large quantities of finds, although it appears possible that the excavated area lay outside of areas of settlement/occupation and the recovery of finds associated with industrial activity - including slag and briquetage - may suggest that some of these activities were undertaken within and around the enclosure system. The pottery strongly suggests that activity attributed to Period 3.1 was largely restricted to the mid-2nd to 3rd centuries, although earlier activity is represented by a single cremation burial.

Cremation burial

2.4.3 Located in the northern part of Area A, and apparently isolated, lay a small pit which contained a truncated pottery vessel holding a cremation burial (**1094**; Plate 9). This vessel is a jar with a pedestal base and rilled surface of probable 1st century AD date, and thus dates either to the Late Iron Age or Early Roman period. It contained a deposit of heavily burnt bone, including 227g identified as human, alongside other fragments identified as sheep and bird bone (see App. C.2). It is possible that this burial is broadly contemporary with the Late Iron Age pit from this area discussed above (see Section 2.3.2, pit **127**) but, regardless of its precise date, it clearly predates the main phases of Roman occupation in Area A by as much as a century.

Enclosure 1255

2.4.4 Partially exposed in the northernmost part of Area A was L-shaped Enclosure **1255**, which is likely to represent the south-east corner of a rectilinear enclosure, on a shared alignment with the other north-east to south-west/north-west to south-east oriented Period 3.1 boundaries and enclosures. The ditch was a fairly substantial feature, measuring up to 2.8m in width and 0.9m deep, but produced very few finds: 151g of animal bone, seven fragments of Roman CBM (302g) and a single sherd of grey ware pottery (mid 1st to 4th century AD).

2.4.5 Beyond the western edge of excvation, the north-west to south-east aligned side of this enclosure corresponded closely with a linear anomaly recorded by the geophysical survey (Fig. 3), which extended from some 130m and corresponded with a ditch recorded during the evaluation in Trench 9 and Trench 15 (ditch **144**), which was up to 1.3m wide and 0.6m deep but did not produce any finds (Knight 2019). No geophysical anomaly corresponding to the north-east to south-west aligned section of the enclosure was recorded to the north of Area A and its full extent remains uncertain.

Boundary ditches

2.4.6 The majority of the Roman remains in Area A appear to have been enclosed by a series of linear boundary ditches. To the east lay north-east to south-west aligned Ditch **1010** and to the north lay perpendicular Ditches **1076** and **1153**. Spaced approximately 8m apart, the two latter ditches possibly represent a ditched trackway. Neither Ditches **1076** or **1153** corresponded to any anomalies recorded by the geophysics, but Ditch **1010** clearly correlated with a linear anomaly originally interpreted as a (recent) field boundary (see Fig. 3).

2.4.7 Ditch **1010** extended beyond the southern excavation limit and was exposed for a length of just over 120m, forming a T-junction with boundary/trackway Ditch **1076**. Ditch **1010** typically measured between 1.2 and 2m in width and up to 0.45m deep. Along part of its northern extent, it was characterised by particularly finds-rich, dark upper fills which resulted in more intensive excavation of the feature in this area (Plate 10); a total of 20 interventions were excavated along the length of the feature.

2.4.8 Most the finds recovered from this ditch were derived from these more localised dark upper fills. A total of 569 sherds of pottery were recovered (6458g), as well as 29 fragments (2131g) of CBM, over 15kg of slag and 46 fragments of fired clay (1686g) which, significantly, included pieces of briquetage. A relatively rich assemblage of metalwork was also recovered, with eight iron objects including a possible chisel bale and fragments of two bucket handles, as well one iron and glass intaglio finger ring (SF 20; Plate 17) and two copper alloy coins; one of late 1st century date (SF 3) and one of late 3rd century date (SF 6). A notable feature of the darker upper fills in some of the excavated sections was the presence of numerous small fragments of heavily burnt bone. It was thought during excavation that some of this material may have derived from disturbed cremation burials, but subsequent assessment has demonstrated that the identifiable bone derives only from animals (App. C. 1). A total of eight bulk environmental samples were taken from the fills of this ditch, but they produced only sparse/occasional charred grain and seeds, although several samples contained fragments of a charred, vesicular material that may be burnt food, such as bread (see App. C.3).

2.4.9 The pair of north-west to south-east aligned boundary/trackway ditches to the north of Ditch **1010** (Ditches **1076** and **1153**) were of similar dimensions (typically 0.9-1.5m wide and up to 0.5m deep) and produced a total of 99 sherds (780g) of Roman pottery and 669g of fired clay (including some briquetage) and a single whetstone.

Waterhole and associated features

2.4.10 The most significant individual feature exposed within the area enclosed/bounded by Ditches **1010** and **1076**/**1153** was a large waterhole (**1073**). This feature corresponded with a discrete anomaly recorded by the geophysical survey (Fig. 3) and had been investigated during the trial trenching, when it was interpreted as a group of intercutting pits, but area excavation established that it was a single large feature, the upper fills of which had been cut by enclosure ditches also assigned to Period 3.1 (Ditches **1067** and **1169**), and by one of the later boundary ditches assigned to Period 3.2 (Ditch **1140**; see below). This feature is thus one of the stratigraphically earliest of the Roman features and appears to have been contemporary with two ditches (Ditches

1180 and **1266**) on differing alignments to the other Roman features in this area which may have drained into the waterhole during its use prior to the laying out of the set of rectilinear plots/enclosures discussed below.

2.4.11 Waterhole **1073** was a substantial feature, sub-circular in plan, it measured up to 4.5m across and was up to 1.05m deep, with moderately to steeply sloping sides and a broad, slightly concave base (Fig. 7, Section 12; Plate 11). The lower fills of this feature, consisting of deposits of silty sand eroded from the feature's sides, interleaved with more clayey/silty waterlogged deposits (Fig. 7, Section 12, fills 195, 1396, 1080, 1081, 1083, 1084, 1085, and 1087). Sampling of these deposits produced waterlogged plant remains including horsetail stems, and seeds of nettles, hemlock, sedges and rushes – all of which are likely to have been growing on the edges or in the immediate vicinity of the feature. These lower fills contained and overlaid a mass of waterlogged wood, much of which appears to represent a single dump of material incorporating both unworked and worked wood (Plate 12). Although the vast majority of this wood appears to have been dumped into the feature, at least one stake (1092; Plate 13) was found *in situ*, embedded into the base of the watering hole, suggesting that at least some of the wood may have derived from a subsequently dismantled/demolished revetment structure (see App. B.13). Pottery from the lowest fill (1395) has been spot dated to the mid to late 2nd century AD.

2.4.12 These lower fills were sealed by a thick deposit of mid greyish brown clayey sand (1089) which contained very large quantities of finds and appears to relate to deliberate backfilling of the feature. This deposit was sealed by an upper fill of light grey clayey sand (1090). All told, this feature produced very substantial and significant finds assemblages, mostly from the major backfill deposit (1089) but also material from the lower, waterlogged, fills. A total of 870 sherds of Roman pottery weighing 13,666g were recovered during the excavation phase (App. B.6), to which can be added 503 sherds (8347g) recovered during the trial trenching (Knight 2019). This included a wide range of fabrics and vessel forms with a notable fineware component including Samian ware and Colchester and Nene Valley colour coated wares. An exceptional find from the evaluation was a fragment of Gallo-Roman clay figurine (Lyons in Knight 2019). Metal finds, also recovered during the evaluation, consisted of a small number of hobnails and a possible fragment of silver-alloy Roman patera (Sami in Knight 2019). The trenching and excavation also produced a combined total of 176g of fired clay, two fragments of lava quern, a rubber stone, 64 fragments of CBM (6618g) and 216g of slag.

2.4.13 Abutting the waterhole on its northern side, this feature appeared to have been cut by (or perhaps more likely to have been contemporary with) a north-west to south-east aligned ditch which extended beyond the edge of excavation to the north-west (Ditch **1180**). This feature produced 65 sherds of Roman pottery (538g), eight fragments (993g) of CBM and 55g of fired clay.

2.4.14 To the south, Ditch **1266**, had a similar relationship to waterhole **1073**; this north to south aligned feature was exposed for a length of 18m before terminating. It produced 49 sherds of Roman pottery (1486g) and a single piece of slag (94g).

Rectilinear enclosure system

2.4.15 Aside from the waterhole and its associated ditches, the area bounded by Ditches **1010** and **1076**/**1153** was dominated by a series of L-shaped and linear ditches defining multiple small rectilinear enclosures/plots, which extended beyond the western edge of excavation (Ditches **1003**/**1007**, **1028**, **1053**, **1067**, **1169**, **1199**, **1202**, **1222**, **1228**, **1251**, **1257**, **1273**, **1281**). As noted above, there is evidence that some, if not all, of these enclosures postdated the backfilling of waterhole **1073**, whilst the layout of the enclosures themselves is clearly multiphase, with a sequence of intercutting ditches in the central part of the Area (Ditches **1028**, **1281**, **1294**, and **1257**) and evidence for recutting of one enclosure ditch adjacent to the southern edge of excavation (Ditch **1003**/**1007**).

2.4.16 Although many of the enclosure ditches were not detected by the geophysical survey, several of the ditches (**1003**/**1007**, **1028**, **1199** and **1251**) corresponded closely with anomalies originally interpreted either as a recent field boundaries or linear trends of uncertain status (Fig. 3). Three of these linear anomalies, on a north-west to south-east alignment (corresponding to ditches **1003**/**1007**, **1199** and **1251**), extended beyond the western edge of Area A, indicating the parts of the enclosure system probably extended at least 20-25m in that direction, although the absence of any continuation of these ditches in Trenches 33 and 39 suggests they probably did not extend much beyond this point (Fig. 3).

2.4.17 The enclosure ditches were invariably relatively insubstantial features, typically measuring between 0.5 and 1.2m wide and between 0.2 and 0.5m deep, with simple fills of grey/brown sandy silts/clays. The finds and environmental remains recovered from these features are summarised in Table 2. Most of the ditches produced moderate amounts of Roman pottery alongside other finds including CBM, slag, quern and fired clay - again including small amounts of briquetage. The relatively large quantity of Roman pottery from Ditch **1067** (344 sherds, 4497g) derives mostly from a point where it cut across the very finds rich back fill of waterhole **1073** (intervention **1397**) and must largely derive from that earlier deposit.

2.4.18 Environmental sampling of the ditches produced poor results, with only occasional grains and small volumes of wood charcoal recovered.

Other features associated with the enclosures

2.4.19 Relatively few features were found associated with the complex of rectilinear enclosures in Area A, but they included: a pair of short L-shaped ditches immediately south of waterhole **1073**; a possibly associated group of small postholes; and elsewhere, a number of discrete pits.

2.4.20 Little more than 2m south of waterhole **1073**, and within the plot/enclosure defined by ditches **1067**, **1222** and **1199**, were a pair of L-shaped features (**1262** and **1399**), both measuring c. 11m in length and lay on a shared north-west to south-east alignment with short, perpendicular c. 1m long projections at their south-eastern ends. Both features measured up to 1.2m wide and 0.3m deep and were filled with single deposits of mid orangey/grey brown sandy silts, and produced a combined total of 22 sherds (369g) of coarse ware Roman pottery. Feature **1262** also produced a small fragment of lava quern (96g). The function of these features is unclear but, considering

their distinctive and unusual morphology, it is possible they represent structural remains.

2.4.21 Immediately to the west was a single sub-circular pit (**1171**). It measured 2.6m long and up to 0.35m deep; the only find was a single sherd of grog tempered pottery of Late Iron Age or Early Roman date.

2.4.22 Centered immediately to the east of features **1262** and **1399** was a loose cluster of 26 postholes/small pits (Posthole Group **1099**), spread over an area of 20m by 15m with some cut into the fills of other Period 3.1 features in this area. These small features generally ranged between 0.2 and 0.45m in diameter and up to 0.5m deep. They did not form any coherent plan, but some may have been related to structures in this area. Finds were very scarce but five features (**1101**, **1122**, **1126**, **1146** and **1167**) produced single sherds of Roman pottery (24g in total).

2.4.23 A further 16 pits/postholes across Area A have been provisionally attributed to Period 3.1 (**1026**, **1049**, **1182**, **1184**, **1186**, **1190**, **1192**, **1210**, **1270**, **1306**, **1308**, **1310**, **1326**, **1340**, **1371** and **1377**), although it should be noted that some of these cut the fills of Period 3.1 ditches and are likely to relate to later activity. The only finds recovered from these features came from pit **1182**, cut into the upper fill of ditch **1273**, which produced 33 fragments (1335g) of lava stone deriving from at least two individual rotary querns.

2.4.24 Two short lengths of curvilinear gully were also exposed in Area A. Gully **1294**, located in the plot enclosure formed by L-shaped ditch **1199**, truncated the fill of ditch **1228**. Measuring c. 7m long, and up to 0.45m wide and 0.2m deep, it produced a substantial quantity of Roman pottery (69 sherds, 906g) as well as slag (459g) and fired clay (47g). To the south lay a very similar feature (gully **1383**) which was cut by boundary ditch **1010**, but produced no finds.

Feature Number	No. of interventions	Roman pottery	Metalwork/ coins	Slag	CBM	Stone	Fired clay	Animal bone	Environmental samples
1003	2			2 (83g)					
1007	7	52 (538g)		1 (588g)					
1028	10	49 (659g)	One CuA coin. one CuA alloy enamelled artefact, one Pb vessel repair, seven Fe artefacts including a blade fragment and nails.	7 (362g)	9 (557g)		5 (41g)	10 fragments	1 sample, sparse charcoal only
1053	1	2 (21g)			10 (2374g)				
1067	8	344 (4497g)				1 x whetstone	26* (669g)		1 sample, single grain
1169	3	19 (122g)			1 (683g)	quernstone (468g)	1* (20g)		
1199	10	17 (248g)						1 fragment	
1202	3	16 (962g)							
1222	6								
1228	5	9 (349g)				quernstone (229g)		1 fragment	
1251	9	16 (173g)		113 (6262g)					1 sample, single grain
1257	1								
1273	2								
1281	1	78 (2817g)				quernstone (1026g)			

Table 2. Summary of finds and environmental remains from Period 3.1 enclosure ditches (= includes briquetage)*

Area B (Figs 5 and 8)

Boundary ditches

2.4.25 A single north-west to south-east aligned linear ditch in the western part of Area B (Ditch **2085**) and a pair of north-east to south-west aligned ditches (Ditches **2152**/**2156** and **2186**) on the northern edge of the area have been attributed to Period 3.1 solely based on their shared alignments with features exposed in Area A. They may belong to a wider field system dating to this period, and it is possible that the latter pair of parallel ditches (spaced 5.5m apart) represented a trackway. Ditch **2085** produced a single fragment of lava quern (18g), consistent with a Roman date for this feature, but no finds were recovered from Ditches **2152**/**2156** and **2186**. The pair of parallel ditches (**2152**/**2156** and **2186**) did not correspond with any anomalies recorded by the geophysical survey, nor was any continuation of these features recorded in any of the evaluation trenches to the north (see Fig. 3). Ditch **2085**, however, may correspond to a linear trend recorded by the geophysics which extends 35m beyond the western edge of Area B, and its continuation to the west is almost certainly represented by a ditch recorded in Trench 36 (ditch **36**), 14m to the west of Area B, which produced no finds (Fig. 3; Knight 2019).

Reuse of C-shaped ditch 2148?

2.4.26 The presence of Roman finds, including pottery, CBM and (probably) iron smelting slag in the upper fills of Iron Age enclosure **2148** was noted above in Section 2.3.4. It appears likely that this feature survived as an earthwork during the Roman period and two features partly cut into its fills (gully **2208** and pit **2202**) probably attest to its reuse at this time. Gully **2208** was cut through the southwestern edge of the earlier enclosure ditch and measured 6.7m long and up to 0.9m wide and 03m deep. It produced two fragments of lava rotary quern (574g) and two fragments of probable iron furnace base/conglomerate (613g). Pit **2202** was cut into the northern part of the C-shaped ditch and was sub-circular in plan, up to 2.6m across and 1m deep with steeply sloping sides and a broad concave base (Plate 14). It contained a basal dark grey sandy silt sealed by upper fills of mid greyish brown sandy silts. Finds recovered from its fills consisted of eight fragments of fired clay plate/brick (207g) and a single large sherd of coarseware Roman pottery (44g).

Area C (Figs 6 and 9)

2.4.27 A single ditch (Ditch **3017**) has been attributed to Period 3.1, again due to its similar alignment to dated Period 3.1 features in Area A. It was exposed for a length of 26m on a north-east to south-west alignment, terminating within the excavation area. The only find from this feature was a small, abraded sherd of Iron Age pottery (5g).

2.4.28 To the north-west was a large, shallow sub-circular pit (**3039**) measuring up to 4.8m in diameter but only 0.2m deep (Plate 15). It produced a small, mixed, finds assemblage consisting of 11 sherds of Middle Iron Age pottery (294g), five sherds of Roman pottery (422g), 13 fragments (273g) of lava quern and a fragment of fired clay (30g).

Period 3.2

Area A (Figs 4 and 7)

2.4.29 Two ditches on a markedly different alignment to the Period 3.1 features and stratigraphically later than many of the enclosure ditches have been assigned to Period 3.2. Ditch **1022** was aligned north-east to south-west and was exposed for a length of almost 100m, continuing beyond both the northern and western edges of excavation. Measuring up to 1.3m wide and 0.4m deep it produced 29 sherds (234g) of Roman pottery (only broadly dated to the 1st to 4th centuries AD), a single fragment of CBM, 47g of fired clay and a small shard of Roman vessel or window glass (3g). Ditch **1140** met this feature at right angles, to form a T-junction, and was aligned north-west to south-east. Of similar dimensions to Ditch **1022**, it produced 15 sherds (115g) of Roman pottery and eight small fragments (25g) of CBM.

2.4.30 Although a north-east to south-west aligned linear anomaly corresponding to Ditch **1022** was recorded by the geophysics within Area A (Fig. 3), the survey did not detect any anomalies representing the continuation of either of these ditches beyond the excavated area. No continuation of Ditch **1140** was recorded on its projected alignment in Trench 26, 14m to the west of Area B and it seems likely to have terminated or changed alignment just beyond the edge of excavation. Any continuation of Ditch **1022** to the north-east would have extended outside of the development area, but to the south-west it probably corresponds to an undated north-east to south-west aligned ditch which was recorded in the eastern end of Trench 40 (ditch **46**; Knight 2019), although no further continuation of this feature was recorded in Trench 45, further to the south (see Fig. 3).

2.5 Period 4: Post-Roman

Area A (Figs 4 and 7)

2.5.1 The only demonstrably post-Roman features were found in Area A, where a post-medieval/modern field boundary crossed the northern part of the area and a large post-medieval/modern extraction pit was exposed in the eastern part of the area which partly truncated Period 3.1 Ditch **1010**.

2.6 Unphased/natural features

Area C (Figs 6 and 9)

2.6.1 A total of 14 discrete, somewhat irregular pit-like features in Area C have been left unphased at this stage. These were recorded in the field as possible pits or tree throw/natural features; none of which produced any finds.

3 FACTUAL DATA: ARTEFACTS

3.1 General

3.1.1 The following finds were recovered:

Material	Number	Weight (g)
Metalwork (Fe, Pb, CuA, Ag; object count)	15 (24)	-
Coins (CuA)	3 (2)	-
Metalworking residues	305	25610g
Worked flint	89	-
Burnt (unworked) flint	13	170g
Prehistoric pottery	435 (18)	7149g (130g)
Roman pottery	2430 (759)	35,972g (11,420g)
Clay figurine fragment	(1)	(17g)
Ceramic building material	187 (70)	20,141g (6123g)
Fired clay	124	3383g
Burnt stone	4	560g
Worked stone	97	6651g
Glass	1	3g
Clay tobacco pipe	1	1g
Fuel residue (coal)	1	2g
Waterlogged wood (recorded and discarded on-site)	12	-

Table 3. Basic quantification of finds recovered from the excavation. Where finds from the evaluation have not been integrated into the assessment level reporting (App. B) the totals from the evaluation are provided separately in brackets (after Knight 2019).

3.2 Metalwork *by Denis Sami*

3.2.1 The metalwork assemblage from the excavation consists of 15 artefacts (excluding three coins, see below). This total does not include 24 metal artefacts recovered during the earlier trench-based evaluation (reported on by Sami in Knight 2019). Finds from the excavation were recovered from archaeological features including ditches, layers and pits. The metalwork includes multifunctional and industrial items such as nails, bucket hoop and tools. Domestic items and dress accessories are represented by a lead vessel reparation, a fragmented copper-alloy pin (possibly from a brooch) and an iron finger ring decorated with a blue glass intaglio (Plate 17). Six items remain unidentifiable to type. The Roman finger ring can be dated to between the 2nd and 3rd centuries AD, but the remainder of the assemblage is chronologically undiagnostic, and it can only be dated by pottery association and site phasing to the Roman period.

3.3 Coins *by Denis Sami*

3.3.1 The excavation produced three Roman copper alloy coins: an antoninianus and two sestertii which were recovered from Period 3.1 ditches in Area A (Ditches **1010** and **1028**). A further two 2nd century Roman coins, not discussed here, were recovered during metal detecting of topsoil deposits (Sami in Knight 2019).

3.3.2 The antoninianus (minted AD 269-270), despite slight damage by excavation and light oxidation, is in excellent condition and with no sign of wear. The two sestertii (AD 96-

97 and AD 107), on the contrary, are heavily worn. This suggests these two coins circulated for a long period of time before final deposition.

3.4 Metalworking residues *by Simon Timberlake*

3.4.1 A total of 25.61 kg (305 pieces) of ironworking slag was recovered from the excavation and evaluation phases of work at the site. Of this, some 6.48 kg (119 pieces) came from the evaluation (all of it associated with iron smithing) and 19.13kg (186 pieces) from the excavation. Most of the slag from the evaluation came from context 79, the fill of a feature later recognised as an enclosure ditch during the excavation (Period 3.1 Ditch **1251**). From the excavation, the majority of the slag was found within the fill of a boundary ditch (Period 3.1 Ditch **1010**) on the east side of Area A. All or most of this slag consisted of Roman (2nd-4th century AD) iron smithing debris, although a small amount of what could have been smelting or bloom smithing slag was recovered from Ditch **1010** and, in Area B, from Ditch **2208** (Period 3.1) and from an upper fill (2175) of Period 2 C-shaped ditch **2148**.

3.5 Flint *by Lawrence Billington*

3.5.1 A total of 89 worked flints and 170g of unworked burnt flint were recovered during the excavation. This includes a small quantity of material from Period 1 (prehistoric) contexts, including a small but distinctive Early Bronze Age assemblage from pit **97** in Area C, but is dominated by material recovered as residual finds form Roman features (Period 3). The most significant individual find is a Lower or Middle Palaeolithic handaxe recovered from Period 1 pit **1041** in Area A (Plate 16), whilst the remaining material attests to activity from the Mesolithic to the Bronze Age, although distinctive/diagnostic pieces are rare.

3.6 Prehistoric pottery *by Carlotta Marchetto*

3.6.1 An assemblage totalling 435 sherds (7149g) of prehistoric pottery was recovered from the excavation, to which can be added a small quantity of material recovered during the evaluation (reported in Knight 2019). The pottery ranged in date from the Early Bronze Age through to the Late Iron Age period, with the majority being of Early Iron Age date (318 sherds, 4622g, c. 800/600-350 BC) and Middle Iron Age date (106 sherds, 2447g, c. 350-50 BC), and the vast majority was recovered from Iron Age (Period 2) features in Area B.

3.7 Roman pottery *by Kate Brady*

3.7.1 A total of 2430 sherds of pottery weighing 35,972g was recovered during the excavation, to which can be added the 749 sherds (11,420g) of Roman pottery recovered during the evaluation which has been reported on previously by Lyons (in Knight 2019) – giving a total of some 3179 sherds weighing 47,392g.

3.7.2 The assemblage includes a large range of fabrics and forms suggesting deposition relating to settlement of mainly Middle Roman date but with deposition continuing into the Late Roman period. The group contained a good proportion of fine and specialist wares suggesting a settlement of some status, with a tradition of Roman dining practices and access to exotic products such as olive oil. The presence of the

products of several regional industries and most noticeably vessels from Colchester, demonstrate the position of the site with good access to local and regional trade networks and particularly the influence of this major local centre. The mean sherd weight (MSW) for the assemblage is 14.7g which suggests a moderately well-preserved assemblage that may have been middened prior to final deposition. This is reflected in the surface condition of many of the sherds which are worn and abraded, most noticeable with the finewares. However, there are many large sherds, with several whole vessel profiles.

3.8 Ceramic building material *by Simon Timberlake*

3.8.1 A total of 20.14kg (187 pieces) of CBM (brick and tile) was recovered from the excavation. This compares with 6.12 kg of CBM recovered from the evaluation phase (Levermore in Knight 2019). The report on the brick and tile from the evaluation has not been amalgamated with the current one at this stage of the post-excavation programme, on account of the minor differences in the methods of recording. Of the 20,141g of brick and tile recovered, all was identifiably Roman in origin, even though much of it was fragmented, and more than 25% considerably weathered and abraded. A large proportion of this material consisted of fragmentary *pila* brick tiles (11,305g), alongside box flue tiles, tegula and imbrex.

3.9 Fired clay *by Simon Timberlake*

3.9.1 A total of 3.38kg (124 pieces) of fired clay was recovered from the evaluation and excavation of the site. The fired clay assemblage is made up of 2803g (84 pieces) of probable briquetage, 499g (35 pieces) of undefined daub and 81g (five pieces) of probable loomweight. All of the briquetage (which included vessel fragments, supports and hearth clay) was recovered from contexts/features attributed to the Roman period (Period 3). Likewise, the majority of the daub was Roman (238g), although some 140g was probably Iron Age in date (Period 2), and another 121g of it was Neolithic to Bronze Age (Period 1). The largest single amount of briquetage (690g) was recorded from context 1058 (Period 3.1 Ditch **1010**, intervention **1057**), with other substantial assemblages from Period 3.1 boundary/enclosure ditches in Area A, clearly representing the remains of a broken-up and discarded material accumulating alongside domestic rubbish within the fills of these ditches.

3.10 Stone *by Simon Timberlake*

3.10.1 A total of 7.21kg (101 pieces) of stone was examined from this site. This includes 2.58kg (nine pieces) recovered from the evaluation phase (previously reported by Levermore in Knight 2019). Of this, of 6651g (97 pieces) of worked stone was identified. Most of this stone (4399g) consisted: fragmentary rotary lava quern recovered from Roman contexts; a single piece of gritstone used as a whetstone (422g) of probable Roman origin; and a rubber stone (1830g) made of dolerite which had been used with a saddlequern, and therefore possibly Iron Age in date (found re-deposited within a Roman ditch). Unusually for a Roman assemblage, almost all the lava quern is burnt and weathered, and in some case considerably broken up.

3.11 Glass *by Carole Fletcher*

3.11.1 Archaeological works produced a very small assemblage of glass, a single shard weighing 0.003kg, recovered from ditch **1069** (Period 3.2 Ditch **1022**). This irregular shard is a clear pale blue green, with some small faults and is 3.7-3.9mm thick. The form of the glass is uncertain, either a highly abraded and weathered fragment of Roman vessel glass, possibly from a prismatic bottle, or a fragment of Roman window glass.

3.12 Clay tobacco pipe *by Carole Fletcher*

3.12.1 A single fragment of undecorated clay tobacco pipe stem (0.001kg) was recovered as an intrusive find from Period 2 pit **1120**. The stem fragment is moderately abraded, clean and unburnt, with a reddish stain at one end.

3.13 Fuel residue *by Carole Fletcher*

3.13.1 Ditch **1289** produced an irregular fragment (0.002kg) of unburnt black bituminous coal. The coal is undiagnostic and not closely datable, although it may be contemporary with the other material that was recovered from the ditch, or it could be intrusive later material from a steam plough or threshing engine.

3.14 Waterlogged wood *by Hannah Pighills*

3.14.1 A large mass of waterlogged wood was exposed on the base of Period 3.1 waterhole **1073** (wood group 1084). Much of this consisted of amorphous, degraded material and unworked roundwood but included more robust elements, some of which were worked. Although the remains of two stakes were found *in situ* in the base of the pit – suggesting the feature may once have held a timber lining or structure of some kind, the rest of the wood appears to represent a secondary dump of material – much of which may have derived from elsewhere - and was fairly disparate in condition (including some charred pieces). The major, more robust, pieces were almost exclusively made of oak (*Quercus* sp.) and included four split planks and one timber beam. Three of the planks bear the remains of mortice joints suggesting they originally derive from a jointed construction(s) of some kind.

4 FACTUAL DATA: ENVIRONMENTAL AND OSTEOLOGICAL EVIDENCE

4.1 General

4.1.1 The following environmental remains/samples were recovered from the excavation:

Category	Quantification/summary
Human skeletal remains	Cremated bone, 227g
Animal bone	592 fragments, 1070g
Environmental samples	48 bulk samples

Table 4. Summary of environmental remains

4.2 Human skeletal remains *by Zoë Ui Choileáin*

4.2.1 A single urned Late Iron Age or Roman cremation burial **1094** was identified at the site. The urn contained 227g of probable human remains, identified by size and robustness. Burnt sheep bone and bird bone were also identified within the fill (see App. C.2). The cremated human bone appears to represent a single individual, either an adult or an older subadult/adult.

4.3 Animal bone *by Zoë Uí Choileáin*

4.3.1 Excavations at the site uncovered a total of 592 recordable fragments of animal bone. This total includes material from the evaluation previously reported in Knight 2019, which has been reassessed as part of this phase of work. Of these, 212 fragments were identifiable to taxon: bird, cattle, horse, pig and sheep/goat. This assemblage is dated largely to the Roman period. Both hand collected material and material from environmental samples have been recorded. The bulk of the assemblage is primarily from ditches and a large waterhole. A single cremation pit contained over 200 fragments of burnt sheep bone, all from the same animal.

4.4 Environmental samples *by Rachel Fosberry*

4.4.1 Forty-eight samples were taken from prehistoric and Roman deposits within the three excavated areas of site. Preservation of plant remains is through carbonisation (charring) and waterlogging and is poor with low density and diversity of items such as cereal grains, seeds, nutshells and plant stems. The carbonised remains are predominantly cereal grains that are mostly abraded and/or fragmented and can only occasionally be identified to species, such as wheat (*Triticum* sp.) and barley (*Hordeum vulgare*). Preservation of charred weed seeds is generally better. Preservation by waterlogging has occurred in some of the deeper deposits although the recovery of identifiable items such as seeds is poor. Horsetail (*Equisetum* sp.) stems and tubers are present in all of the waterlogged samples.

5 STATEMENT OF POTENTIAL

5.1 Stratigraphy

5.1.1 The stratigraphic record was generated by OA East's Digital Recording System (DRS) which forms part of the digital archive of the project alongside digital photographs and the site database (MS Access), which includes full details of all recorded contexts. A total of 748 paper context records and 279 sections drawn on 19 sheets of A3 permatrace were generated. The digital and paper elements of the contextual record form the main components of the excavation data and are sufficient to form the basis of the site narrative. This record has good potential to further understanding of the archaeological remains dating to the various phases of the site's use.

5.2 Metalwork *by Denis Sami*

5.2.1 This small assemblage offers very little opportunity to speculate on the character or date of activities on the site, although it appears to be Roman in chronology. Metalwork is concentrated in ditches in Area A, possibly suggesting a disuse of such features during Period 3.1. The lack of Roman household items advocates for a rural use of the land, although the two possible tools may indicate some sort of industrial activity in the area and the finger ring with intaglio may have belonged to a relatively high-status individual.

5.3 Coins *by Denis Sami*

5.3.1 This small assemblage of coins has little potential to contribute to the site narrative.

5.4 Metalworking residues *by Simon Timberlake*

5.4.1 It would be useful to undertake further study on this assemblage to better understand the industry of this settlement. Comparatively, this would appear to be a moderate-sized, not a large ironworking assemblage, yet we may be looking at primary as well as secondary ironworking, in the latter case suggesting perhaps the occurrence of more than one smithy. Further analysis and comparison of these slags (with recorded examples from other Essex sites) may resolve the following questions: a) the source(s) of the ores used in smelting; b) the nature of the furnaces and whether the slag was tapped; c) confirmation of whether or not iron smelting was undertaken here during the Roman period and d) to establish whether we are looking at the smithing of iron blooms (primary ironworking) or just the re-smithing of billet iron, scrap or the forging/repair of tools (secondary ironworking). It may not be possible to answer any of these questions with certainty, but a renewed examination of the material combined with a more thorough investigation of comparable sites could prove productive.

5.5 Flint *by Lawrence Billington*

5.5.1 This small assemblage of worked flint has some, limited, potential to provide information on the earlier prehistoric activity at the site, whilst the Palaeolithic hand axe is a find of intrinsic interest and requires full reporting.

5.6 Prehistoric pottery *by Carlotta Marchetto*

5.6.1 The prehistoric pottery from the excavation dates from the Early Bronze Age to the Middle Iron Age, suggesting activity at the site throughout much of the 2nd and 1st millennium BC. The majority is handmade Early Iron Age sherds. Although the pottery assemblage is relatively small, the presence of multiperiod pottery could suggest a use of the settlement from the Bronze Age to the Roman period.

5.6.2 The Early Iron Age pottery dates to the earlier stages of the period, c. 800-500 BC, and constitutes an 'early' Decorated ware PDR group (Brudenell 2012), characterised by coarseware and fineware, plain and decorated vessels. This assemblage could contribute to a wider characterisation of later prehistoric pottery assemblages in Essex and provided comparative data on fabrics, methods of surface treatment, decoration and ceramic technology.

5.6.3 The Middle Iron Age assemblage is relatively small, but it is characterised by large and well-preserved sherds that can contribute to a more specific description of the typology and the character of the MIA pottery tradition. The assemblage includes several key groups containing partial vessel profiles.

5.6.4 The gap between the two ceramic phases (Earlier Iron Age and Middle Iron Age) should be investigated more specifically to understand the development of the settlement. The comparison with other similar assemblages in the region could help build a more detailed understanding of ceramic development in this part of the landscape.

5.7 Roman pottery *by Kate Brady*

5.7.1 This moderately large and well-stratified pottery assemblage has considerable potential in terms of understanding the chronology and character of the Roman activity at the site. Individual pottery groups are well dated and suggest a floruit of activity in the mid-2nd to mid-3rd century and further comparison with regional typologies and large local assemblages such as those from Colchester (Going 1987) and Kelvedon (Rodwell 1988) should enable the dating to be refined further and some of the more broadly dated contexts to be assigned more closely to a ceramic phase. Full recording of the pottery fabrics will provide information on ceramic supply to the site and help place the settlement within its trade networks. Stephen Rippon (2018, 172-96) has suggested that the distribution of pottery can be culturally, as well as geographically determined, with the resulting pattern reflecting territorial or cultural boundaries. The pattern of supply at the Monk's Farm site will be considered with this suggestion in mind. The site is situated near the Roman road between two large towns (Colchester and Chelmsford) and close to the Roman roadside settlement of *Canonium* (Kelvedon) and its relationship with that site, as can be defined ceramically, will be examined. Comparison with the products of the kilns at Kelvedon (e.g Chambers Meadow) and from the 4th century kiln site at Imworth (SGRP kilns database) will be made to examine whether any of these later products reached the site.

5.7.2 The pottery will also contribute to questions of site status and function. As mentioned above, the site is in the hinterland of the roadside settlement at Kelvedon. A key research aim will be to determine whether the pottery is of comparative status with similar access to imports and specialist wares. Key ratios include the ratio of dishes

and bowls against jars (Evans 2001) and the relative proportion of decorated samian (Willis 2005). Values will be compared with sites of various size in the region. Additionally, the assemblage has good potential to reveal patterns of deposition which may provide insight into the function of features, identify core and peripheral areas of activity, and point to different modes of deposition and waste disposal.

5.8 Ceramic building material *by Simon Timberlake*

5.8.1 For a site with so few traces of significant building structures, the brick and tile assemblage is both large and varied, despite its rather fragmented condition. The evidence suggests that we are looking at a group of moderately high-status buildings somewhere in the near vicinity. There is potential therefore in the analysis of the finds, if not in their distribution across the site, to be able to suggest some of the buildings represented and where these might have been placed. Depending upon the scale of the redeposition, clearance and subsequent truncation of the Iron Age and Roman levels this may or may not be possible, yet some useful parallels may still be drawn with other similar-sized settlements within this same area of Essex/East Anglia, some of them with very similar levels of industry and with similar origins.

5.9 Fired clay *by Simon Timberlake*

5.9.1 Given its poor preservation, an improved understanding of this assemblage may be difficult to achieve, although a renewed study of this and of comparable types of furniture (such as brine vessels, moulds and containers) from other sites holds significant potential for the better understanding of the inland salt industry and (in some small way) the role of this Roman town. The question remains as to what we are missing, and indeed whether we are missing, the main focus of salt production in these urban outskirts, just as we seem to be within the centre of the Roman town? The further study of this briquetage holds the only potential for further work within the fired clay assemblage, the small amount of daub and fragmentary loomweight being both insignificant and relatively undiagnostic.

5.10 Stone *by Simon Timberlake*

5.10.1 The occurrence of lava quern but not other sorts of typically used Romano-British quern at this site is of some interest, simply on account of the absence of the latter. This is very unlikely to be an artefact of the period of occupation of this settlement, but much more a phenomenon of its proximity to Colchester which was one of the entry points on the east coast of Britain for this trade in lava quern from the port of Andernach on the Rhine. It may thus be significant but is very unlikely to have implications for the further study of the stone assemblage from this site.

5.11 Glass *by Carole Fletcher*

5.11.1 The fragmentation of the assemblage and its limited size means it has no potential to aid local, regional and national research priorities.

5.12 Clay tobacco pipe *by Carole Fletcher*

5.12.1 The assemblage has little potential to aid local, regional, and national research priorities. The pipe fragment does little, other than to indicate the consumption of tobacco on, or in the vicinity of, the site after *c*.1600.

5.13 Fuel residues *by Carole Fletcher*

5.13.1 The assemblage has no potential to aid the regional or local research objectives.

5.14 Waterlogged wood *by Hannah Pighills*

5.14.1 The size of the assemblage and condition of the wood dictates that it has little potential to inform on the kind of structure which the main timber elements may have derived, and there is little potential for any further work.

5.15 Human skeletal remains *by Zoë Ui Choileáin*

5.15.1 The cremation pit was isolated with no other funerary activity recorded on site. It is likely that the burnt sheep bone and bird bone represent offerings on the pyre which was not uncommon in Roman cremation burials. Isolated Roman cremation burials are not uncommon throughout East Anglia and this pit adds to the growing corpus of information on Romano-British rural burial practice in the region.

5.16 Animal bone *by Zoë Uí Choileáin*

5.16.1 Primarily, these specimens represent domestic waste. The assemblage is dominated by burnt sheep/goat bone from two main contexts. Although these greatly increase the fragment count, each only represents a single animal. Due to the small size of the assemblage, few other conclusions can be reached regarding the butchery or dietary practices of this population.

5.17 Environmental samples *by Rachel Fosberry*

5.17.1 The plant assemblages recovered from this site have limited potential to add information on the diet and economy of the site. The recovery of hazelnut shell from prehistoric pit **1030** is consistent with the date of the feature. Similarly, Iron Age deposits often produce a background scatter of charred remains, usually cereals. The samples from Roman deposits can be considered as consistent with a lack of human settlement. Such scarcity of charred plant remains can also be an indicator of later intrusions from more modern practice of stubble burning and are not considered reliable material for radiocarbon dating.

5.17.2 The samples from the watering hole produced very limited assemblages, mostly of remains of tough seeds that are more likely to preserve in these conditions.

5.18 Overall potential

5.18.1 In combination, the stratigraphic data along with the potential offered by the majority of the artefact assemblages and majority of the ecofact assemblages is considered to be of sufficient quality to address the project's Updated Research Objectives and to form the basis of a full archive report and synthetic publication (Section 6).

6 UPDATED PROJECT DESIGN

6.1 Revised research aims

Introduction

6.1.1 The original research aims, formulated on the basis of the trial trenching results, are reproduced above in Section 1.4. The results of the excavation have produced new evidence and have prompted reinterpretation of some aspects of the trenching which renders some of the original research aims redundant or requiring modification. In particular:

- The pottery from the C-shaped enclosure ditch in Area B, originally identified as Anglo-Saxon, has now been dated to the Middle Iron Age: there is no longer any evidence for Anglo-Saxon activity from the site, and the evidence for Iron Age activity is more extensive than the trenching indicated.
- The putative Roman beamslot building originally identified by trenching in Area A has been shown to relate instead to an enclosure ditch.
- Analysis of the scatters of burnt bone from some of the fills of Roman ditches in Area A, originally interpreted as possible cremation deposits, has demonstrated that these deposits are made up exclusively of burnt animal bone.

6.1.2 The evidence recovered from the excavation has necessitated a comprehensive updating of the research aims for the project, which takes account of, and aims to contribute to, the Regional Research Framework for the East of England (Glazebrook 1997; Brown and Glazebrook 2000; Medlycott 2011). These revised research aims are a set out below, organised by chronological period.

Prehistoric (Period 1)

Contextualising the evidence for Lower/Middle Palaeolithic activity

What other evidence is there for Lower/Middle Palaeolithic activity from the gravel terraces of the Blackwater Valley? What does the sites geological context suggest about the probable date of this material, and can it be related to a specific stage(s) of the Pleistocene/quaternary geological sequence (i.e. Marine Isotope Stages)?

6.1.3 The Lower/Middle Palaeolithic handaxe recovered from Area A (Plate 16) is a significant find in terms of the local record of Pleistocene human activity. Although its recovery from a feature of probable prehistoric or Roman date makes its original depositional context uncertain, it requires contextualisation in terms of the known record of Palaeolithic findspots in the local area and the date and origin of the Pleistocene deposits at the site from which it most likely derived. This will be investigated through consultation of relevant sources including HER records of the immediate environs of the site, geological mapping, and relevant sections of *The English Rivers Project* (Wymer 1999; Mepham 2009) and the *Managing the Essex Pleistocene Project* report (O'Connor 2015).

Neolithic and Bronze Age settlement in the Blackwater Valley

What was the extent of Neolithic and Bronze Age activity on the site and in the wider landscape? What does the dating of the Neolithic and Bronze Age features reveal about the intensity of occupation and land use during different periods over his timeframe? Is it possible to characterise the nature of the activity represented by the Neolithic and Bronze Age remains? Does the absence of Middle and Late Bronze Age remains indicate a lack of activity at the site and in the local area during these periods?

6.1.4 Evidence for Neolithic and Early Bronze Age activity was sparse, essentially represented by a single (possibly natural) feature associated with Late Neolithic Grooved Ware pottery (c. 2800-2400 BC) in Area C and four pits associated with small quantities of Early Bronze Age Beaker pottery (c. 2400-1800 BC) from Areas A and B. These were associated with very small quantities of finds and although they seem likely to relate to domestic activity of some kind, any episodes of occupation may have been short-lived. These features were not associated with any significant environmental remains and there is little potential for further analysis of the finds to characterise the kinds of activities undertaken on the site. Nonetheless, their very presence here is indicative of widespread, if low-intensity, activity across the gravel terraces of this part of the Blackwater valley, especially during the Early Bronze Age. This evidence for activity requires contextualising in terms of the known record of Neolithic and Bronze Age activity in the immediate environs of the site and in the Blackwater/Chelmer valleys more generally (Wilkinson *et al*. 2012; Healy 2012).

6.1.5 The absence of evidence for Middle and Late Bronze Age activity at Monk's Farm requires consideration in the context of evidence for intensive activity of this date in other parts of the Blackwater and Chelmer Valleys (Yates 2012). Consideration of the location and character of remains of this date in the wider region, and consultation of local HER records, may help to establish the significance of the lack of evidence for activity from the site for these periods and whether they saw a genuine hiatus in activity/land use.

Iron Age (Period 2)

Chronology and sequence of the Iron Age remains

What is the chronology and sequence of the Iron Age activity? Is there any evidence of Early Iron Age activity, or that activity extended into the Late Iron Age? Was there a hiatus between the Iron Age occupation and the Romano-British activity?

6.1.6 The Iron Age remains at Monk's Farm were concentrated in Area B, with a small number of discrete features of this date also recorded in Area A. Dating of these remains relies on the associated pottery assemblage, with assessment of this material (App. B.5) suggesting that it will be possible to separate the Iron Age activity in Area B into two distinct phases/periods of activity, an Early Iron Age phase represented only by discrete features - including one major cluster of intercutting pits (Pit Group **2076**) - and a Middle Iron Age phase represented by C-shaped Enclosure **2148** and, possibly, Enclosure **2092**. Assessment suggests that the Early Iron Age pottery from Area B belongs to the 'earliest' Iron Age (c.800-600/500 BC; App. B; Brudenell 2012; Sealey

2012, 37-39) and that there thus may have been a hiatus between these two phases of Iron Age activity. The Middle/later Iron Age pottery from Area B can be broadly dated to between 350 BC and AD 50, whilst the complete absence of associated Late Iron Age pottery strongly suggests that activity had cased here by c. 50 BC, when wheel-made/grog-tempered Late Iron Age wares first began to be added to the existing ceramic repertoire across the county (Sealey 2012).

6.1.7 There was, however, some (slight) evidence for Late Iron Age activity in Area B, and this may be significant in terms of understanding the origins of the later, Roman remains in this area of the site. This took the form of one small pit associated with Late Iron Age pottery excavated during the evaluation (pit **127**) and a small number of residual Late Iron Age/1st century AD pottery sherds. The pottery vessel from the isolated cremation burial (**1094**) in Area A can also be dated to the 1st century AD, but it is unclear whether this dates to the Late Iron Age or the early Roman period and radiocarbon dating is unlikely to resolve this issue due to the character of the calibration curve for this period, which typically produces imprecise date ranges covering parts of both periods. Assessment of the Roman pottery suggests that only a very small proportion of the assemblage (some 5%) can be attributed to the Early Roman period (1st century AD), but understanding the significance of this in terms of whether there was continuous activity on the site from the Late Iron Age to Roman periods will require full analysis of the pottery and its distribution and depositional context.

Characterising the Iron Age activity

What was the function of the two enclosures? Can the location of any domestic structures be inferred from the distribution of finds and features? What evidence is there for the economy of the site? Is there any evidence for craft/industrial-type activity?

6.1.8 The Early Iron Age remains are made up exclusively of pits and seem to relate to kind of unenclosed settlement typical of the period (see below). Analysis of the pottery from the Early Iron Age features should produce some information on the scale and character of activity during this period, but other finds and environmental remains were sparse, with little potential to provide detailed information on the nature of the economy or on any processing/craft-type activities taking place on the site.

6.1.9 The finds and environmental evidence from Middle Iron Age contexts (almost exclusively associated with C-shaped enclosure **2148**) were similarly restricted, although again analysis of the pottery should provide some evidence on the character of activity during this period. The morphology of the C-shaped enclosure ditch is somewhat unusual, but its size and form suggest it could have enclosed a single roundhouse structure of the kind typical of Middle Iron Age settlements in the county (Sealy 2016), and this would be consistent with the recovery of pottery from its fills – deriving from domestic-type activity. At this stage of assessment, it is considered very likely that the iron smelting slag from the upper fills of the enclosure ditch were associated with later, Roman, reuse of the enclosure (see below) but this will require confirmation from further analysis of the finds and stratigraphic records.

6.1.10 The full extent of Enclosure **2092** was not revealed by the excavation and as it produced no finds its attribution to Period 2 (Iron Age) is tentative. Given the lack of finds it might best be interpreted as a small paddock or enclosure associated with agricultural activities such as livestock penning/management, but there is little potential for further analysis to cast light on either its date or function.

The local context of Iron Age activity

How do the Iron Age remains at Monk's Farm compare with those known from the area surrounding the Roman Town at Kelvedon? What does the discovery of Iron Age occupation to the north of the town indicate about the extent and character of Iron Age settlement and agriculture in this landscape?

6.1.11 Investigations of the area in and around the Roman town at Kelvedon have revealed extensive Iron Age remains, many of which date to the Late Iron Age, and include a set of enclosures located little more than 100m south of Monk's Farm (see Section 1.3; Fig. 2). This extensive evidence for Iron Age activity may provide a context for later developments including the construction of the Roman road and military fort in the 1st century AD. In this context, the Monk's Farm excavations are significant in terms of providing the first substantive evidence for Iron Age activity to the north of the modern railway line, on the gravel terraces at some distance from the river (see Fig. 2). This has important implications for our understanding of the scale and extent of Iron Age activity in the area, and the Monk's Farm remains need to be placed in the context of the evidence from the area of the Roman town, drawing on HER and relevant published and unpublished sources (e.g. Rodwell 1988, Eddy and Turner 1982; Clarke 1988).

Regional scale variation in Iron Age settlement

How does the scale, organisation and morphology of the Iron Age remains compare to those from other Iron Age settlements in the region? Do variations in settlement form appear to be related to differences in the economy, chronology or material culture of different sites?

6.1.12 The Early and Middle Iron Age remains in Area B makes a small but useful contribution to the regional record of Iron Age settlement (Sealey 2012, 2016). The unenclosed Early Iron pit groups are typical of this period in Eastern England, whilst the Middle Iron Age C-shaped enclosure is of a somewhat unusual form for which parallels should be sought from other sites. The different signatures of the Early and Middle Iron Age phases of occupation seem to reflect well-documented chronological developments in the form and character if Iron Age settlement remains, with a massive increase in ditched enclosures in the Middle Iron Age, but requires discussion in terms of the regional-scale evidence for changes in the economy, social organisation and population levels of communities over the course of the Iron Age (cf. Sealey 2016).

Roman (Period 3)

Chronology and sequence of the Roman remains

Is it possible to refine the phasing and dating of the Roman remains? Do different phases of the sites use equate to differences in its use? Is there any evidence for activity at the very beginning (mid-late 1st century) and end (later 4th century) of the Roman period?

6.1.13 Notwithstanding the possible evidence for Early Roman activity (see above), assessment of the pottery assemblage suggests that most of the Roman remains at the site relates to activity during the 2nd and earlier 3rd centuries AD, continuing into the later 3rd century but with little or no evidence for definite 4th century activity (App. B.6). Full analysis of the pottery and the stratigraphic records from Area A has significant potential to refine the phasing/dating of these remains beyond the very generic provisional phasing scheme presented in this report. It is anticipated that multiple sub-phases of Roman activity will be able to be defined, perhaps with an earlier phase of agricultural land use represented by waterhole **1073** and some of the boundary ditches, followed by phases of more intensive activity represented by the conjoined rectilinear enclosure system, and ending with the boundary ditches assigned here to Period 3.2. The Roman remains in Areas B and C produced very few closely datable finds and there is only limited potential to assign these to any specific sub-phases that may be identified in Area A.

Site function: settlement, industry and agriculture

Is there any direct evidence for settlement/domestic activity on the site during any of the phases of Roman activity or is domestic occupation likely to have lain beyond the boundaries of the site? What was the function of the various boundary and enclosure ditches? Does the evidence for industrial and processing activity (i.e. briquetage, iron slag, quern stone etc.) relate to on-site activity or was this material brought to the site from elsewhere? Was the iron smelting slag recovered from the Iron Age enclosure ditch in Area B associated with later reuse of this feature and Roman iron production? Does any of the industrial-type activity at the site belong to specific phases of the sites use or to different areas/zones of the site? What is the evidence for agricultural land-use and economy during the Roman period?

6.1.14 Establishing the function(s) of the site during the various phases of Roman activity will be a major priority for further analysis.

6.1.15 As noted above, it is possible that in Area A an early phase of agricultural land use (represented by some of the boundary ditches and Waterhole **1073**) was followed by more intensive activity, represented by the rectilinear enclosure system, but further work is required to establish whether these enclosures were associated with domestic occupation, hosted industrial/processing-type activities and/or were used for agricultural purposes. The character of much of the pottery from the site suggests it derives from relatively affluent, high-status households, and it seems likely to have been 'imported' to the site, from an adjacent/nearby area of settlement or from further afield (see below). A major question in this context is whether the finds relating

to industrial/craft-type activities form Area A - including the briquetage (App. B.8) and iron smithing slag (App. B.3) relate to activities taking place within the enclosures or whether they too derive from another location. Examining these issues will require detailed analysis of the distribution and depositional context of the finds, including preparation of distribution plots of major artefact types, as well as comparison of the morphology and layout of the various Roman features with enclosed rural settlements/sites elsewhere in the region (Medlycott and Atkinson 2012; Smith et al 2016).

6.1.16 In Area B, features and finds demonstrably of Roman date were found almost exclusively in association with the earlier, Middle Iron Age, C-shaped enclosure (**2148**), and seem to reflect the reuse of what may have remained a visible earthwork into this period. Although relatively few finds were recovered from the gully and pit which were cut through the enclosure ditch during this period, it is significant that the material from gully **2208** included a possible furnace base and a large mass of furnace conglomerate, probably attesting to iron smelting (App. B.3). Finds from the upper fill of the Iron Age ditch itself also produced evidence for iron production and working in the form of a piece of tap slag, a fragment of vitrified furnace wall and a smithing hearth base, found in association with other Roman finds including two sherds of pottery and two tegula fragments. Further work is required in terms of characterising these metalworking residues in more detail and examining their precise stratigraphic context and association with other finds, but this may reflect the use of the earthwork enclosure for an episode of iron production and working during the Roman period. Evidence for Roman iron production (i.e. smelting as opposed to smithing) is quite rare in Eastern England (Allen *et al.* 2017, 178-86, Fig. 5.1). At a national scale, outside of major industrial complexes/enclaves, evidence of iron production at rural sites is typically found removed from the core of contemporary settlements (ibid., 185) and this is consistent with the location of these finds in Area B, away from the area of more intensive activity in Area A, whilst potentially within the area of an extensive Roman field system and utilising/re-purposing the earthwork remains of an earlier feature.

6.1.17 Evidence for the economy of the site and agricultural activity during the Roman period is limited, with poor preservation of both charred plant and faunal remains and there is little potential for further work on these assemblages. However, some insights into the environment of the site in its early phases of Roman activity are provided by the waterlogged remains from waterhole **1073** (App. C.3), whilst the layout and disposition of the various ditched boundaries recorded in Area A, B and C will allow at least some limited discussion of the scale and organisation of land use at this time.

The local context

Do the large quantities of finds associated with some of the Roman features in Area A indicate proximity to a nearby rural settlement, or represent material derived from occupation in the Roman town? What do the finds indicate about the status and character of the settlement/households from which they derived? How does the chronology of the site relate to the known sequence of activity at the Roman town? What evidence is there that the industrial/agricultural activity at Monk's Farm played a role in provisioning the town and its inhabitants? To what extent do the finds from

the site indicate links with the town and/or with exchange networks along the provincial road network?

6.1.18 As outlined above, assessment suggests that much of the pottery was probably introduced to the site from relatively high status/affluent households located beyond the area of excavation. Such household may have belonged to a settlement somewhere in the immediate vicinity of Monk's Farm, in the rural hinterland of the Roman town, or may have been resident in the town itself. Detailed analysis of the pottery and comparison with other assemblages from rural and urban contexts in the county may shed light on this issue (see App. B.6), as well as proving more detailed information on the status of the household(s)/settlement(s) from which it ultimately derived. Establishing the relationship between the Roman activity at Monk's Farm and the Roman Town at Kelvedon requires further work in terms of comparing the chronology and sequence of the activity in Area A with that at the town (Rodwell 1988). The role of the site in terms of provisioning the town and producing material for exchange along the road network and in the local urban markets requires consideration, especially in terms of whether the kind of activities potentially represented at Monk's Farm (i.e. salt production/processing, iron working, agricultural production) compare with those attested within the built up areas of the town itself.

Roman towns and their hinterlands in Eastern England

How does the evidence for Roman activity in the hinterland of Roman Kelvedon compare with evidence form other Roman towns and major roadside settlements in Eastern England? How does the chronology of the site relate to what is known of the development of towns in the region, and especially the evidence for their decline in the late Roman period?

6.1.19 Further work on the relationship between the Roman activity at Monk's Farm and the Roman town at Kelvedon should provide information relevant to wider, regional scale, research questions surrounding the relationship of towns to their rural hinterlands. This will require a review of the evidence from the excavations against the record form other urban sites in the county and wider region (Medlycott and Atkinson 2012; Burnham and Wacher 1990), set in the broader, national, context of current understandings of the relationship between major urban centres, small towns and rural settlements, and their place in the wider workings of the provincial economy (e.g. Smith *et al.* 2016, 418-420).

6.2 Interfaces

6.2.1 The Post-Excavation Assessment has been compiled by Lawrence Billington (LB; Post-Excavation Project Officer) and edited and quality assured in-house by Louise Moan (LM; Senior Project Manager) and Tom Phillips (TP; Senior Project Manager), with internal approval from Elizabeth Popescu (EP; Head of Post-Excavation and Publication). It will be distributed to the Client (RPS) and the Local Planning Authority for approval.

6.2.2 Following approval of the Post-Excavation Assessment, discussions will be had between LM, RPS and representatives of the Local Planning Authority to progress the

post-excavation analysis and publication. As a result of this meeting, a Publication Synopsis will be prepared, with internal consultation with TP and EP.

6.2.3 Meetings will be arranged at relevant points during the post-excavation analysis with RPS and the Local Planning Authority representative or be conducted via email or telephone as appropriate.

6.3 Methods statement

Stratigraphy

6.3.1 Contextual, finds and environmental data will be analysed using an MS Access database in combination with a GIS application. The specialist information will be fully integrated to aid dating and complete more detailed grouping and phasing of the site. A full stratigraphic narrative will be produced based on that presented in this report and integrated with the results of the specialist analysis and will form the basis of the archive report.

Illustration

6.3.2 The existing plans and sections will be updated with any amended phasing and additional sections of features digitised. Report/publication figures will be generated using Adobe Illustrator. Finds recommended for illustration will be drawn by hand and then digitised or, where appropriate, photography of certain finds-types will be undertaken.

Documentary research

6.3.3 Published and unpublished sources will be consulted where appropriate, using information from the Essex Historic Environment Record as a primary point of reference. Other resources will be consulted and will also include scrutiny of reports on comparable/relevant sites locally and nationally in order to properly contextualise the site. This evidence will be collated and where relevant reproduced in the full grey literature report and any subsequent publication.

Artefact analysis

Metalwork

6.3.4 No further analysis/recording of the finds are necessary. A full archive report should be prepared, incorporating the previously recorded metalwork from the evaluation.

6.3.5 A total of 12 items are recommended for X-ray analysis (see App. B.1 for details). The iron and glass finger ring (SF 20) requires consolidation (which will facilitate identification of the intaglio), and it should be illustrated.

Coins

6.3.6 A final archive report on the coins should be produced which includes the two coins previously collected during the evaluation.

Metalworking residues

6.3.7 Renewed examination of some of the slag samples alongside comparable reference materials, together with some pXRF analysis of the elemental ratio patterns, may help to identify differences between the 'furnace conglomerate' and the larger smithing hearth bases, as it might also suggest a link between possible sources (local bog iron ores or imported ones) and the samples of smelting slag. The provision of a distribution plot of slag finds across the whole excavation area would be extremely useful in determining the location(s) of this ironworking, therefore the possibility of smithy structures.

Flint

6.3.8 The assemblage has been fully recorded, and no further recording is required. The catalogue should be updated and a full report written following final phasing and analysis of the stratigraphic records. A detailed description of the Palaeolithic hand axe should be prepared with accompanying illustration or photographs, and this find should be briefly put into the context of other Lower and Middle Palaeolithic finds from the terrace gravels of the Blackwater valley and the record of the county more generally (O'Connor 2015).

Prehistoric pottery

6.3.9 The pottery has been fully recorded/catalogued and this data needs to be presented in a fully quantified archive pottery report following final phasing and grouping of the site. The main focus of the analysis will be on the Early Iron Age and Middle Iron Age assemblages and their affinities with contemporary groups from the surrounding area.

6.3.10 The Early and Middle Iron Age pottery is worthy of publication, with a brief mention of the Early Bronze Age pottery recommended. Publication should provide a summary version of the archive pottery report, combined with illustrations of a selection of form-assigned vessels and other diagnostic features sherds. Priority should be given to illustrating material from any radiocarbon dated contexts.

Roman pottery

6.3.11 The assemblage requires full recording and detailed reporting, incorporating the material previously recovered during the evaluation phase. This will include detailed identification and classification of forms and fabrics as well as recording of attributes relating to use/depositional patterns (e.g. perforations, worn surfaces, burning etc.). Inter-regional comparisons will be made with other pottery assemblages, including with local kiln products, and material from Kelvedon Roman town.

Ceramic building material

6.3.12 Prior to the preparation of the final excavation report/ site publication the assemblage should be re-examined briefly in order to revise/ check on the catalogue descriptions and compare with other similar assemblages of brick and tile. A distribution plot of the CBM finds will assist in interpreting their significance.

Fired clay

6.3.13 A distribution plot showing the exact location of the fired clay across the excavation areas will be a necessary precursor to the renewed study and full reporting on the identified briquetage. Some basic chemical analysis of the briquetage using a pXRF on selected examples should provide some proof of their use for making salt.

Stone

6.3.14 The stone has been fully recorded and the only work required is to produce a full archive report, preferably informed by a distribution plot of the worked stone across the site.

Glass

6.3.15 No further work is recommended, beyond preparing a statement for publication and the catalogue acts as a full archival record.

Clay tobacco pipe

6.3.16 This report acts as a full record, and no further work is recommended on this assemblage. If published, this report may be summarised for the publication.

Fuel residues

6.3.17 This statement acts as a full record for the archive and no further work is required beyond summarising the information for publication.

Waterlogged wood

6.3.18 No further analysis is required. A full archive report should be written, preparation for which will include inspection of the photographs taken of the wood during the fieldwork.

Environmental

Human bone

6.3.19 The cremated bone has been fully recorded and no further work is required beyond editing the assessment report to produce a full archive report, which should also include a brief discussion of comparable burials from the local area and wider region.

Animal bone

6.3.20 The assemblage has been fully recorded. Further work should include the recording of any further faunal material obtained from the residues of bulk environmental samples. The records of the faunal assemblage will require updating when the final phasing and grouping of the site is carried out and a full archive report prepared.

Environmental samples

6.3.21 The sample flots have been fully assessed and recorded and no further work is required.

6.4 Publication and dissemination of results

Archive report (grey literature)

6.4.1 Following approval of the Post-Excavation Assessment Report by the Local Planning Authority, it will be lodged with the Essex Historic Environment Record and made available online at the Archaeological Data Service and on the OA Library (https://library.thehumanjourney.net/).

6.4.2 A full archive report will then be prepared; tasks associated with this are identified in the task list below (Section 7) and a product description is provided in Appendix D. This archive report will include results of all further analyses.

Publication

6.4.3 It is proposed that the results of the excavation are published as an article in the *Transactions of the Essex Society for Archaeology and History.* A product description is provided in Appendix D and a more detailed synopsis of the proposed publication will be produced and submitted to RPS and the Local Authority Planning Authority representative for approval following final approval of the PXA and UPD.

6.5 Retention and disposal of finds and environmental evidence

6.5.1 Recommendations for the retention and/or de-selection of finds and environmental remains have been made by the relevant specialists during this assessment stage (see Apps B and C). A summary of material recommended for de-selection is provided here in Table 5. On completion of full analysis, discussions will be held between the relevant parties (see Section 6.2 above) to oversee the de-selection of material and preparation for archiving of material. The retained material will be deposited with the site archive in due course (see below).

Category	Quantification/summary
Unworked burnt flint	13 pieces (170g
Clay tobacco pipe	1 fragment(1g)
Coal	1 fragment (1g)

Table 5. Material recommended for de-selection prior to archiving

6.6 Ownership and archive

6.6.1 All artefactual material recovered from site will be held in storage by OA East and ownership of all such archaeological finds will be given over to the relevant authority to facilitate future study and ensure proper preservation of all artefacts. During analysis and report preparation, OA East will hold all material and reserves the right to send material for specialist analysis. It is Oxford Archaeology Ltd's policy, in line with accepted practice, to keep site archives (paper and artefactual) together wherever possible.

6.6.2 The archive will be prepared in accordance with current OA East guidelines, which are based on current national guidelines.

6.6.3 Excavated material and records will be deposited with, and curated by, Braintree Museum under the OA East Site Code XEXMOK20 and the Local Authorities HER code/Event Number KLSR19 (to be confirmed). The digital archive will be deposited with an approved digital repository. Transfer of ownership will be sought prior to deposition.

7 RESOURCES AND PROGRAMMING

7.1 Project team structure

7.1.1 The project team is set out in the table below:

Name	Initials	Organisation	Role
Louise Moan	LM	OAE	Project Manager
Elizabeth Popescu	EP	OAE	Post-Excavation and Publication Manager
Tom Phillips	TP	OAE	Editor
Lawrence Billington	LB	OAE	Post-Excavation Project Officer, principal author
Denis Sami	DS	OAE	Metalwork specialist
Simon Timberlake	ST	Freelance	Fired clay, stone, metalworking debris and ceramic building material specialist
Carlotta Marchetto	CM	OAE	Prehistoric pottery specialist
Kate Brady	KB	OAS	Roman pottery specialist
Zoe Ui Choileain	ZC	OAE	Human Bone and faunal remains specialist
Karen Barker	KB	Freelance	Conservator and X-radiography
Hannah Pighills	HP	OAE	Wood specialist
David Brown	DB	OAE	Illustrator
Katherine Hamilton	KH	OAE	Archives Supervisor

Table 6. Project team

7.2 Task list and programme

7.2.1 Compilation of a final archive report is normally completed within one year of the approval of the Post-Excavation Assessment and Updated Project Design (PXA & UPD). The full archive report is anticipated to be submitted in the summer of 2022, with publication to follow approval of the archive report.

7.2.2 A task list of further analysis work on the stratigraphic narrative and the artefact/ecofact assemblages for the production of the full grey literature report and publication is presented in Table 7 below.

Task No.	Task	Staff	No. Days
Project Management			
1	Project management	LM	1
2	Team meetings	LM LB	0.5
3	Liaison with relevant staff and specialists, distribution of relevant information and materials	various	0.5
Stage 1: Stratigraphic analysis			
4	Integrate ceramic/artefact dating with site matrix	LB	0.5
5	Update database with final phasing and grouping	LB	1
6	Compile overall stratigraphic text and site narrative to form the basis of the full/archive report	LB	3
7	Review, collate and standardise results of all final specialist reports and integrate with stratigraphic text and project results	LB	1.5
Illustration			
8	Prepare distribution plots of relevant finds	LB	1

Task No.	Task	Staff	No. Days
9	Prepare draft phase plans, finds distribution, sections and other report figures	DB	3
10	Select photographs for inclusion in the report	LB	0.25
11	Select sections for inclusion in the report	LB	0.25
12	Illustrate 1 x metal artefact	Ill	0.5
13	Illustrate up to 40 Roman pottery vessels	Ill	4
14	Illustrate up to six prehistoric pottery vessels	Ill	1
15	Illustrate up to 11 fired clay objects	Ill	2
16	Illustrate three stone objects (quern stones)	Ill	1
17	Illustrate one worked flint (handaxe)	Ill	0.5
Documentary research			
18	Commission updated search of the Essex Historic Environment Record for the environs of the site	LB	£150
19	Research into relevant local/regional sites	LB	1
Artefact and environmental studies			
20	Metalwork items and coins: integrate evaluation finds into catalogue and prepare archive report	DS	1
21	Stabilisation of one metalwork item (Fe finger ring) and X-ray of 12 items prior to deposition in the archive	KB	1
22	Prehistoric pottery: Integrate evaluation finds into catalogue and prepare archive report and drawing briefs	CM	2
23	Roman pottery: full recording of assemblage and integration of evaluation finds, preparation of drawing briefs and writing of archive report	KA	15
24	Ceramic building material: integrate evaluation finds into catalogue and prepare archive report	ST	2
25	Metalworking debris: Re-examination and xPRF analysis of selected items and preparation of archive report	ST	4
26	Fired clay: Re-examination and pXRF analysis of briquetage and preparation of archive report	ST	3
27	Waterlogged wood: preparation of full archive report	HP	1.5
28	Faunal remains: recording of material from bulk samples, updating catalogue and preparation of archive report	ZUC	0.5
Stage 2: Report Writing			
29	Integrate documentary research	LB	0.5
30	Compile list of illustrations/liaise with illustrators	LB DB	0.5
31	Write discussion and conclusions	LB	2
32	Prepare report figures	DB	3
33	Collate/edit captions, bibliography, appendices etc	LB	1
34	Internal edit	TP/EP	1.5
35	Incorporate internal edits	LB	0.5
36	Final edit/internal approval/QC	TP LM EP	0.5
37	Send to Local Authority for approval	LM	0.1

Task No.	Task	Staff	No. Days
38	Approval revisions	LB	0.5
Stage 3a: Publication			
39	Produce draft publication text	LB	3
40	Compile list of illustrations/liaise with illustrators	LB DB	0.5
41	Produce publication figures	DB	1.5
42	Internal edit	EP/TP	2
43	Incorporate internal edits	LB	0.5
44	Final edit	EP/TP	1
Stage 4: Archiving			
45	Compile paper archive	LB	0.5
46	Archive/delete digital photographs	LB	0.5
47	Compile/check and deposit material archive	LB /KH	3

Table 7. Task list

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APPENDIX A CONTEXT INVENTORY

Context	Trench/Area	Category	Feature Type	Cut	Phase	Group	Feature Number
32	B (Tr 37)	cut	ditch	32	2	0	2148
33	B (Tr 37)	fill	ditch	32	2	0	2148
34	B (Tr 43)	cut	pit	34	2	0	34
35	B (Tr 43)	fill	pit	34	2	0	34
36	B (Tr 37)	cut	ditch	36	2	0	2148
37	B (Tr 37)	fill	ditch	36	2	0	2148
38	B (Tr 37)	cut	ditch	38	2	0	2148
39	B (Tr 37)	fill	ditch	38	2	0	2148
40	B (Tr 37)	cut	ditch	40	2	0	2148
41	B (Tr 37)	fill	ditch	40	2	0	2148
72	A (Tr 35)	cut	gully	72	3.1	0	1251
73	A (Tr 35)	fill	gully	72	3.1	0	1251
76	A (Tr 35)	cut	ditch	76	3.1	0	1028
77	A (Tr 35)	fill	ditch	76	3.1	0	1028
78	A (Tr 35)	cut	ditch	78	3.1	0	1251
79	A (Tr 35)	fill	ditch	78	3.1	0	1251
84	A (Tr 35)	fill	ditch	78	3.1	0	1251
85	A (Tr 35)	cut	ditch	85	3.1	0	1228
86	A (Tr 35)	fill	ditch	85	3.1	0	1228
89	A (Tr 28)	cut	ditch	89	3.1	0	89
90	A (Tr 28)	fill	ditch	89	3.1	0	89
91	A (Tr 28)	cut	ditch	91	3.1	0	1010
92	A (Tr 28)	fill	ditch	91	3.1	0	1010
93	A (Tr 28)	cut	ditch	93	3.1	0	1028
94	A (Tr 28)	fill	ditch	93	3.1	0	1028
95	A (Tr 28)	cut	ditch	95	3.2	0	1022
96	A (Tr 28)	fill	ditch	95	3.2	0	1022
97	C (Tr 24)	cut	pit	97	1	0	97
98	C (Tr 24)	fill	pit	97	1	0	97
111	C (Tr 32)	cut	ditch	111	3.1	0	3017
112	C (Tr 32)	fill	ditch	111	3.1	0	3017
113	C (Tr 32)	cut	gully	113	1	0	113
114	C (Tr 32)	fill	gully	113	1	0	113
115	A (Tr 34)	cut	posthole	115	3.1	Pit/Posthole Group 1099	115
116	A (Tr 34)	fill	posthole	115	3.1	Pit/Posthole Group 1099	115
117	A (Tr 34)	cut	posthole	117	3.1	Pit/Posthole Group 1099	117
118	A (Tr 34)	fill	posthole	117	3.1	Pit/Posthole Group 1099	117
121	A (Tr 34)	cut	ditch	121	3.2	0	1022
122	A (Tr 34)	fill	ditch	121	3.2	0	1022
123	A (Tr 34)	cut	ditch	123	3.1	0	1222
124	A (Tr 34)	fill	ditch	123	3.1	0	1222
125	A (Tr 17)	cut	ditch	125	3.1	0	1255
126	A (Tr 17)	fill	ditch	125	3.1	0	1255

127	A (Tr 17)	cut	pit	127	2	0	127
128	A (Tr 17)	fill	pit	127	2	0	127
129	A (Tr 27)	cut	pit	129	3.1	0	1073
130	A (Tr 27)	fill	pit	129	3.1	0	1073
131	A (Tr 27)	fill	pit	129	3.1	0	1073
132	A (Tr 27)	cut	ditch	132	3.1	0	1067
133	A (Tr 27)	fill	ditch	132	3.1	0	1067
134	A (Tr 27)	cut	pit	134	3.1	0	1073
135	A (Tr 27)	fill	pit	134	3.1	0	1073
136	A (Tr 27)	fill	pit	134	3.1	0	1073
137	A (Tr 27)	fill	pit	134	3.1	0	1073
138	A (Tr 27)	cut	pit	138	3.1	0	1073
139	A (Tr 27)	fill	pit	138	3.1	0	1073
140	A (Tr 27)	fill	pit	138	3.1	0	1073
141	A (Tr 27)	cut	pit	141	3.1	0	1073
142	A (Tr 27)	fill	pit	141	3.1	0	1073
143	A (Tr 27)	fill	pit	141	3.1	0	1073
1000		layer	topsoil	0	0	0	n/a
1001		layer	subsoil	0	0	0	n/a
1002		layer	natural	0	0	0	n/a
1003	A	cut	ditch	1003	3.1	0	1003
1004	A	fill	ditch	1003	3.1	0	1003
1005	A	fill	ditch	1003	3.1	0	1003
1006	A	fill	ditch	1003	3.1	0	1003
1007	A	cut	ditch	1007	3.1	0	1007
1008	A	fill	ditch	1007	3.1	0	1007
1009	A	fill	ditch	1007	3.1	0	1007
1010	A	cut	ditch	1010	3.1	0	1010
1011	A	fill	ditch	1010	3.1	0	1010
1012	A	cut	ditch	1012	3.1	0	1007
1013	A	fill	ditch	1012	3.1	0	1007
1014	A	cut	ditch	1014	3.1	0	1003
1015	A	fill	ditch	1014	3.1	0	1003
1016	A	cut	ditch	1016	3.1	0	1007
1017	A	fill	ditch	1016	3.1	0	1007
1018	A	cut	ditch	1018	3.1	0	1010
1019	A	fill	ditch	1018	3.1	0	1010
1020	A	cut	pit	1020	1	0	1020
1021	A	fill	pit	1020	1	0	1020
1022	A	cut	ditch	1022	3.2	0	1022
1023	A	fill	ditch	1022	3.2	0	1022
1024	A	cut	ditch	1024	3.1	0	1010
1025	A	fill	ditch	1024	3.1	0	1010
1026	A	cut	pit	1026	3.1	0	1026
1027	A	fill	pit	1026	3.1	0	1026
1028	A	cut	ditch	1028	3.1	0	1028
1029	A	fill	ditch	1028	3.1	0	1028
1030	A	cut	pit	1030	1	0	1030
1031	A	fill	pit	1030	1	0	1030
1032	A	fill	pit	1030	1	0	1030
1033	A	cut	ditch	1033	3.1	0	1028

1034	A	fill	ditch	1033	3.1	0	1028
1035	A	cut	ditch	1035	3.1	0	1010
1036	A	fill	ditch	1035	3.1	0	1010
1037	A	cut	ditch	1037	3.1	0	1007
1038	A	fill	ditch	1037	3.1	0	1007
1039	A	cut	ditch	1039	3.1	0	1010
1040	A	fill	ditch	1039	3.1	0	1010
1041	A	cut	pit	1041	1	0	1041
1042	A	fill	pit	1041	1	0	1041
1043	A	cut	ditch	1043	3.1	0	1010
1044	A	fill	ditch	1043	3.1	0	1010
1045	A			0	n/a	0	void
1046	A			0	n/a	0	void
1047	A	cut	ditch	1047	3.1	0	1010
1048	A	fill	ditch	1047	3.1	0	1010
1049	A	cut	pit / natural feature	1049	3.1	0	1049
1050	A	fill	pit	1049	3.1	0	1049
1051	A	cut	ditch	1051	3.1	0	1028
1052	A	fill	ditch	1051	3.1	0	1028
1053	A	cut	ditch	1053	3.1	0	1053
1054	A	fill	ditch	1053	3.1	0	1053
1055	A	cut	ditch	1055	3.1	0	1028
1056	A	fill	ditch	1055	3.1	0	1028
1057	A	cut	ditch	1057	3.1	0	1010
1058	A	fill	ditch	1057	3.1	0	1010
1059	A	vessel	cremation	1057	3.1	0	1010
1060	A	fill	cremation	1057	3.1	0	1010
1061	A	cut	ditch	1061	3.2	0	1022
1062	A	fill	ditch	1061	3.2	0	1022
1063	A	cut	ditch	1063	3.2	0	1022
1064	A	fill	ditch	1063	3.2	0	1022
1065	A	cut	ditch	1065	3.1	0	1010
1066	A	fill	ditch	1065	3.1	0	1010
1067	A	cut	ditch	1067	3.1	0	1067
1068	A	fill	ditch	1067	3.1	0	1067
1069	A	cut	ditch	1069	3.2	0	1022
1070	A	fill	ditch	1069	3.2	0	1022
1071	A	cut	ditch	1071	3.2	0	1022
1072	A	fill	ditch	1071	3.2	0	1022
1073	A	cut	watering-hole	1073	3.1	0	1073
1074	A	cut	ditch	1074	3.1	0	1010
1075	A	fill	ditch	1074	3.1	0	1010
1076	A	cut	ditch	1076	3.1	0	1076
1077	A	fill	ditch	1076	3.1	0	1076
1078	A	cut	ditch	1078	3.2	0	1022
1079	A	fill	ditch	1078	3.2	0	1022
1080	A	fill	watering hole	1073	3.1	0	1073
1081	A	fill	watering hole	1073	3.1	0	1073
1082	A	fill	watering hole	1073	3.1	0	1073
1083	A	fill	watering hole	1073	3.1	0	1073

1084	A	finds unit	watering hole	1073	3.1	0	1073
1085	A	fill	watering hole	1073	3.1	0	1073
1086	A	fill	watering hole	1073	3.1	0	1073
1087	A	fill	watering hole	1073	3.1	0	1073
1088	A	fill	watering hole	1073	3.1	0	1073
1089	A	fill	watering hole	1073	3.1	0	1073
1090	A	fill	watering hole	1073	3.1	0	1073
1091	A	fill	watering hole	1073	3.1	0	1073
1092	A	fill	watering hole	1073	3.1	0	1073
1093	A	layer	hillwash	0	natural		1093
1094	A	cut	cremation	1094	3.1	Cremation 1094	1094
1095	A	fill	pit	1094	3.1	Cremation 1094	1094
1096	A	fill	pit	1094	3.1	Cremation 1094	1094
1097	A	cut	ditch	1097	3.2	0	1022
1098	A	fill	ditch	1097	3.2	0	1022
1099	A	cut	posthole	1099	3.1	Pit/Posthole Group 1099	1099
1100	A	fill	posthole	1099	3.1	Pit/Posthole Group 1099	1099
1101	A	cut	posthole	1101	3.1	Pit/Posthole Group 1099	1101
1102	A	fill	posthole	1101	3.1	Pit/Posthole Group 1099	1101
1103	A	cut	posthole	1103	3.1	Pit/Posthole Group 1099	1103
1104	A	fill	posthole	1103	3.1	Pit/Posthole Group 1099	1103
1105	A	cut	posthole	1105	3.1	Pit/Posthole Group 1099	1105
1106	A	fill	posthole	1105	3.1	Pit/Posthole Group 1099	1105
1107	A	cut	posthole	1107	3.1	Pit/Posthole Group 1099	1107
1108	A	fill	posthole	1107	3.1	Pit/Posthole Group 1099	1107
1109	A	cut	posthole	1109	3.1	Pit/Posthole Group 1099	1109
1110	A	fill	posthole	1109	3.1	Pit/Posthole Group 1099	1109
1111	A	cut	posthole	1111	3.1	Pit/Posthole Group 1099	1111
1112	A	fill	posthole	1111	3.1	Pit/Posthole Group 1099	1111
1113	A	cut	posthole	1113	3.1	Pit/Posthole Group 1099	1113
1114	A	fill	posthole	1113	3.1	Pit/Posthole Group 1099	1113
1115	A	fill	posthole	1113	3.1	Pit/Posthole Group 1099	1113
1116	A	cut	posthole	1116	3.1	Pit/Posthole Group 1099	1116
1117	A	fill	posthole	1116	3.1	Pit/Posthole Group 1099	1116

1118	A	cut	ditch	1118	3.1	0	1076
1119	A	fill	ditch	1118	3.1	0	1076
1120	A	cut	pit	1120	2	0	1120
1121	A	fill	pit	1120	2	0	1120
1122	A	cut	pit	1122	3.1	Pit/Posthole Group 1099	1122
1123	A	fill	pit	1122	3.1	Pit/Posthole Group 1099	1122
1124	A	cut	posthole	1124	3.1	Pit/Posthole Group 1099	1124
1125	A	fill	posthole	1124	3.1	Pit/Posthole Group 1099	1124
1126	A	cut	posthole	1126	3.1	Pit/Posthole Group 1099	1126
1127	A	fill	posthole	1126	3.1	Pit/Posthole Group 1099	1126
1128	A	cut	posthole	1128	3.1	Pit/Posthole Group 1099	1128
1129	A	fill	posthole	1128	3.1	Pit/Posthole Group 1099	1128
1130	A	cut	posthole	1130	3.1	Pit/Posthole Group 1099	1130
1131	A	fill	posthole	1130	3.1	Pit/Posthole Group 1099	1130
1132	A	cut	pit / posthole	1132	3.1	Pit/Posthole Group 1099	1132
1133	A	fill	pit / posthole	1132	3.1	Pit/Posthole Group 1099	1132
1134	A	cut	posthole	1134	3.1	Pit/Posthole Group 1099	1134
1135	A	fill	posthole	1134	3.1	Pit/Posthole Group 1099	1134
1136	A	cut	posthole	1136	3.1	Pit/Posthole Group 1099	1136
1137	A	fill	posthole	1136	3.1	Pit/Posthole Group 1099	1136
1138	A	cut	ditch	1138	3.1	0	1067
1139	A	fill	ditch	1138	3.1	0	1067
1140	A	cut	ditch	1140	3.2	0	1140
1141	A	fill	ditch	1140	3.2	0	1140
1142	A	cut	posthole	1142	3.1	Pit/Posthole Group 1099	1142
1143	A	fill	posthole	1142	3.1	Pit/Posthole Group 1099	1142
1144	A	cut	posthole	1144	3.1	Pit/Posthole Group 1099	1144
1145	A	fill	posthole	1144	3.1	Pit/Posthole Group 1099	1144
1146	A	cut	pit / posthole	1146	3.1	Pit/Posthole Group 1099	1146
1147	A	fill	posthole	1146	3.1	Pit/Posthole Group 1099	1146
1148	A	cut	ditch	1148	3.1	0	1067
1149	A	cut	ditch	1149	3.2	0	1140

1150	A	fill	ditch	1149	3.2	0	1140
1151	A	cut	pit / posthole	1151	3.1	Pit/Posthole Group 1099	1151
1152	A	fill	pit / posthole	1151	3.1	Pit/Posthole Group 1099	1151
1153	A	cut	ditch	1153	3.1	0	1153
1154	A	fill	ditch	1153	3.1	0	1153
1155	A	fill	ditch	1153	3.1	0	1153
1156	A	cut	posthole	1156	3.1	Pit/Posthole Group 1099	1156
1157	A	fill	posthole	1156	3.1	Pit/Posthole Group 1099	1156
1158	A	cut	ditch	1158	3.2	0	1140
1159	A	fill	ditch	1158	3.2	0	1140
1160	A			0	n/a	0	void
1161	A			0	n/a	0	void
1162				0	0	0	void
1163	A	fill	ditch	1148	3.1	0	1067
1164	A	cut	ditch	1164	3.1	0	1076
1165	A	fill	ditch	1164	3.1	0	1076
1166	A	fill	ditch	1164	3.1	0	1076
1167	A	cut	pit / posthole	1167	3.1	Pit/Posthole Group 1099	1167
1168	A	fill	pit / posthole	1167	3.1	Pit/Posthole Group 1099	1167
1169	A	cut	ditch	1169	3.1	0	1169
1170	A	fill	ditch	1169	3.1	0	1169
1171	A	cut	pit	1171	3.1	0	1171
1172	A	fill	pit	1171	3.1	0	1171
1173	A	fill	pit	1171	3.1	0	1171
1174	A	fill	pit	1171	3.1	0	1171
1175	A	cut	ditch	1175	3.1	0	1153
1176	A	fill	ditch	1175	3.1	0	1153
1177	A	fill	ditch	1175	3.1	0	1153
1178	A	cut	ditch	1178	3.1	0	1169
1179	A	fill	ditch	1178	3.1	0	1169
1180	A	cut	ditch	1180	3.1	0	1180
1181	A	fill	ditch	1180	3.1	0	1180
1182	A	cut	pit	1182	3.1	0	1182
1183	A	fill	pit	1182	3.1	0	1182
1184	A	cut	pit	1184	3.1	0	1184
1185	A	fill	pit	1184	3.1	0	1184
1186	A	cut	pit	1186	3.1	0	1186
1187	A	fill	pit	1186	3.1	0	1186
1188	A	cut	ditch	1188	3.1	0	1169
1189	A	fill	ditch	1188	3.1	0	1169
1190	A	cut	pit	1190	3.1	0	1190
1191	A	fill	pit	1190	3.1	0	1190
1192	A	cut	pit	1192	3.1	0	1192
1193	A	fill	pit	1192	3.1	0	1192
1194	A	cut	ditch	1194	3.1	0	1180
1195	A	fill	ditch	1194	3.1	0	1180

1196	A	fill	ditch	1194	3.1	0	1180
1197	A	fill	watering-hole	1073	3.1	0	1073
1198	A	fill	watering-hole	1073	3.1	0	1073
1199	A	cut	ditch	1199	3.1	0	1199
1200	A	fill	ditch	1199	3.1	0	1199
1201	A	fill	ditch	1199	3.1	0	1199
1202	A	cut	ditch	1202	3.1	0	1202
1203	A	fill	ditch	1202	3.1	0	1202
1204	A	fill	ditch	1202	3.1	0	1202
1205	A	cut	ditch	1205	3.1	0	1202
1206	A	fill	ditch	1205	3.1	0	1202
1207	A	fill	ditch	1205	3.1	0	1202
1208	A	cut	ditch	1208	3.1	0	1199
1209	A	fill	ditch	1208	3.1	0	1199
1210	A	cut	pit / posthole	1210	3.1	0	1210
1211	A	fill	pit / posthole	1210	3.1	0	1210
1212	A	cut	ditch	1212	3.1	0	1199
1213	A	fill	ditch	1212	3.1	0	1199
1214	A	cut	ditch	1214	3.1	0	1199
1215	A	fill	ditch	1214	3.1	0	1199
1216	A	fill	ditch	1214	3.1	0	1199
1217	A	cut	ditch	1217	3.1	0	1153
1218	A	fill	ditch	1217	3.1	0	1153
1219	A	fill	ditch	1217	3.1	0	1153
1220	A	cut	ditch	1220	3.1	0	1199
1221	A	fill	ditch	1220	3.1	0	1199
1222	A	cut	ditch	1222	3.1	0	1222
1223	A	fill	ditch	1222	3.1	0	1222
1224	A	cut	ditch	1224	3.1	0	1199
1225	A	fill	ditch	1224	3.1	0	1199
1226	A	cut	ditch	1226	3.1	0	1199
1227	A	fill	ditch	1226	3.1	0	1199
1228	A	cut	ditch	1228	3.1	0	1228
1229	A	fill	ditch	1228	3.1	0	1228
1230	A	cut	ditch	1230	3.1	0	1199
1231	A	fill	ditch	1230	3.1	0	1199
1232	A	cut	ditch	1232	3.1	0	1010
1233	A	fill	ditch	1232	3.1	0	1010
1234	A	cut	ditch	1234	3.1	0	1010
1235	A	fill	ditch	1234	3.1	0	1010
1236	A			0	n/a	0	void
1237	A	cut	ditch	1237	3.1	0	1010
1238	A	fill	ditch	1237	3.1	0	1010
1239	A	cut	ditch	1239	3.1	0	1222
1240	A	fill	ditch	1239	3.1	0	1222
1241	A	cut	ditch	1241	3.1	0	1010
1242	A	fill	ditch	1241	3.1	0	1010
1243	A	fill	ditch	1241	3.1	0	1010
1244	A	cut	ditch	1244	3.1	0	1010
1245	A	fill	ditch	1244	3.1	0	1010
1246	A	fill	ditch	1244	3.1	0	1010

1247	A	cut	ditch	1247	3.1	0	1228
1248	A	fill	ditch	1247	3.1	0	1228
1249	A	cut	ditch	1249	3.2	0	1022
1250	A	fill	ditch	1249	3.2	0	1022
1251	A	cut	ditch	1251	3.1	0	1251
1252	A	fill	ditch	1251	3.1	0	1251
1253	A	cut	posthole	1253	3.1	Pit/Posthole Group 1099	1253
1254	A	fill	posthole	1253	3.1	Pit/Posthole Group 1099	1253
1255	A	cut	ditch	1255	3.1	0	1255
1256	A	fill	ditch	1255	3.1	0	1255
1257	A	cut	ditch	1257	3.1	0	1257
1258	A	cut	ditch	1258	3.1	0	1251
1259	A	fill	ditch	1258	3.1	0	1251
1260	A	cut	ditch	1260	3.1	0	1202
1261	A	fill	ditch	1260	3.1	0	1202
1262	A	cut	ditch	1262	3.1	0	1262
1263	A	fill	ditch	1262	3.1	0	1262
1264	A	cut	ditch	1264	3.1	0	1262
1265	A	fill	ditch	1264	3.1	0	1262
1266	A	cut	ditch	1266	3.1	0	1266
1267	A	fill	ditch	1266	3.1	0	1266
1268	A	cut	ditch	1268	3.1	0	1067
1269	A	cut	ditch	1269	3.1	0	1067
1270	A	cut	pit	1270	3.1	0	1053
1271	A	cut	ditch	1271	3.1	0	1266
1272	A	fill	ditch	1271	3.1	0	1266
1273	A	cut	ditch	1273	3.1	0	1273
1274	A			0	n/a	0	void
1275	A	fill	ditch	1257	3.1	0	1257
1276	A	fill	ditch	1273	3.1	0	1273
1277	A	fill	ditch	1268	3.1	0	1067
1278	A	fill	pit	1270	3.1	0	1053
1279	A	cut	ditch	1279	3.1	0	1228
1280	A	fill	ditch	1279	3.1	0	1228
1281	A	cut	ditch	1281	3.1	0	1281
1282	A	fill	ditch	1281	3.1	0	1281
1283	A	cut	ditch	1283	3.1	0	1199
1284	A	fill	ditch	1283	3.1	0	1199
1285	A	cut	ditch	1285	3.1	0	1266
1286	A	fill	ditch	1285	3.1	0	1266
1287	A	cut	ditch	1287	3.2	0	1022
1288	A	fill	ditch	1287	3.2	0	1022
1289	A	cut	ditch	1289	3.1	0	1255
1290	A	fill	ditch	1289	3.1	0	1255
1291	A	fill	ditch	1289	3.1	0	1255
1292	A	cut	ditch	1292	3.2	0	1140
1293	A	fill	ditch	1292	3.2	0	1140
1294	A	cut	gully	1294	3.1	0	1294
1295	A	fill	gully	1294	3.1	0	1294

1296	A	cut	gully	1296	3.1	0	1294
1297	A	fill	gully	1296	3.1	0	1294
1298	A	cut	gully	1298	3.1	0	1294
1299	A	fill	gully	1298	3.1	0	1294
1300	A	cut	ditch	1300	3.1	0	1007
1301	A	fill	ditch	1300	3.1	0	1007
1302	A	cut	ditch	1302	3.1	0	1007
1303	A	fill	ditch	1302	3.1	0	1007
1304	A	cut	ditch	1304	3.1	0	1007
1305	A	fill	ditch	1304	3.1	0	1007
1306	A	cut	posthole	1306	3.1	0	1306
1307	A	fill	posthole	1306	3.1	0	1306
1308	A	cut	pit	1308	3.1	0	1308
1309	A	fill	pit	1308	3.1	0	1308
1310	A	cut	pit	1310	3.1	0	1310
1311	A	fill	pit	1310	3.1	0	1310
1312	A	cut	ditch	1312	3.1	0	1028
1313	A	fill	ditch	1312	3.1	0	1028
1314	A	cut	ditch	1314	3.1	0	1273
1315	A	fill	ditch	1314	3.1	0	1273
1316	A	cut	ditch	1316	3.2	0	1022
1317	A	fill	ditch	1316	3.2	0	1022
1318	A	cut	ditch	1318	3.1	0	1251
1319	A	fill	ditch	1318	3.1	0	1251
1320	A	cut	ditch	1320	3.1	0	1228
1321	A	fill	ditch	1320	3.1	0	1228
1322	A	cut	ditch	1322	3.1	0	1010
1323	A	fill	ditch	1322	3.1	0	1010
1324	A	cut	ditch	1324	3.1	0	1010
1325	A	fill	ditch	1324	3.1	0	1010
1326	A	cut	pit	1326	3.1	0	1326
1327	A	fill	pit	1326	3.1	0	1326
1328	A	cut	ditch	1328	3.1	0	1199
1329	A	fill	ditch	1328	3.1	0	1199
1330	A	cut	ditch	1330	3.2	0	1022
1331	A	fill	ditch	1330	3.2	0	1022
1332	A	cut	ditch	1332	3.1	0	1067
1333	A	fill	ditch	1332	3.1	0	1067
1334	A	cut	ditch	1334	3.1	0	1028
1335	A	fill	ditch	1334	3.1	0	1028
1336	A	cut	ditch	1336	3.1	0	1010
1337	A	fill	ditch	1336	3.1	0	1010
1338	A	cut	ditch	1338	3.1	0	1251
1339	A	fill	ditch	1338	3.1	0	1251
1340	A	cut	pit	1340	3.1	0	1340
1341	A	fill	pit	1340	3.1	0	1340
1342	A	cut	ditch	1342	3.1	0	1222
1343	A	fill	ditch	1342	3.1	0	1222
1344	A	cut	ditch	1344	3.1	0	1028
1345	A	fill	ditch	1344	3.1	0	1028
1346	A	cut	ditch	1346	3.1	0	1222

1347	A	fill	ditch	1346	3.1	0	1222
1348	A	cut	ditch	1348	3.2	0	1022
1349	A	fill	ditch	1348	3.2	0	1022
1350	A	cut	ditch	1350	3.1	0	1266
1351	A	fill	ditch	1350	3.1	0	1266
1352	A	cut	ditch	1352	3.1	0	1251
1353	A	fill	ditch	1352	3.1	0	1251
1354	A	cut	ditch	1354	3.1	0	1251
1355	A	fill	ditch	1354	3.1	0	1251
1356	A	fill	ditch	1354	3.1	0	1251
1357	A	cut	ditch	1357	3.1	0	1255
1358	A	fill	ditch	1357	3.1	0	1255
1359	A	cut	ditch	1359	3.1	0	1028
1360	A	fill	ditch	1359	3.1	0	1028
1361	A			0	n/a	0	void
1362	A			0	n/a	0	void
1363	A	cut	ditch	1363	3.1	0	1222
1364	A	fill	ditch	1363	3.1	0	1222
1365	A	cut	pit	1365	1	0	1365
1366	A	fill	pit	1365	1	0	1365
1367	A	cut	ditch	1367	3.1	0	1153
1368	A	fill	ditch	1367	3.1	0	1153
1369	A	cut	ditch	1369	3.1	0	1251
1370	A	fill	ditch	1369	3.1	0	1251
1371	A	cut	pit	1371	3.1	0	1371
1372	A	fill	pit	1371	3.1	0	1371
1373	A	cut	ditch	1373	3.2	0	1140
1374	A	fill	ditch	1373	3.2	0	1140
1375	A	cut	ditch	1375	3.2	0	1022
1376	A	fill	ditch	1375	3.2	0	1022
1377	A	cut	pit	1377	3.1	0	1377
1378	A	fill	pit	1377	3.1	0	1377
1379	A	cut	ditch	1379	3.1	0	1076
1380	A	fill	ditch	1379	3.1	0	1076
1381	A	cut	ditch	1381	3.2	0	1022
1382	A	fill	ditch	1381	3.2	0	1022
1383	A	cut	ditch	1383	3.1	0	1383
1384	A	fill	ditch	1383	3.1	0	1383
1385	A	cut	ditch	1385	3.1	0	1010
1386	A	fill	ditch	1385	3.1	0	1010
1387	A	cut	ditch	1387	3.1	0	1383
1388	A	fill	ditch	1387	3.1	0	1383
1389	A	cut	ditch	1389	3.1	0	1076
1390	A	fill	ditch	1389	3.1	0	1076
1391	A	cut	ditch	1391	3.1	0	1076
1392	A	fill	ditch	1391	3.1	0	1076
1393	A	cut	ditch	1393	3.1	0	1076
1394	A	fill	ditch	1393	3.1	0	1076
1395	A	fill	watering-hole	1073	3.1	0	1073
1396	A	fill	watering-hole	1073	3.1	0	1073
1397	A	cut	ditch	1397	3.1	0	1067

1398	A	fill	ditch	1397	3.1	0	1067
1399	A	cut	ditch	1399	3.1	0	1399
1400	A	fill	ditch	1399	3.1	0	1399
1401	A	cut	ditch	1401	3.1	0	1399
1402	A	fill	ditch	1401	3.1	0	1399
1403	A	cut	ditch	1403	3.1	0	1399
1404	A	fill	ditch	1403	3.1	0	1399
1405	A	cut	ditch	1405	3.1	0	1262
1406	A	fill	ditch	1405	3.1	0	1262
1407	A	finds unit	watering-hole	1073	3.1		1073
1408	A	finds unit	watering-hole	1073	3.1		1073
1409	A	finds unit	watering-hole	1073	3.1		1073
1410	A	finds unit	watering-hole	1073	3.1		1073
1411	A	finds unit	watering-hole	1073	3.1		1073
1412	A	finds unit	watering-hole	1073	3.1		1073
1413	A	finds unit	watering-hole	1073	3.1		1073
1414	A	finds unit	watering-hole	1073	3.1		1073
1415	A	finds unit	watering-hole	1073	3.1		1073
1416	A	finds unit	watering-hole	1073	3.1		1073
1417	A	finds unit	watering-hole	0	3.1		1073
2000	B	cut	posthole	2000	2	Pit/Posthole Group 2000	2000
2001	B	fill	posthole	2000	2	Pit/Posthole Group 2000	2000
2002	B	cut	posthole	2002	2	Pit/Posthole Group 2000	2002
2003	B	fill	posthole	2002	2	Pit/Posthole Group 2000	2002
2004	B	cut	posthole	2004	2	Pit/Posthole Group 2000	2004
2005	B	fill	posthole	2004	2	Pit/Posthole Group 2000	2004
2006	B	cut	posthole	2006	2	Pit/Posthole Group 2000	2006
2007	B	fill	posthole	2006	2	Pit/Posthole Group 2000	2006
2008	B	cut	posthole	2008	2	Pit/Posthole Group 2000	2008
2009	B	fill	posthole	2008	2	Pit/Posthole Group 2000	2008
2010	B	cut	posthole	2010	2	Pit/Posthole Group 2000	2010

2011	B	fill	posthole	2010	2	Pit/Posthole Group 2000	2010
2012	B	cut	posthole	2012	2	Pit/Posthole Group 2000	2012
2013	B	fill	posthole	2012	2	Pit/Posthole Group 2000	2012
2014	B	cut	posthole	2014	2	Pit/Posthole Group 2000	2014
2015	B	fill	posthole	2014	2	Pit/Posthole Group 2000	2014
2016	B	cut	posthole	2016	2	Pit/Posthole Group 2000	2016
2017	B	fill	posthole	2016	2	Pit/Posthole Group 2000	2016
2018	B	cut	posthole	2018	2	0	2018
2019	B	fill	posthole	2018	2	0	2018
2020	B	cut	posthole	2020	2	0	2020
2021	B	fill	posthole	2020	2	0	2020
2022	B	cut	posthole	2022	2	0	2022
2023	B	fill	posthole	2022	2	0	2022
2024	B	cut	posthole	2024	2	0	2024
2025	B	fill	posthole	2024	2	0	2024
2026	B	cut	posthole	2026	2	0	2026
2027	B	fill	posthole	2026	2	0	2026
2028	B	cut	posthole	2028	2	0	2028
2029	B	fill	posthole	2028	2	0	2028
2030	B	cut	posthole	2030	2	0	2030
2031	B	fill	posthole	2030	2	0	2030
2032	B	cut	posthole	2032	2	0	2032
2033	B	fill	posthole	2032	2	0	2032
2034	B	cut	posthole	2034	2	0	2034
2035	B	fill	posthole	2034	2	0	2034
2036	B	cut	posthole	2036	2	0	2036
2037	B	fill	posthole	2036	2	0	2036
2038	B	cut	posthole	2038	2	0	2038
2039	B	fill	posthole	2038	2	0	2038
2040	B	cut	posthole	2040	2	0	2040
2041	B	fill	posthole	2040	2	0	2040
2042	B	cut	posthole	2042	2	0	2042
2043	B	fill	posthole	2042	2	0	2042
2044	B	cut	posthole	2044	2	0	2044
2045	B	fill	posthole	2044	2	0	2044
2046	B	cut	posthole	2046	2	0	2046
2047	B	fill	posthole	2046	2	0	2046
2048	B	cut	posthole	2048	2	0	2048
2049	B	fill	posthole	2048	2	0	2048
2050	B	cut	posthole	2050	2	0	2050
2051	B	fill	posthole	2050	2	0	2050
2052	B	cut	posthole	2052	2	0	2052
2053	B	fill	posthole	2052	2	0	2052
2054	B	cut	posthole	2054	2	Pit /Posthole Group 2054	2054

2055	B	fill	posthole	2054	2	Pit /Posthole Group 2054	2054
2056	B	cut	posthole	2056	2	Pit /Posthole Group 2054	2056
2057	B	fill	posthole	2056	2	Pit /Posthole Group 2054	2056
2058	B	cut	posthole	2058	2	Pit /Posthole Group 2054	2058
2059	B	fill	posthole	2058	2	Pit /Posthole Group 2054	2058
2060	B	cut	posthole	2060	2	Pit /Posthole Group 2054	2060
2061	B	fill	posthole	2060	2	Pit /Posthole Group 2054	2060
2062	B	cut	posthole	2062	2	Pit /Posthole Group 2054	2062
2063	B	fill	posthole	2062	2	Pit /Posthole Group 2054	2062
2064	B	cut	posthole	2064	2	Pit /Posthole Group 2054	2064
2065	B	fill	posthole	2064	2	Pit /Posthole Group 2054	2064
2066	B	cut	posthole	2066	2	Pit /Posthole Group 2054	2066
2067	B	fill	posthole	2066	2	Pit /Posthole Group 2054	2066
2068	B	cut	posthole	2068	2	Pit /Posthole Group 2054	2068
2069	B	fill	posthole	2068	2	Pit /Posthole Group 2054	2068
2070	B	cut	posthole	2070	2	Pit /Posthole Group 2054	2070
2071	B	fill	posthole	2070	2	Pit /Posthole Group 2054	2070
2072	B	cut	posthole	2072	2	Pit /Posthole Group 2054	2072
2073	B	fill	posthole	2072	2	Pit /Posthole Group 2054	2072
2074	B	cut	posthole	2074	2	Pit /Posthole Group 2054	2074
2075	B	fill	posthole	2074	2	Pit /Posthole Group 2054	2074
2076	B	cut	pit	2076	2	Pit cluster 2076	2076
2077	B	fill	pit	2076	2	Pit cluster 2076	2076
2078	B	fill	pit	2076	2	Pit cluster 2076	2076
2079	B	cut	pit	2079	2	0	2079/2164
2080	B	fill	pit	2079	2	0	2079/2164
2083	B	cut	pit	2083	2	0	2083
2084	B	fill	posthole	2083	2	0	2083
2085	B	cut	ditch	2085	3.1	0	2085
2086	B	fill	ditch	2085	3.1	0	2085
2087	B			0	0	0	void
2088	B			0	0	0	void
2089	B			0	0	0	void

2090	B			0	0	0	void
2091	B	fill	pit	2083	2	0	2083
2092	B	cut	ditch	2092	2	0	2092
2093	B	fill	ditch	2092	2	0	2092
2094	B	cut	ditch	2094	2	0	2092
2095	B	fill	ditch	2094	2	0	2092
2096	B	cut	pit / posthole	2096	2	0	2096
2097	B	fill	pit / posthole	2096	2	0	2096
2098	B	fill	pit / posthole	2096	2	0	2096
2099	B			0	0	0	void
2100	B	cut	ditch	2100	2	0	2092
2101	B	fill	ditch	2100	2	0	2092
2102	B	cut	ditch	2102	2	0	2092
2103	B	fill	ditch	2102	2	0	2092
2104	B	cut	ditch	2104	2	0	2092
2105	B	fill	ditch	2104	2	0	2092
2106	B	cut	ditch	2106	2	0	2092
2107	B	fill	ditch	2106	2	0	2092
2108	B	cut	posthole	2108	2	Pit /Posthole Group 2054	2108
2109	B	fill	posthole	2108	2	Pit /Posthole Group 2054	2108
2110	B	cut	posthole	2110	2	Pit /Posthole Group 2054	2110
2111	B	fill	posthole	2110	2	Pit /Posthole Group 2054	2110
2112	B	cut	posthole	2112	2	Pit /Posthole Group 2054	2112
2113	B	fill	posthole	2112	2	Pit /Posthole Group 2054	2112
2114	B	cut	posthole	2114	2	Pit /Posthole Group 2054	2114
2115	B	fill	posthole	2114	2	Pit /Posthole Group 2054	2114
2116	B	cut	posthole	2116	2	Pit /Posthole Group 2054	2116
2117	B	fill	posthole	2116	2	Pit /Posthole Group 2054	2116
2118	B	cut	posthole	2118	2	Pit /Posthole Group 2054	2118
2119	B	fill	posthole	2118	2	Pit /Posthole Group 2054	2118
2120	B	cut	posthole	2120	2	Pit /Posthole Group 2054	2120
2121	B	fill	posthole	2120	2	Pit /Posthole Group 2054	2120
2122	B	cut	posthole	2122	2	Pit /Posthole Group 2054	2122
2123	B	fill	posthole	2122	2	Pit /Posthole Group 2054	2122
2124	B	cut	posthole	2124	2	Pit /Posthole Group 2054	2124

2125	B	fill	posthole	2124	2	Pit /Posthole Group 2054	2124
2126	B	cut	posthole	2126	2	Pit /Posthole Group 2054	2126
2127	B	fill	posthole	2126	2	Pit /Posthole Group 2054	2126
2128	B	cut	posthole	2128	2	Pit /Posthole Group 2054	2128
2129	B	fill	posthole	2128	2	Pit /Posthole Group 2054	2128
2130	B	cut	posthole	2130	2	Pit /Posthole Group 2054	2130
2131	B	fill	posthole	2130	2	Pit /Posthole Group 2054	2130
2132	B	cut	posthole	2132	2	Pit /Posthole Group 2054	2132
2133	B	fill	posthole	2132	2	Pit /Posthole Group 2054	2132
2134	B	cut	posthole	2134	2	Pit /Posthole Group 2054	2134
2135	B	fill	posthole	2134	2	Pit /Posthole Group 2054	2134
2136	B	cut	posthole	2136	2	Pit /Posthole Group 2054	2136
2137	B	fill	posthole	2136	2	Pit /Posthole Group 2054	2136
2138	B	cut	posthole	2138	2	0	2138
2139	B	fill	posthole	2138	2	0	2138
2140	B	cut	pit	2140	2	0	2140
2141	B	fill	posthole	2140	2	0	2140
2142	B	cut	ditch	2142	3.1	0	2085
2143	B	fill	ditch	2142	3.1	0	2085
2144	B	fill	ditch	2142	3.1	0	2085
2145	B	cut	ditch	2145	3.1	0	2085
2146	B	fill	ditch	2145	3.1	0	2085
2147	B	fill	ditch	2145	3.1	0	2085
2148	B	cut	ditch	2148	2	0	2148
2149	B	fill	ditch	2148	2	0	2148
2150	B	cut	pit	2150	2	0	2150
2151	B	fill	pit	2150	2	0	2150
2152	B	cut	gully	2152	3.1	0	2152
2153	B	fill	gully	2152	3.1	0	2152
2154	B	cut	gully	2154	3.1	0	2152
2155	B	fill	gully	2154	3.1	0	2152
2156	B	cut	gully	2156	3.1	0	2156
2157	B	fill	gully	2156	3.1	0	2156
2158	B	cut	pit	2158	2	Pit /Posthole Group 2054	2158
2159	B	fill	pit	2158	2	Pit /Posthole Group 2054	2158
2160	B	cut	pit	2160	2	Pit /Posthole Group 2054	2160

2161	B	fill	pit	2160	2	Pit /Posthole Group 2054	2160
2162	B	cut	pit	2162	2	Pit /Posthole Group 2054	2162
2163	B	fill	pit	2162	2	Pit /Posthole Group 2054	2162
2164	B	cut	pit	2164	2	Pit cluster 2076	2079/2164
2165	B	fill	pit	2164	2	Pit cluster 2076	2079/2164
2166	B	cut	pit	2166	2	Pit cluster 2076	2166
2167	B	fill	pit	2166	2	Pit cluster 2076	2166
2168	B	cut	pit	2168	2	Pit cluster 2076	2168
2169	B	fill	pit	2168	2	Pit cluster 2076	2168
2170	B	cut	pit	2170	2	Pit cluster 2076	2170
2171	B	fill	pit	2170	2	Pit cluster 2076	2170
2172	B	cut	pit?	2172	2	Pit cluster 2076	2172
2173	B	fill	pit	2172	2	Pit cluster 2076	2172
2174	B	cut	ditch	2174	2	0	2148
2175	B	fill	ditch	2174	2	0	2148
2176	B	fill	ditch	2174	2	0	2148
2177	B	cut	pit	2177	2	0	2177
2178	B	fill	pit	2177	2	0	2177
2179	B	fill	pit	2177	2	0	2177
2180	B	cut	pit	2180	2	0	2180
2181	B	fill	pit	2180	2	0	2180
2182	B	cut	pit	2182	2	Pit Group 2182	2182
2183	B	fill	pit	2182	2	Pit Group 2182	2182
2184	B	cut	pit	2184	2	0	2184
2185	B	fill	pit	2184	2	0	2184
2186	B	cut	gully	2186	3.1	0	2186
2187	B	fill	gully	2186	3.1	0	2186
2188	B	cut	gully	2188	3.1	0	2186
2189	B	fill	gully	2188	3.1	0	2186
2190	B	cut	gully	2190	3.1	0	2186
2191	B	fill	gully	2190	3.1	0	2186
2192	B	cut	gully	2192	3.1	0	2156
2193	B	fill	gully	2192	3.1	0	2156
2194	B	cut	pit	2194	1	0	2194
2195	B	fill	pit	2194	1	0	2194
2196	B	cut	pit	2196	2	Pit Group 2182	2196
2197	B	fill	pit	2196	2	Pit Group 2182	2196
2198	B	cut	pit	2198	2	Pit Group 2182	2198
2199	B	fill	pit	2198	2	Pit Group 2182	2198
2200	B	cut	ditch	2200	2	0	2148
2201	B	fill	ditch	2200	2	0	2148
2202	B	cut	pit	2202	3.1	0	2202
2203	B	fill	pit	2202	3.1	0	2202
2204	B	fill	pit	2202	3.1	0	2202
2205	B	fill	pit	2202	3.1	0	2202
2206	B	fill	pit	2202	3.1	0	2202
2207	B	fill	pit	2202	3.1	0	2202
2208	B	cut	ditch	2208	3.1	0	2208
2209	B	fill	ditch	2208	3.1	0	2208

2210	B	cut	ditch	2210	2	0	2148
2211	B	fill	ditch	2210	2	0	2148
2212	B	cut	ditch	2212	2	0	2148
2213	B	fill	ditch	2212	2	0	2148
2214	B	cut	pit	2214	3.1	0	2202
2215	B	fill	pit	2214	3.1	0	2202
2216	B	fill	pit	2214	3.1	0	2202
2217	B	cut	ditch	2217	3.1	0	2208
2218	B	fill	ditch	2217	3.1	0	2208
2219	B	cut	ditch	2219	2	0	2148
2220	B	fill	ditch	2219	2	0	2148
2221	B	cut	ditch	2221	2	0	2148
2222	B	fill	ditch	2221	2	0	2148
2223	B	fill	ditch	2221	2	0	2148
2224	B	cut	pit	2224	2	0	2224
2225	B	fill	pit	2224	2	0	2224
2226	B	cut	ditch	2226	3.1	0	2085
2227	B	fill	ditch	2226	3.1	0	2085
3000	C	cut	pit / natural feature	3000	Undated	0	3000
3001	C	fill	pit / tree throw	3000	Undated	0	3000
3002	C	cut	pit / tree throw	3002	Undated	0	3002
3003	C	fill	pit / tree throw	3002	Undated	0	3002
3004	C	fill	pit / natural feature	3002	Undated	0	3002
3005	C	fill	pit / natural feature	3002	Undated	0	3002
3006	C	fill	pit / natural feature	3002	Undated	0	3002
3007	C	cut	pit / natural feature	3007	Undated	0	3007
3008	C	fill	pit / natural feature	3007	Undated	0	3007
3009	C	cut	pit / natural feature	3009	Undated	0	3009
3010	C	fill	pit / natural feature	3009	Undated	0	3009
3011	C	cut	pit / natural feature	3011	Undated	0	3011
3012	B	fill	pit / natural feature	3011	2	0	3011
3013	C	cut	pit / natural feature	3013	Undated	0	3013
3014	C	fill	pit / natural feature	3013	Undated	0	3013
3015	C	cut	pit / natural feature	3015	Undated	0	3015
3016	C	fill	pit	3015	Undated	0	3015
3017	C	cut	gully	3017	3.1	0	3017
3018	C	fill	gully	3017	3.1	0	3017
3019	C	cut	gully	3019	3.1	0	3017
3020	C	fill	gully	3019	3.1	0	3017
3021	C	cut	gully	3021	3.1	0	3017

3022	C	fill	gully	3021	3.1	0	3017
3023	C	cut	gully	3023	3.1	0	3017
3024	C	fill	gully	3023	3.1	0	3017
3025	C	cut	gully	3025	3.1	0	3017
3026	C	fill	gully	3025	3.1	0	3017
3027	C	cut	ditch	3027	Undated	0	3027
3028	C	fill	ditch	3027	Undated	0	3027
3029	C	cut	pit / natural feature	3029	Undated	0	3029
3030	C	fill	pit / natural feature	3029	Undated	0	3029
3031	C	cut	pit / posthole	3031	Undated	0	3031
3032	C	fill	pit / posthole	3031	Undated	0	3031
3033	C	cut	pit / posthole	3033	Undated	0	3033
3034	C	fill	pit / posthole	3033	Undated	0	3033
3035	C	cut	posthole	3035	Undated	0	3035
3036	C	fill	posthole	3035	Undated	0	3035
3037	C	cut	pit / natural feature	3037	Undated	0	3037
3038	C	fill	pit / natural feature	3037	Undated	0	3037
3039	C	cut	pit	3039	3.1	0	3039
3040	C	fill	pit	3039	3.1	0	3039
3041	C	cut	pit	3041	1	0	3041
3042	C	fill	pit	3041	1	0	3041
3043	C	fill	pit	3041	1	0	3041

APPENDIX B ARTEFACT ASSESSMENTS

B.1 Metalwork *by Denis Sami*

Introduction

B.1.1 The metalwork assemblage from the excavation consists of 15 artefacts (excluding three coins; see App. B.2). This total does not include 24 metal artefacts recovered during the earlier trench-based evaluation (reported on by Sami in Knight 2019). Finds from the excavation were recovered from archaeological features including ditches, layers and pits (Table 8).

Feature	No. Artefact	% No. Artefact
ditch	12	80.0%
layer	2	13.3%
pit	1	6.7%
Total	15	100%

Table 8. Quantification of metalwork by feature/deposit type

B.1.2 The assemblage comprises copper alloy (CuA), iron (Fe) and lead (Pb) artefacts and it is used here to integrate the previous evaluation trenches assessment and develop further understanding of the character of the different activities that occurred on the site through its chronological phases (Table 9).

Metal	No. Artefact	% No. Artefact
CuA	2	13.3%
Fe	12	80.0%
Pb	1	6.7%
Total	15	100%

Table 9. Quantification of artefacts by metal type

Methodology

B.1.3 The metalwork was examined in accordance with the OA East metalwork finds standard based on the guidance of the *Historical Metallurgy Society* (HMS, Datasheets 104 and 108), the *Archaeometallurgy Guidelines for Best Practice* (Historic England 2015) and the *Guidelines for the Storage and Display of Archaeological Metalwork* (English Heritage/Historic England 2013).

B.1.4 The catalogue of Roman ironwork by Manning (1989) is used here as the main reference in the assessment and description of artefacts, while the Portable Antiquities Scheme (PAS) database was consulted for finds not reported in this publication.

B.1.5 The material was classified according to Crummy's 1983 categories. The items were catalogued, and the details presented at the end of this report (Table 11).

B.1.6 Finds from both hand excavation and soil samples were quantified using an Access database. A single Excel spreadsheet was used to enter details and measurements of each artefact; this database was interrogated to compile statistics. All metal finds were counted, weighed when relevant and classified on a context-by-context basis. The catalogue is organised by context number.

Characterisation

B.1.7 The metalwork includes multifunctional and industrial items such as nails, a bucket hoop and tools. Domestic and dress accessory are represented by a lead vessel repair, a fragmented copper-alloy pin (possibly from a brooch), and an iron finger ring decorated with a blue glass intaglio (Plate 17). Six items remain unidentifiable to type. The assemblage is chronologically undiagnostic, and it can only be dated by pottery association and site phasing to the Roman period.

Statement of potential

B.1.8 This small assemblage offers very little opportunity to speculate on the character or date of activities on the site, although it appears to be Roman in chronology. Metalwork is concentrated in ditches in Area A, possibly suggesting a disuse of such features during Period 3.1. The lack of Roman household items and dress accessories advocates for a rural use of the land, although the two possible tools may indicate some sort of industrial activity in the area.

Recommendations

B.1.9 No further analysis/recording of the finds are necessary. A full archive report should be prepared, incorporating the previously recorded metalwork from the evaluation.

B.1.10 A total of 12 items are recommended for x-ray analysis (Table 10).

B.1.11 Finger ring SF20, needs consolidation, this will facilitate the identification of the intaglio. Illustration of this piece is also advised.

SF	Context	Feature	Material	Artefact
4	1243	ditch	Fe	tool
5	1044	ditch	Fe	nail
7	1025	ditch	Fe	tool
8	1036	ditch	Fe	unidentified
9	1056	ditch	Fe	nail
12	1058	ditch	Fe	unidentified
13	1233	ditch	Fe	bucket
14	1187	pit	Fe	unidentified
16	2201	ditch	Fe	unidentified
17	1044	ditch	Fe	bucket
19	1196	ditch	Fe	unidentified
20	1235	ditch	Fe & glass	Finger ring

Table 10. Metalwork requiring x-ray

SF	Area	Context	Cut	Site phase	Feature	Material	Artefact	No. Artefact	Condition	Description	Length (mm)	Width (mm)	Thickness (mm)	Diam. (mm)	Weight (gr)	Spot date
4	A	1243	1241	3.1	ditch	Fe	tool	1	Incompl.	A possible Roman chisel. A central shank with square cross-section tapering into a circular cross-section end. At the opposite end the shank steps into a short blade with angled back and straight cutting edge	96	12.4	6.2	0	0	RM
5	A	1044	1043	3.1	ditch	Fe	nail	1	Compl.	A bent stem with square cross-section and flat circular head	47	3.8	0	0	0	RM
7	A	1025	1024	3.1	ditch	Fe	tool	1	Incompl.	A straight shank with rectangular cross-section possibly from a chisel or other tool. One terminal slightly tapering at the end	48	7	4	0	0	RM
8	A	1036	1035	3.1	ditch	Fe	ND	1	Incompl.	A very oxidised L shaped item, possibly a nail	0	0	0	0	0	RM
9	A	1056	1055	3.1	ditch	Fe	nail	1	Incompl.	A nail with a cross-section shank and large flat circular head	47	6	0	28	0	RM
12	A	1058	1057	3.1	ditch	Fe	ND	1	Incompl.	A very encrusted artefact, possibly a chisel consisting of a long and straight concave shank with a rounded tapering terminal. The opposing end is completely rusted. Need x-ray analysis	204	13	8	0	0	RM
13	A	1233	1232	3.1	ditch	Fe	bucket	1	Incompl.	Two fragments of a curved strip of metal possibly from a bucket's hoop	140	21	3	0	0	RM
14	A	1187	1186	3.1	pit	Fe	ND	1	Incompl.	An undecorated and slightly tapering strip of metal	78	11	3.2	0	0	RM
15	A	1001	0	n/a	layer	CuA	ND	1	Incompl.	A bent and undecorated metal wire with	35	2.2	1.4	0	0	ND

SF	Area	Context	Cut	Site phase	Feature	Material	Artefact	No. Artefact	Condition	Description	Length (mm)	Width (mm)	Thickness (mm)	Diam. (mm)	Weight (gr)	Spot date
										oval cross-section						
16	B	2201	2200	2	ditch	Fe	ND	1	Incompl.	A strip of metal with rectangular cross-section. Need x-ray	49	15	4.1	0	0	IA/RM
17	A	1044	1043	3.1	ditch	Fe	bucket	1	Incompl.	A fragments of a curved strip of metal possibly from a bucket's hoop	163	19	4.5	0	0	RM
18	A	1001	0	n/a	layer	CuA	pin	1	Incompl.	A pin with ca circular cross-section possibly from a brooch	0	0	0	1.3	0	RM
19	A	1196	1194	3.1	ditch	Fe	ND	1	Incompl.	Five fragments from a rod of metal with square cross-section. The artefact is very encrusted and needs x-ray analysis	0	23.5	0	0	0	RM
2	A	1029	1028	3.1	ditch	Pb	vessel repair	1	Incompl.	A sub-circular pottery repair	0	0	0	0	0	RM
20	A	1235	1234	0	ditch	Fe+glass	Finger ring	1	Incompl.	An iron Roman finger ring with a blue glass intaglio. The ring is heavily encrusted and the intaglio cannot at this stage be identified	23	13	5	0	0	RM

Table 11. Metalwork catalogue

B.2 Coins *by Denis Sami*

B.2.1 The excavation produced three Roman copper alloy coins: an antoninianus and two sestertii; all were recovered from Period 3.1 ditches in Area A (Ditches **1010** and **1028**). A further two 2nd century Roman coins, not discussed here, were recovered during metal detecting of topsoil deposits during the evaluation phase (Sami, in Knight 2019). Details on the three coins from the excavation phase are provide in Table 12.

B.2.2 The antoninianus (minted AD 269-270), despite slight damage by excavation and light oxidation, is in excellent condition and with no sign of wear. The two sestertii (AD 96-97 and AD 107), on the contrary, are heavily worn. This suggests these two coins circulated for a long period of time before final deposition.

Context	sf no.	Denomination	Min Date	Max Date	Reece	Authority	Obv description	Obv. legend	Rev. description	Rev. legend
1048	6	Antoninianus	269	270	13	Victorinus	radiate draped bust right	IMP C PIAV VICTORINVS AVG	standing left holding olive branch and sceptre	PAX AVG Left field: V, Right field: Star
1233	3	Sestertius	96	97	5	Nerva	bust facing right	illegible	illegible	illegible
1029	1	Sestertius	107	107	5	Trajan	radiate head right, slight drapery on left shoulder	IMP CAES NERVAE TRAIANO AVG GER DAC P M TR P COS V P P	S-C Abundantia or Annona standing left, holding corn-ears over modius and cornucopiae, prow of ship to right	S P Q R OPTIMO PRINCIPI

Table 12. Catalogue of coins

Statement of potential and recommendations

B.2.3 This small assemblage of coins has little potential and no further work is required.

B.2.4 A final archive report on the coins should be produced which includes the two coins previously collected during the evaluation.

B.3 Metalworking residues *by Simon Timberlake*

Introduction

B.3.1 A total of 25.61kg (305 pieces) of ironworking slag was recovered from the excavation and evaluation phases at Monks Farm, Kelvedon. Of this, some 6.48kg (119 pieces) came from the evaluation (all of it associated with iron smithing) and 19.13kg (186 pieces) from the excavation. Most of the slag from the evaluation came from context 79, the fill of a feature later recognised as an enclosure ditch during the excavation (Ditch **1251**; Period 3.1). From the excavation the majority of the slag was found within the fill of a boundary ditch (Ditch **1010**; Period 3.1) on the east side of Area A. All or most of this consisted of Roman (2nd-4th century AD) iron smithing debris, although a small amount of what could have been smelting or bloom smithing slag was recovered from Ditch **1010** and, in Area B, from feature **2208** (Period 3.1) and from the fill 2175 of Period 2 C-shaped Ditch **2148** (Area B).

Methodology

B.3.2 The iron slag was identified visually using an illuminated x10 magnifying lens and compared where necessary with an archaeological slag reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite, whilst a magnet was used to test for the presence of wustite or free iron within the slag.

Catalogue and description of iron slag

B.3.3 The vast majority of this iron smithing slag consisted of relatively low density porous broken-up and irregular-looking smithing hearth bases (SHBs) with numerous slag

smithing lumps (SSL) and an equivalent number of fragments of thin glazed vitrified hearth lining (VHL) pieces. Just a few of the pieces of VHL were associated with less vitrified fired clay, whilst one of the vitrified clay pieces from the evaluation phase (context 79(2)) was the detached aperture rim of a small tuyere – probably a clay pipe tuyere with an external aperture of around 30-35mm diameter.

B.3.4 Some of the smithing hearth bases (SHBs) were dense and iron-rich, with convex to conical-shaped bottoms, and some were rich in charcoal inclusions. Yet some of the others, particularly from contexts 1019 and 1025 were relatively iron poor with high silica contents (vitrified clay indicating the extensive melting of the clay hearth linings). All of this was Roman (mostly 2nd-4th century AD) ironworking slag which shared very similar characteristics from across the area of the site: high temperatures (>1200°C), round deep clay-lined smithing hearths (of approx. 90-100mm diameter and 60mm depth), irregular-shaped and compositionally variable SHBs, and in some cases 'furnace conglomerate-type' (FC) slag cake masses. This is not to say that some of the pieces of conglomerate, slag cake and slag drip might not be linked to Roman smelting or to bloomery smithing (such as the pieces from 1025(1+2), 1341 and in particular 2209) – yet caution is required in the interpretation of this assemblage at this stage. The overwhelming evidence it would seem is for secondary smithing and forging work associated with one or more smithies, from which were dumped near by the larger debris associated with ironworking.

B.3.5 Some of the more magnetic pieces of iron slag probably included part-re-melted lumps of iron waste broken off during the forging process (e.g. 1019(5), 1025(10) and 1337(4) of iron – probably a detached strip or knife end broken-off during smithing. The porosity of some of this slag was due to the inclusion of (burnt-out) charcoal – the impressions of these suggesting the use in some cases of relatively large pieces of (oak?) charcoal as a fuel.

B.3.6 The only confirmed evidence for iron smelting at this site is a single lump of pooled or ropy tap slag enclosing a small fragment of baked clay (most probably a piece detached from the sides of a clay-lined slag pit or channel associated with a shaft furnace).This was recovered from the fill 2175 of a curvilinear Iron Age ditch (cut **2174** also associated with feature **2148**) from the centre of Site B. Associated with this was a piece of 60mm thick vitrified furnace wall (2175(1)) – perhaps a fragment of the smelting furnace – and a small irregular globular-shaped proto SHB (2175)(3)). The juxtaposition of these pieces suggests that the slag in this context is most probably re-deposited from somewhere near-by; therefore, that a small amount of iron smelting and smithing was most likely being undertaken here during the Iron Age.

B.3.7 There appears to be no evidence amongst all this material of non-ferrous metalworking.

B.3.8 The largest amounts of iron slag per context came from contexts 1019 (9074g), 79 (5841g), 1025 (3573g), 1337 (1053g), 2175 (672g), 1248 (662g) and 2209 (613g).

Assessment

B.3.9 The localised assemblage recovered from Trench 35 of the evaluation represents a cohesive assemblage of iron smithing slag which, unusually for a Roman settlement,

implies the dumping of slag from a nearby smithy into a ditch. The slag shows few signs of weathering, indicating the contemporary nature of this deposit. The admixture of SHB and VHL from the broken-up hearths suggests wholesale dumping, although this (relatively) small amount probably represents only a small part of the total.

B.3.10 In the same way, the slag recovered from Area A (most of which comes from the eastern boundary ditch (contexts 1019, 1025 and 1337) appears to represent one or more specific dumps of similar smithing hearth debris, although the exact spatial distribution of this material remains to be examined. All of this is of a broadly similar date and type.

B.3.11 The exact processes involved in producing the more massive charcoal-filled slag bottoms referred in this case as furnace conglomerate (and slag cake) could not with any certainty be determined, although it is possible these may be associated with much larger and deeper secondary smithing hearths, or with primary bloom smithing; in the latter case this would appear to be an indication of iron smelting somewhere in the near vicinity. If so, one might have expected charcoal-filled roasting pits, slag pits and other features, for which there does not appear to be any evidence.

B.3.12 The only Roman ironworking slag considered to be promising as smelting evidence came from the terminus of a ditch (fill context 2209) which cut a Middle Iron Age ditch from which Iron Age smelting slag was recovered. The slag from Roman (2nd-3rd century AD) ditch included a dense slag-cake furnace base and a large mass of furnace conglomerate. Typically, the latter is indicative of smelting, and the accretion of slag within the base of a shaft furnace, but as in the above cases, there may well be a different explanation for this. The juxtaposition of these features within Area B may be a clue as to the location(s) of where some limited smelting took place, the material from context 2175 being by far the more convincing of the two.

B.3.13 A Middle Iron Age smelting furnace which produced small amounts of furnace conglomerate and slag runnel (liquid slag) was excavated at Bradley Fen, Cambridge (Knight and Brudenell 2020), whilst Late Iron Age proto-tap slagging furnaces were examined in detail at Priors Hall, Corby, the latter providing good evidence for the technological change from slag accretion within the body of a furnace to the proper tapping of a liquid slag into a pit (Hall 2006 & 2008).

B.3.14 There are no obvious parallels in terms of archaeological evidence for Iron Age smelting activity in this area of Essex, although during the Roman period there are a few examples, including Heybridge, where considerable evidence for ironworking during the 2nd-3rd century AD (including bloomery slag) is recorded (Cleere 1981,16). The source of the iron ore used can only be guessed at, although it is possible that bog iron ores may have been used, as was typical in East Anglia during the Iron Age.

Statement of potential

B.3.15 It would be useful to undertake further study on this assemblage in order to better understand the industry of this settlement. Comparatively this would seem to be a moderate-sized, not a large ironworking assemblage, yet we may be looking at primary as well as secondary ironworking, in the latter case suggesting perhaps the occurrence of more than one smithy. Further analysis and comparison of these slags (with

recorded examples from other Essex sites) may well resolve the following questions: a) the source(s) of the ores used in smelting; b) the nature of the furnaces and whether the slag was tapped; c) confirmation of whether or not iron smelting was undertaken here during the Roman period; and d) to establish whether we are looking at the smithing of iron blooms (primary ironworking) or just the re-smithing of billet iron, scrap or the forging/repair of tools (secondary ironworking). It may not be possible to answer any of these questions with certainty, but a renewed examination of the material combined with a more thorough investigation of comparable sites could prove quite productive.

Further work

B.3.16 Renewed examination of some of the slag samples alongside comparable reference materials together with some pXRF analysis of the elemental ratio patterns could help to identify differences between the 'furnace conglomerate' and the larger smithing hearth bases, as it might also suggest a link between possible sources (local bog iron ores or imported ones) and the samples of smelting slag. The provision of a distribution plot of slag finds across the whole excavation area would be extremely useful in determining the location(s) of this ironworking, therefore the possibility of smithy structures. A few examples of these finds will also require illustration. For the specialist this may entail an additional 3-4 days work at the final report/ publication stage.

Context	Trench	SF no	Nos. piece	Wt (g)	Dimensions (mm)	Mag (0-4)	Slag category	Type	Notes
73	35		1	14	40x30x12	0-1	VHL	smithing	
77 (1)	35		4	254	85x55x40 + 50x30 + 30 + 60	2-0	SHB (x2) + VHL + SSL(x1)	smithing	irregular SHB with large charcoal impressions
77 (2)	35		1	9	30x25x12	1	VHL	smithing	thin hearth lining
77 (3)	35		2	99	75x50x25(refit)	0	VHL	smithing	bubbly fused with VC beneath
79 (1)	35		24	2465	140x120x60 +30-90 (var)	3(x1) 0	SHB(x3) + SSL + VHL(x4)	smithing	large irreg SHB (compl) + irreg frags with large ch impressions
79 (2)	35		80	3318	70x65x50 + 95x80x60 + 90x75x50 + 115x80x35 + 90-25 (var)	3(x4) 0	SHB(x4) + SSL + VHL(x14)	smithing	x3 large irreg SHB + x1 conical heavy + thin VHL and fired clay frags + x1 tuyere rim c. 30-35mm dia.+free Fe
79 (3)	35	12	4	58	40x60x24(refit)	0	VHL	smithing	part of 77(1)?
79 (4)	35		2	48	40x30x13 + 30x25x11	0+1	VHL +FC	smithing	
137	27		1	216	80x65x40	2	SHB	smithing	complete plano-convex
1005	excav		2	83	50x50x40	1-3	FC/ SHB	smithing?	within a 40mm+ deep hearth or small shaft
1019 (1)	excav		1	68	65x35x35	0	VC	smithing?	piece of *pila* brick (CBM) used as hearth lining – prob for smithing?
1019 (2)	excav		1	11	50x30x7	0-1	VHL	smithing	
1019 (3)	excav		16	4424	100x90x75(543g) 110x95x40(262g) 95x80x45(316g) 90x95x50(311g) 125x115x50(527g) 90x80x60(298g) 95x120x70(478g) 90x90x50(282g) 95x80x45(242g)	0-2	SHB + VHL	smithing	x15 more or less complete SHBs -typically irregular+deep but bi-convex to plano-concavo-convex. Common hearth size suggested = 90x90x60mm deep. Many with tuyere hinge

Context	Trench	SF no	Nos. piece	Wt (g)	Dimensions (mm)	Mag (0-4)	Slag category	Type	Notes
					100x90x40(211g) 105x85x30(153g) 100x75x40(159g) 90x60x65(232g) 100x65x60(267g) 70x50x25(83g) +30(9g)				(break) evident. Much charcoal as inclusion and often vitrified clay tops to these.
1019 (4)	excav		30	3858	80x85x60(352g) 120x75x55(251g) 85x80x40(203g) 110x85x40(367g) 110x85x30(277g) 110x70x45(207g) 100x70x40(220g) 80x70x32(130g) 80x50x39(126g) 65x65x35(126g) 70x50x22(99g) 60x55x45(114g) 75x55x40(94g) 50x55x45(97g) 80x60x50(127g) 55x50x30(94g) 70x35x35(138g) 60x30x45(124g) +	1-3	SHB	smithing	x25 SHBs – all irregular shapes, some with convex bottoms (moulded to shape of hearth) 50% with vitrified clay surfaces
1019 (5)	excav		21	583	20-70	0	VHL + VC	smithing	incl parts of apparently empty vitrified hearths and VC lumps
1019 (6)	excav		1	35	70x25x15	3	Fe in slag	smithing	corroded smithing iron
1019 (7)	excav		7	95	30-55	1	SSL	smithing	
1025 (1)	excav		4	1048	105x70x95 (deep)	1-3	FC?	smelting/ smithing?	furnace conglomerate with charcoal incl -one edge with VHL – could be v large smith hearth?
1025 (2)	excav		1	31	45x25x30	1	SR	smelting?	bubbly slag drip – smith?
1025 (3)	excav		5	142	25-45	0-1	VHL +VC	smithing?	Irreg pieces hearth lining and furnace incorp lump
1025 (4)	excav		14	2292	70x60x30(145g) 85x75x45(231g) 85x80x40(236g) 90x85x50(279g) 90x70x50(216g) 70x70x35(146g) 60x65x20(91g) 50x55x35(117g) 60x50x35(94g) 60x45x35(118g) 65x40x25(109g) 60x35x20(68g) 53x65x40(122g)	0-4	SHB?	smithing	x13 SHBs- some with plano-convex basal profiles – but generally irregular in form with much interstitial charcoal
1025 (5)	excav		1	254	95x110x45	0	SHB/VHL	smithing	vitrified clay lining + fuel ash with v little iron slag
1025 (6)			4	137	30-45	0-1	SHB	smithing	broken-up frags of x1 +
1025 (7)			2	70	50x25x7 +50x40x17	1-3	proto-SHB	smithing	concave tops - weathered
1025 (8)			3	91	30-55	1-2	SSL	smithing	irregular
1025 (9)			5	101	60x35x17 + 30-40	0-1	VHL + VC	smithing	
1025 (10)			3	230	50x45x20(square) 55x30x20 + 40x35x20	2-4	Fe in slag	smithing	Includes small square 'billet' of iron (148g)

Context	Trench	SF no	Nos. piece	Wt (g)	Dimensions (mm)	Mag (0-4)	Slag category	Type	Notes
1025 (11)			2	398	100x65x60 +40	0-1	FC	smithing?	furnace conglomerate – formation?
1058	excav		1	212	85x70x35	0-2	SHB	smithing	concavo-convex SHB
1123	excav		4	175	85x75x30	0	SHB	smithing	v irregular concavo-convex type
1248	excav		1	662	75x100x70	0-1	SHB	smithing	v large plano-convex conular shaped SHB*
1267	excav		1	94	60x50x30	0-1	FC?	smithing	As below
1295	excav		6	459	105x60x40 + 25-40	0-3	FC?	smithing	attached VHL suggests that this is a small pit-like hearth/furnace of min 60mm deep+120mm dia
1301	excav		1	588	90x80x35	1-3	SHB	smithing	large sub-square shaped SHB with concave centre
1337 (1)	excav		13	699	100x55x25(198g) 85x65x35(220g) 65x55x30(104g) 25-35(177g)	1-3	SHB	smithing	4+ SHBs – one of these broken up int pieces. All flattish/irregular in shape
1337 (2)	excav		1	33	45x40x15	2	proto-SHB	smithing	weathered
1337 (3)	excav		12	168	20-60	0-2	SSL	smithing	Irregular pieces
1337 (4)	excav		1	78	55x30x30	4	Fe in slag	smithing	lump of corroded iron embedded in slag
1337 (5)	excav		7	105	50x40x25 +20-35	0-2	VHL + VC	smithing	irregular pieces
1341			5	264	70x50x45	1-2	FC	smithing/ smelting?	part of cake 45mm thick with charcoal
1355	excav		1	126	75x40x40	0-1	FC+VHL	smithing?	conglom with charcoal on a VHL with tuyere blast hole – 40mm depth
1370	excav		1	233	85x95x45	2-3	SHB	smithing	v irreg shaped SHB with mixture of VC
2175 (1**)**	excav		1	312	110x70x60	0	FW	smelting	vitrified sandy daub lining to a bowl or shaft furnace (M-LIA)
2175 (2)	excav		1	327	90x70x45	0	SR	smelting	tapped or pooled slag with attached baked clay lining to pit or channel*
2175 (3)	excav		1	33	35x35x20	1	proto-SHB	smithing	v small irreg SHB (M-LIA)
2209 (1)	excav		1	186	70x50x20-40(thick)	0	SC	smelting?	part of dense slag cake – *in situ*.furnace base? *
2209 (2)			1	427	120x105x50	0-2	FC + VC	smelting?	mass of furnace conglom furnace base+bubbly VC

Table 13. Catalogue of metal working residues

B.4 Flint *by Lawrence Billington*

Summary

B.4.1 A total of 89 worked flints and 170g of unworked burnt flint. were recovered during the excavation and the previous evaluation. This includes a small quantity of material from Period 1 (prehistoric) contexts, including a small but distinctive Early Bronze Age assemblage from a pit in Area C, but is dominated by material recovered as residual finds form Roman features (Period 3). The most significant individual find is a Lower or Middle Palaeolithic handaxe recovered from a pit in Area A, whilst the remaining material attests to activity from the Mesolithic to the Bronze Age, although distinctive/diagnostic pieces are rare.

Methodology

B.4.2 The assemblage was catalogued directly onto an Excel spreadsheet and the artefacts were classified according to a system of broad artefact/debitage types based on standard definitions for post-glacial lithic assemblages from southern Britain (e.g. Bamford 1985, 72-77; Healy 1988, 48-9; Butler 2005). A summary quantification of the assemblage by Period is provided in Table 14, and the assemblage is catalogued by context in Table 15, with full details retained in the project archive.

Period/Type	Period 1	Period 2	Period 3 (3.1 & 3.2)	Unphased/ unstratified	Total
Irregular waste			4		4
Primary flake			1	1	2
Secondary flake	24	4	18	1	47
Tertiary flake	8	1	6	2	17
Secondary blade-like flake	1		2		3
Tertiary blade-like flake			1		1
Secondary blade			1	3	4
Tertiary blade	1		1	2	4
Core			1		1
Scraper	4		1		5
Hand-axe	1				1
Total worked	**39**	**5**	**36**	**9**	**89**
BF count	2	1	6	4	13
BF weight	26	41	51.3	52	170.3

Table 14. Basic quantification of the flint assemblage by period

Assemblage characterisation

Period 1 (prehistoric features)

B.4.3 A total of 39 worked flints were recovered form pits provisionally phased to Period 1. These include a Palaeolithic hand-axe (Plate 16) recovered from the fill of pit **1041** (found alongside a later secondary flake). This piece is clearly redeposited in this context. This is a small but finely worked piece, missing its proximal tip, with the break

surface appearing fresher than the flake scars on the rest of the piece but clearly not representing modern/excavation damage and thus likely to have occurred at some point in antiquity. Measuring >97mm long, 75mm wide and 26mm thick it has been fully flaked over both surfaces, with no surviving cortex, and is heavily stained, with typical 'basketwork' patination on one face. Although its edges and flake scars are lightly rounded and worn, consistent with the piece having been transported within fluvial gravels, it is in very good condition. It is rarely possible to precisely date hand axes on the basis of their form/typology, and this piece could be of Lower or Middle Palaeolithic date.

B.4.4 The most distinctive assemblage form the Period 1 features came from pit **97** (Area C) The sixteen worked flints recovered from the fill of pit **97** are in good, fresh, condition. The assemblage is dominated by unretouched flake-based removals but does include a high proportion of retouched forms in the form of four scrapers. The unretouched removals include two fine narrow/blade-based pieces, but are dominated by small partly cortical, hard-hammer struck flakes. One of the scrapers is made on a relatively large secondary flake and bears regular scalar retouch along one lateral edge, forming a convex side scraper. The other three are all best described as short end scrapers. They are small, measuring little more than 35mm in length, and are made on simple hard hammer struck secondary flakes. All are retouched at their distal ends and, in two cases, the retouch can be described as semi-invasive/'scale-flaked'. The simple flake-based technology and the typology of the retouched tools clearly indicate a Beaker/Early Bronze Age date for the assemblage. In particular, the high proportion of scrapers in the assemblage is typical of Beaker associated assemblages from Eastern England (see Garrow 2006, 128-9, table 7.5) whilst the diminutive size of the scrapers and their distinctive scalar retouch (cf. true thumbnail scrapers) are also very characteristic of this period (Healy 1984, 15-16).

B.4.5 A further relatively substantial assemblage (19 pieces) came from pit **1030** in Area A, but this is made up exclusively of unretouched removals, mostly hard hammer struck flakes of the kind typical of later Neolithic to Early Bronze Age technologies.

Other contexts

B.4.6 There is no evidence for the use of flint during the Iron Age occupation of the site and all of the flint recovered form Period 2 and 3 contexts represents residual material incorporate into the fills of later features, whilst a small amount of flint was also recovered from undated/unstratified contexts (Table 14). This material is thinly distributed, invariably with only one or two pieces coming form an individual context. It is dominated by unretouched removals, mostly generalised flake-based material, but including some blades and blade -like flakes of Mesolithic/earlier Neolithic date. The only retouched piece is a single end-scraper from Period 3.1 ditch **1067**.

Statement of potential

B.4.7 This small assemblage of worked flint has some, limited, potential to provide information on the earlier prehistoric activity at the site, whilst the Palaeolithic hand axe is a find of intrinsic interest and requires full reporting.

Recommendations

B.4.8 The assemblage has been fully recorded, and no further analytical work is required. The catalogue should be updated and a full report written following final phasing and analysis of the stratigraphic records. A detailed description of the Palaeolithic hand axe should be prepared with accompanying illustration or photographs, and this find should be put into the context of other Lower and Middle Palaeolithic finds from the terrace gravels of the Blackwater valley and the record of the county more generally (O'Connor 2015).

Context	Cut	Area	Feature type	Feature number	Period	small find no.	Irregular waste	Primary flake	Secondary flake	Tertiary flake	Secondary blade-like flake	Tertiary blade-like flake	Secondary blade	Tertiary blade	Core	Scraper	Hand-axe	Total worked	BF count	BF weight
9	8	Tr 42	furrow		n/a									1				1		
13	12	Tr 36	ditch		n/a														4	52
21	12	Tr 20	ditch		n/a			1		1								2		
25	24	Tr 19	ditch		n/a															
33	32	B (Tr 37)	ditch	2148	2				1	1								2		
35	34	B (Tr 43)	pit	34	2														1	41
71	70	Tr 41	ditch		n/a								1					1		
77	76	A (Tr 35)	ditch	1028	3.1		1											1		
96	95	A (Tr 28)	ditch	1022	3.2				1									1		
98	97	C (Tr 24)	pit	97	1				9	1	1			1		4		16		
110	109	Tr 39	ditch		n/a									1				1		
114	113	C (Tr 32)	gully	113	1					1								1		
140	138	A (Tr 27)	pit	1073	3.1				1									1		
1001	0	B	subsoil		0								1					1		
1009	1007	A	ditch	1007	3.1				1									1		
1011	1010	A	ditch	1010	3.1			1		1	1							3		
1017	1016	A	ditch	1007	3.1										1			1		
1019	1018	A	ditch	1010	3.1					1								1		
1028	1028	A	ditch	1028	3.1					1								1		
1031	1030	A	pit	1030	1				13	6								19		
1038	1037	A	ditch	1007	3.1				4									4		
1042	1041	A	pit	1041	1	11			1								1	2		
1054	1053	A	ditch	1053	3.1		2		1									3		

Context	Cut	Area	Feature type	Feature number	Period	small find no.	Irregular waste	Primary flake	Secondary flake	Tertiary flake	Secondary blade-like flake	Tertiary blade-like flake	Secondary blade	Tertiary blade	Core	Scraper	Hand-axe	Total worked	BF count	BF weight
1066	1065	A	ditch	1010	3.1				1									1		
1068	1067	A	ditch	1067	3.1				1							1		2		
1079	1078	A	ditch	1022	3.2				1									1		
1089	1073	A	watering hole	1073	3.1				3									3		
1139	1138	A	ditch	1067	3.1								1					1		
1159	1158	A	ditch	1140	3.2									1				1		
1181	1180	A	ditch	1180	3.1					2								2		
1196	1194	A	ditch	1180	3.1															
1242	1241	A	ditch	1010	3.1														5	36
1267	1266	A	ditch	1266	3.1					1	1							2		
1272	1271	A	ditch	1266	3.1														1	16
1282	1281	A	ditch	1281	3.1				1									1		
1341	1340	A	pit	1340	3.1				1									1		
1355	1354	A	ditch	1251	3.1				1									1		
1366	1365	A	pit	1365	1							1						1		
2075	2074	B	posthole	2074	2				1									1		
2185	2184	B	pit	2184	2				1									1		
2209	2208	B	ditch	2208	3.1		1											1		
2225	2224	B	pit	2224	2				1									1		
3040	3039	C	pit	3039	3.1				1									1		
3043	3041	C	pit	3041	1				1									1	2	26
3047			unstratified		0					1			1					2		
99999			unstratified		0				1									1		

Table 15. Catalogue of flint

B.5 Prehistoric pottery *by Carlotta Marchetto*

Introduction

B.5.1 An assemblage totalling 435 sherds (7149g) of prehistoric pottery was recovered from the excavation, displaying a mean sherd weight (MSW) of 16.4g. The prehistoric pottery from the evaluation (reported in Knight 2019) has not been re-examined at this stage, aside from 18 sherds, initially recorded as Anglo Saxon, from C-shaped ditch **2148**, which have been re-dated to the Middle Iron Age considering more updated information from the excavation. The pottery was recovered from a total of 31 contexts relating to 28 cut features/labelled interventions (Table 16). The pottery ranged in date from the Early Bronze Age through to the Late Iron Age period, with the majority being of Early Iron Age (318 sherds, 4622g, c. 800/600-350 BC) and Middle Iron Age date (106 sherds, 2447g, c. 350-50 BC).

B.5.2 The pottery is in a moderate/stable condition, and the assemblage contains a range of partial vessel profiles. Small sherds (<4cm in size) dominate, but most are relatively 'fresh' and unabraded. Dating is therefore largely based on the character of the fabrics and their comparison with material from larger published assemblages from the region.

B.5.3 This assessment report provides a general characterisation of the assemblage with basic quantification (counts and weights) of the material by context and date. It also provided a statement on significance and series of recommendations for further recording, analysis, publication and retention.

Area	Context	Cut	Feature	Group name	No sherds	Wt (g)	Date	Period
B	33	32	ditch		6	230	MIA*	2
B	37	36	ditch		12	112	MIA*	2
B	1001		subsoil		4	23	EIA/MIA	0
A	1011	1010	ditch		1	9	LIA/ER	3.1
A	1021	1020	pit		1	4	EBA	1
A	1022	1023	ditch		1	2	EIA	3.2
A	1022	1023	ditch		1	11	MIA	3.2
A	1031	1030	pit		1	3	Prehist, EBA?	1
A	1048	1047	ditch		1	5	EIA	3.1
A	1121	1120	pit		35	476	MIA	2
A	1123	1122	pit	Pit/Posthole Group 1099	1	6	EIA	3.1
A	1159	1158	ditch		1	4	EIA	3.2
A	1159	1158	ditch		1	30	MIA	3.2
A	1181	1180	ditch		1	5	Prehist, EBA?	3.1
A	1201	1200	ditch		1	17	EIA	3.1
A	1204	1202	ditch		1	4	EIA	3.1
A	1355	1354	ditch		1	13	EIA	3.1
A	1366	1365	pit		5	52	EBA	1
B	2021	2020	posthole		1	5	EIA	2

Area	Context	Cut	Feature	Group name	No sherds	Wt (g)	Date	Period
B	2077	2076	pit/burial	Pit cluster 2076	76	1430	EIA	2
B	2078	2076	pit/burial	Pit cluster 2076	23	170	EIA	2
B	2140	2141	pit		2	8	EIA	2
B	2151	2150	pit		3	77	MIA	2
B	2165	2164	pit	Pit cluster 2076	197	2834	EIA	2
B	2171	2170	pit	Pit cluster 2076	2	44	EIA	2
B	2175	2174	ditch		27	775	MIA	2
B	2176	2174	ditch		6	149	MIA	2
B	2195	2194	pit		2	7	EBA	2
B	2207	2202	pit		1	8	MIA	3.1
B	2211	2210	ditch		2	35	EIA	2
B	2211	2210	ditch		1	11	MIA	2
B	2222	2221	ditch		5	291	MIA	2
C	3026	3025	gully		1	5	EIA	3.1
C	3040	3039	pit		3	17	EIA	3.1
C	3040	3039	pit		8	277	MIA	3.1
Total					*435*	*7149*		

Table 16. Pottery quantification by context

Methodology

B.5.4 All the pottery has been fully recorded following the recommendations laid out by the Prehistoric Ceramic Research Group (2011). After a full inspection of the assemblage, fabric groups were devised on the basis of dominant inclusion types, their density and modal size. Sherds from all contexts were counted, weighed (to the nearest whole gramme) and assigned to a fabric group. Sherd type was recorded, along with technology (wheel-made or handmade), evidence for surface treatment, decoration, and the presence of soot and/or residue. Rim and base forms were described using a codified system recorded in the catalogue and were assigned vessel numbers.

B.5.5 Where possible, rim and base diameters were measured, and surviving percentages noted. In cases where a sherd or groups of refitting sherds retained portions of the rim and shoulder, the vessel was also categorised by form. Early Iron Age vessels were classified using a form series devised by M. Brudenell (Brudenell 2012), and the class scheme created by John Barrett (1980). The Middle Iron Age-type forms were codified using the series developed by J.D. Hill (Hill and Horne 2003, 174; Hill and Braddock 2006, 155-156).

B.5.6 All pottery was subject to sherd size analysis. Sherds less than 4cm in diameter were classified as ‘small’ (255 sherds; 59%); sherds measuring 4-8cm were classified as ‘medium’ (159 sherds; 36%), and sherds over 8cm in diameter will be classified as ‘large’ (21 sherds; 5%). The quantified data is presented on an Excel data sheet held with the project archive.

Assessment of Early Bronze Age pottery

B.5.7 The assemblage comprises eight sherds of pottery (63g) with a MSW of 7.8g. The pottery derives from three contexts relating to three pits: **1020** and **1365** in Area A, and **2194** in Area B.

B.5.8 The assemblage contains sherds in flint and grog tempered fabrics (GF1 and F2). The majority of the sherds are made in grog and flint tempered fabric (87% by count). The pottery was in poor condition, and some was identified only by fabric.

B.5.9 Three probable Beaker sherds are a simple flat base and two decorated sherds. The first example, from context 1366, presents two pinched parallel lines on the body. The other example, from context 2195, has two incised lines.

Assessment of Early Iron Age pottery

B.5.10 The assemblage comprises 318 sherds of pottery (4622g) with a MSW of 14.5g. The pottery derives from 17 contexts relating to seven ditches, five pits, one pit/burial, one posthole, one gully and the subsoil. A total of 307 sherds (4549g) derive from Period 2 contexts (96% of the pottery by count) in Area B. A total of nine sherds (67g) derive from Period 3.1 contexts (3% by count) in Areas A and C. A total of two sherds (6g) derive from Period 3.2 contexts (1% of the pottery by count) in Area A. The majority of this pottery in Areas A and C derives from Roman contexts so it could be considered residual in nature.

Assemblage characteristics

B.5.11 The assemblage is dominated by sherds in flint (fabric F1-F3); the grade of the crushed burnt flint inclusions varying along a spectrum of coarse to very fine, and common to sparse depending on the size of the vessel and quality of ware. This is typical of Early Iron Age assemblages across the eastern region (Brudenell 2012).

B.5.12 Based on the total number of different rims, bases and rim and shoulders identified, the Early Iron Age is estimated to contain 21 different vessels: eight rims, six bases and seven partial vessel profiles. Of these, six are sufficiently intact to assign to form. These include two Class I coarseware jars, one with weakly defined shoulders (Form G) and one tripartite jar with marked shoulders and everted rim (Form I). Three Class I fineware jars, one with rounded body and short upright neck (Form A) and two with a marked shouldered and hollowed neck (Form H). The Class III is represented by a decorated bipartite coarseware bowl (Form M). The vessel shapes and decorations are characteristic of pottery groups belonging to the earlier stages of the Early Iron Age, c. 800-500 BC. These constitute the 'Early' Decorated ware PDR groups (Brudenell 2012).

B.5.13 Decoration is present on 26 sherds (527g). A range of applications and techniques typical of the Early Iron Age are evident, with fingertip and nail applications on the shoulder and rim top. Two fineware sherds display grooved horizontal lines on the rim and neck.

Key groups

B.5.14 Pottery deposits dating to the Early Iron Age are either small, weighing under 100g, or large, weighing over 500g. The majority are small and typically contain only a few sherds. In fact, the vast majority of Early Iron Age pottery derives from just three pits: **2076**, **2164** and **2170**, in Pit Group **2076**. Combined, these pits include 298 sherds, weighing 4478g. This represents 94% of the overall Early Iron Age assemblage or 97% by weight. The pits also contain all the 21 different vessels represent in the overall period assemblage (based on different rim and base counts) and all of the form assigned vessels described above.

Assessment of Middle Iron Age pottery

B.5.15 The assemblage comprises 106 sherds of pottery (2447g) with a MSW of 23g. The pottery derives from 12 contexts relating to 11 features/labelled interventions. These comprise seven ditches. The majority of the pottery derives from Period 2 features (60 sherds, 1645g) in Area B, whilst 35 sherds (476g) derive from a single Period 2 pit (**1120**) in Area A. Residual pottery consisted of a total of nine sherds (285g) from Period 3.1 contexts in Areas B and C and two sherds (41g) from Period 3.2 contexts in Area A.

Assemblage characteristics

B.5.16 The assemblage contains sherds in a range of fabrics, all broadly typical of pottery groups dating to the Middle Iron Age in Essex. They include a mix of sandy wares with inclusions of organic matter and occasionally flint. In total two basic fabric groups have been distinguished. Sherds with just sand account for 25% of the material by weight. The other sandy wares have inclusions of organic matter (75%).

B.5.17 Based on the total number of different rims and bases identified, the Middle Iron Age is estimated to contain a minimum of 12 different vessels: two different rims, three bases and seven partial vessel profiles. Most vessels have simple upright rounded rims, but externally thickened and everted rims are also present. Partial vessel profiles are relatively common (seven identified), with vast majority being constricted necked vessels (Hill Form B). Other types include neckless barrel-shaped jars/bowls and slightly globular pots with no distinct neck zone but a clearly defined rim (Hill Form K and L). Small slack-shouldered vessels are also present (Hill Form A). Measurable vessel rims (5 in total) have a range of dimeters from a minimum of 8cm to a maximum of 22cm and belong to small to medium-sized pots. Vessels of this size are likely to have been everyday cooking and serving pots, although only one retains traces of carbonised residue. In general, however, residues are very rare in the assemblage, with only 11 sherds with residue recorded (274g). Decoration is very rare with only one sherd (14g) displaying a fingertip application on the rim top.

Key groups

B.5.18 The Middle Iron Age pits yielding pottery contained medium assemblages of material weighing less than 500g. Pit **1120** yielded an assemblage weighing 476g and from pit **3039** derived an assemblage weighing 277g. Larger groups derived from ditch **2174**

(33 sherds, 924g). This ditch contains three of the 12 different vessels represented in the Middle Iron Age assemblage, with two form assigned vessels.

Assessment of Late Iron Age pottery

B.5.19 Only one sherd (9g) of Late Iron Age pottery was recorded (although see App. B.5 for details of other small quantities of Late Iron Age/Early Roman pottery). The pottery derived from Ditch **1010** in area A, Period 3.1. The sherd is handmade in a sand and grog tempered fabric, typical of the Late Iron Age in the region.

Assessment of prehistoric pottery

B.5.20 A total of two sherds (8g) are too small and fragmentary to be assigned to a particular prehistoric period or ceramic tradition. These sherds are in flint fabric (fabrics F1, one sherd, 5g; F2, one sherd, 3g) all of which are all heavily abraded. Both derived from features in Area A; one example from pit **1030**, Period 1 and the other from ditch **1180**, Period 3.1. Given the comparison with the pottery from the evaluation, this pottery is most likely to be Early Bronze Age in date.

Statement of Potential

B.5.21 The prehistoric pottery from the excavation dates from the Early Bronze Age to the Middle Iron Age, suggesting activity at the site throughout much of the 2nd and 1st millennium BC. The majority is of handmade Early Iron Age. Although the pottery assemblage is relatively small, the presence of multiperiod pottery could suggest a use of the settlement from the Bronze Age to the Roman period.

B.5.22 The Early Iron Age pottery dates to the earlier stages of the period, c. 800-500 BC, and constitutes an 'early' Decorated ware PDR group (Brudenell 2012), characterised by coarseware and fineware, plain and decorated vessels. This assemblage could contribute to a wider characterisation of later prehistoric pottery assemblages in Essex, and provided comparative data on fabrics, methods of surface treatment, decoration and ceramic technology.

B.5.23 The Middle Iron Age assemblage is relatively small, but it is characterised by big and well-preserved sherds that can contribute to a more specific description of the typology and the character of the Middle Iron Age pottery tradition. The assemblage includes several key groups containing partial vessel profiles.

B.5.24 The gap between the two ceramic phases (Earlier Iron Age and Middle Iron Age) should be investigated more specifically to understand the development of the settlement. The comparison with other similar assemblages in the region could help build a more detailed understanding of ceramic development in this part of the landscape.

Recommendations for further work

B.5.25 All the prehistoric pottery should be subject to full analysis, focussing on forms, fabrics, method of surface treatment, vessel use, patterns of vessel fragmentation and deposition. The attribute data should be presented in a fully quantified archive pottery report. The main focus of the analysis should be on the Early Iron Age and Middle Iron

Age assemblages and their affinities with contemporary groups from the surrounding area.

B.5.26 The Early and Middle Iron Age pottery is worthy of publication, with a brief mention of the Early Bronze Age pottery recommended. Publication should provide a summary version of the archive pottery report, combined with illustrations of a selection of form-assigned vessels and other diagnostic features sherds. Priority should be given to illustrating material from any radiocarbon dated contexts.

Retention, Dispersal and Display

B.5.27 None of the material should be considered for dispersal until the phasing is complete and all pottery has been analysed. It may be appropriate to disperse residual material after the production of an archive pottery report.

Task list

B.5.28 Illustrations: seven vessel profiles.

B.5.29 Prepare analytical report and a synthesis for publication (2 days).

B.6 Roman pottery *by Kate Brady*

Introduction

B.6.1 A total of 2430 sherds of pottery weighing 35,972g was recovered during the excavation. This total is in addition to the 749 sherds (11,420g) of Roman pottery recovered during the evaluation (largely from waterhole/well **1073**), which has been reported on previously by Lyons (in Knight 2019). For the purposes of assessment, the assemblage from the excavation phase was scanned to identify diagnostic forms and fabrics, allowing context groups to be spot-dated and the potential of the assemblage for further work to be assessed. Each context group was quantified by sherd count and group weight. Fabrics were assigned codes devised by the Essex County Council Field Archaeology Unit (Biddulph *et al*. 2015), while forms were briefly described and assigned, where possible, Chelmsford form types (Going 1987). The data were entered onto an excel spreadsheet, which is retained in the project archive. A summary catalogue of the pottery is provided at the end of this report as Table 17.

Fabrics

B.6.2 The following fabrics were noted (codes in brackets are taken from Tomber and Dore 1998):

- ASALA South Spanish amphora (BAT AM 1/ BAT AM 2)
- BB2 Colchester black-burnished ware (COL BB2)
- BSW Black-surfaced wares
- CGSW Central Gaulish samian ware (LEZ SA 2)
- GROGC Coarse reduced grog-tempered ware (SOB GT)
- COLBM Colchester buff ware mortaria (COL WH)
- COLC Colchester colour-coated ware (COL CC 2)
- COLSW Colchester samian ware (COL SA)

- EGSW East Gaulish samian ware
- GRF Fine grey wares
- GROG Fine grog-tempered ware and fine reduced grog-tempered ware (SOB GT)
- GRS Sandy grey wares
- ?HAB Hadham black-surfaced ware (HAD RE 2)
- ?HAR Hadham grey ware (HAD RE 1)
- LESTA London-Essex stamped ware
- MICW Miscellaneous Late Iron Age coarse wares
- MWSRS Miscellaneous white or cream-slipped sandy red wares
- NVC Nene Valley colour-coated ware (LNV CC)
- NVM Nene Valley self-coloured mortaria (LNV WH)
- NVW Nene Valley white ware (LNV WH)
- OXRC Oxfordshire red colour-coated ware (OXF RS)
- OXW Oxfordshire white ware (OXF WH)
- RED Miscellaneous oxidised wares
- SGSW South Gaulish samian ware (LGF SA and possibly MON SA)
- STOR Storage jar fabrics
- VRGR Verulamium region grey ware
- VRW Verulamium region white ware (VER WH)
- UWW White wares, unsourced

Chronology

B.6.3 The majority of the assemblage (47.2% by sherd count and 42.9 % by weight) was recovered from contexts that could be ceramically assigned to the middle Roman period (c. AD 100-240). A smaller amount (28.1% by sherd count and 26.5% by weight) is from groups ceramically dated to the Late Roman period (c. AD 240-410). The Early Roman contribution is smaller still, amounting to 4.9% by sherd count and 5.2% by weight. The quantity assigned ceramically to the Late Iron Age to early Roman period (0.45% by sherd count and 0.61% by weight) is minimal, and heavily skewed by a large portion of a single vessel from a cremation burial context. The remainder of the assemblage has not been assigned to a definitive period, but much of it is slightly more broadly dated to the early to middle Roman period or middle to late Roman period, and the dating has good potential to be more closely refined with full recording and analysis. There is no material with a certain 4th century date and its possibly that activity may have ceased before the latest part of the Roman period.

Late Iron Age to early Roman

B.6.4 The earliest pottery comprises a small amount of grog, grog-and-sand and flint tempered body sherds of late Iron Age to early Roman date, found mostly in contexts of Roman date and are therefore residual.

B.6.5 A large portion of a grog-tempered vessel of Late Iron Age to Early Roman date was recovered from a single cremation context (1096; burial **1097**) and the only feature conclusively of Late Iron Age to Early Roman date. The vessel is clearly a jar (although

no rim is present) with a pedestal base and rilled surface. The vessel is Late Iron Age to Early Roman in date (probably dating from the 1st century AD).

Early Roman

B.6.6 There are several large well-dated groups, with potential for dating to be refined with full analysis. Three groups contained forms indicative of a date in the latter half of the 1st century AD. Context 1196 (Ditch **1180**, intervention **1194**) contained several diagnostic forms, including a bead-rim carinated bowl in dark-surfaced reduced ware fabric with vertical burnished line decoration. The form is most similar to Going form C13 which dates to the late 1st to 2nd century. Other forms represented include a globular beaker in sandy greyware (Going form H2) of 1st century date, a Colchester mortarium (late 1st to 2nd century), a small amount of South Gaulish samian ware (AD 40-110) and a possible bead-rim bowl in probable Verulamium grey ware. A curving sided platter in sandy greyware (Going form A1) dates to AD 40-70 and was found in context 1295 (ditch **1294**) alongside a sherd of South Gaulish samian ware and a less closely dateable whiteware flagon handle of uncertain source. Another distinctive early Roman vessel is a globular beaker in sandy greyware with a decorated band of diagonal incised dots. It is a Going form H1 and dates to the 1st century AD.

Mid to late Roman

B.6.7 A diverse range of pottery was recorded in groups dated to the Middle and Late Roman periods. Locally produced reduced and oxidised coarse wares, many of which are noticeably sandy, were available as everted-rim jars (mostly forms paralleled in Going's typology such as forms G23, G24 and G25). There are also a smaller number of lid-seated jars, larger storage jars and cooking pots. There are three jars with frilled rims (Marney 1989, fig. 33), which are probably Hadham products. Another is a possible Lower Nene Valley creamware jar with a cornice rim and wavy line decoration around the neck, similar to a vessel from Water Newton, Cambridgeshire (Perrin 1999, fig. 66, no. 330). Coarseware bowls and dishes were most commonly plain and bead-rimmed straight sided forms of Going types B1, B2 and B4, typically of mid 2nd to mid 3rd century date (Going 1987). Some whole profiles are present, usually with slightly chamfered bases. Other bowl forms of interest include vessels typical of the Verulamium industry, with flat and/or multiple beaded rims (such as Going form C16) in sandy white and oxidised wares.

B.6.8 The coarsewares are joined by colour-coated wares and mortaria from Colchester, a distinctive local source to the east. Sherds from these fairly local sources are complemented by a moderate amount of colour-coated and white wares and mortaria from the Nene Valley, and a smaller amount possibly from the Oxford region. Imports are well represented in this period, with olive oil amphorae from southern Spain and numerous samian ware vessels from South, Central and East Gaul.

B.6.9 As expected, jars were the most common vessel class represented, but many other classes were noted, with the occurrence of bowls and dishes notably high, and with flanged, bead-rimmed, plain-rimmed forms all common. There are also bag shaped, poppy-head, indented and globular beakers (some of which have barbotine or rough-

cast decoration). There are a smaller number of flagons, platters, cups, lids, amphorae and mortaria among the forms.

Waterhole 1073

B.6.10 Diagnostic groups of Middle and Late Roman date are numerous but material from one feature is highlighted here to illustrate the combinations of forms and fabrics most characteristic of the assemblage. A particularly large assemblage from waterhole **1073** contained material that spanned the Middle and Late Roman periods. There were nine fills with pottery from this feature, with six contexts dating to the Middle Roman period and with three to the Late Roman period. The Middle Roman contexts contained diagnostic vessels including straight-sided black-burnished ware and reduced ware bowls and dishes with plain and bead-rims. Most are undecorated but one has burnished squiggle decoration and one burnished lattice. There is also a hooked rim Colchester mortarium of mid to late 2nd Century date (Going form D2). There is also a poppy-head beaker (Going form H6), Colchester colour-coated ware body sherds and the base sherd from a colander in sandy oxidised ware.

B.6.11 Samian ware from the Central and East Gaulish kilns is present in a variety of forms in this feature, including a Drag 31 dish and a Drag 33 cup. A Drag 37 bowl was also present but in contexts that also contain forms of late Roman date, suggesting high degree of mixing of pottery of different dates (possibly in a midden) prior to deposition. Late Roman forms include black-burnished ware cooking pots decorated with wide angled burnished lattice decoration and splayed rims. The other diagnostic late Roman form in this group is the dropped flange dish/bowl (Going form B6), which is present in greyware and black-burnished ware and appears in the region at around AD 260-80 (Going, 1987). A small amount of Oxford colour-coated ware dates to post-AD240 or possibly after AD 350, when the ware tended to reach central Essex in any notable quantity (cf. Going 1987, 3), and a fine whiteware flagon may also be from the Oxford kilns, being a Young flagon form W15 (Young 2000), dated to AD 240-300.

Finewares and Imports

B.6.12 A large group of samian ware vessels from South, Central and Eastern Gaul formed the bulk of the imports, complemented by a small amount by sherd count (but greater by weight) of amphora from Southern Spain. Most of the other colour-coated fine wares were provided by the Colchester industry and to a lesser extent the Nene Valley but it is possible that a small amount of this material came from the continent, as the fabrics appear very similar. Similarly, a small amount of the samian ware may be from the Colchester industry and this may be clarified during detailed recording.

B.6.13 Several samian forms were identified, including several Drag 33 cups and bowls, a Drag 36 dish with leaf decoration around the rim, a Drag 37 bowl, a Drag 46/ Curle 15 and a Drag 31 dish. There were three stamps, and two were very worn and indecipherable. One was partially readable with the letters DOV.IM visible and it should be possible to identify the potter and possibly more closely date this vessel.

B.6.14 Other finewares recorded come from the Colchester industry and include at least one with a barbotine hunt scene decoration and one bag-shaped beaker with barbotine

bird and scale/feather decoration and there were also several small bag-shaped beakers with rough-cast decoration. These were joined by a small number of fine oxidised and reduced ware sherds from Much Hadham in Hertfordshire, one of which is a 'London/Essex stamped ware' sherd with circle and dashed line decoration. Nene Valley colour-coated vessels include a small funnel shaped necked beaker, an indented beaker and a flanged bowl. There is also a possible Castor Box lid (Going form K7) with roulette decoration around the rim and a frilled form around the upper part and around the rim (Perrin 1999, fig. 62, no. 209)

Use

B.6.15 There were few distinctive signs of use although much of the pottery was very worn all over (most noticeably with the finewares), this is most likely due to post depositional processes. A few vessels were sooted including cooking pots and dishes, but also notably two samian ware Drag 33 cups.

Summary

B.6.16 The assemblage includes a large range of fabrics and forms suggesting deposition relating to settlement of mainly middle Roman date but with deposition continuing into the late Roman period. The group contained a good proportion of fine and specialist wares suggesting a settlement of some status, with a tradition of Roman dining practices and access to exotic products such as olive oil. The presence of the products of several regional industries and most noticeably vessels from Colchester, demonstrate the position of the site with good access to local and regional trade networks and particularly the influence of this major local centre.

B.6.17 The mean sherd weight (MSW) for the assemblage is 14.7g with suggests a moderately well-preserved assemblage that may have been middened prior to final deposition. This is reflected in the surface condition of many of the sherds which is worn and abraded, most noticeable with the finewares. However, there are many large sherds, with several whole vessel profiles and further analysis will look more closely at identifying varying sherd condition across different features, and spatially across the site.

B.6.18 The groups are well dated and suggest a floruit of activity in the mid 2nd to mid 3rd century and further comparison with regional typologies and large local assemblages such as those from Colchester (Going 1987) and Kelvedon (Rodwell 1988) should enable the dating to be refined further and some of the more broadly dated contexts to be assigned more closely to a ceramic phase.

Statement of Potential and recommendations

B.6.19 Detailed recording of the assemblage will allow the dating of context groups and, in turn, the site sequence, to be refined and finalised. Chronological distinctions may also be made through the analysis of relative proportions or presence and absence of key forms and fabrics.

B.6.20 Identification and quantification of the pottery fabrics will provide information on ceramic supply to the site and help place the settlement within its trade networks.

Stephen Rippon (2018, 172-96) has suggested that the distribution of pottery can be culturally, as well as geographically determined, with the resulting pattern reflecting territorial or cultural boundaries. The pattern of supply at the Monk's Farm site will be considered with this in mind. The site is situated near the Roman road between two large towns (Colchester and Chelmsford) and close to the Roman roadside settlement of *Canonium* (Kelvedon) and its relationship with that site as can be defined ceramically will be examined. Comparison with the products of the kilns at Kelvedon (e.g Chambers Meadow) and from the 4th century kiln site at Imworth (SGRP kilns database) will be made to examine whether any of these later products reached the site.

B.6.21 The pottery will contribute to questions of site status and function. As mentioned above, the site in in the hinterland of the roadside settlement at Kelvedon. A key research aim will be to determine whether the pottery is of comparative status with similar access to imports and specialist wares. Key ratios include the ratio of dishes and bowls against jars (Evans 2001) and the relative proportion of decorated samian (Willis 2005). Values will be compared with sites of various size in the region.

B.6.22 A note will be made of perforated vessels, worn surfaces, burnt sherds, graffiti and the like, which can contribute to questions of vessel use. For example, which forms were used as cooking pots? Do wear patterns within samian vessels conform to established patterns (Biddulph 2008)?

B.6.23 The assemblage has good potential to reveal patterns of deposition. Quantities and the typological composition of the pottery by feature type and phase will be examined. Comparison across the site of mean sherd weights and measures derived from rim percentage data may provide insight into the function of features, identify core and peripheral areas of activity, and point to different modes of deposition and waste disposal. Values within features will also be compared to potentially separate groups associated with primary or secondary use and further inform understanding of pottery deposition. Complete or near compete vessels identified after refitting will also be noted.

Context	Cut	Period	Group	Feature Number	Count	Weight (g)	Description	Spot date
1009	1007	3.1	0	1007	12	281	(STOR) coarse storage jar, (GRS), (UWW) oxf? (GRS)	MC1-LC4
1013	1012	3.1	0	1007	32	170	(GRS) jar, (RED) fine and sandy (GROG) residual	M-LC1
1017	1016	3.1	0	1007	2	19	fine (RED), (GRS)	MC1-LC4
1019	1018	3.1	0	1010	48	815	(STOR) large body sherd, (GRS) various straight sided dishes with plain/ thickened and pointed bead rims, (UWW), Jar Going G23	MC2-MC3
1022	1022	3.2	0	1022	1	3	(GRF)	MC1-LC4
1025	1024	3.1	0	1010	86	843	(COLC) body sherds, (ASALA) body sherd, (GRS) plain rim with groove definitely outside, (GRS), (UWW), (RED) body sherds, SAM bead rim and dish side, small (GRS) globular beaker with lattice dec with tiny bead rim, (CGSW) Drag 33? (GRS) flat rim bowl (Going C16), (GRF) poppyhead, (ASALA), (GROG), (GRS)	2C
1028	1028	3.1	0	1028	13	113	(MWSRS), (GRS) incl jar G23	EC2-LC4
1036	1035	3.1	0	1010	83	1007	(GRS) straight sided bowl/ dishes with bead rims x 3 also one chamfered base. (COLC) body sherd, lots of greyware body sherds, 2 sandy (GRSW) jars.	MC2-MC3
1038	1037	3.1	0	1007	1	14	(RED)	MC1-LC4
1040	1039	3.1	0	1010	126	1536	Samian with stamp on base (internal) 'DOV.I M' ? (EGSW or COLSW)? SF10 Dense limestone incusions and some mica and black flecks, most of this context is an everted rim cooking pot with acute lattice dec (BB2) 2C, (CGSW) dish with worn/ indecipherable stamp exterior base. Drag 18/31 also 2 or 3 other jars (GRS), G25 jar fabric looks like E30 wheel made R20 one body sherd, <5> samp R20 jar with everted rim	E-MC2
1044	1043	3.1	0	1010	17	297	(COLC) small beaker bead rim with rough cast dec, (CGSW) 18/31 dish, plain (GRS) rim, (GRS) chamfered base prob dish/bowl no rim, (CGSW) 18/31? Body sherd, R(GRS) base of chamfered dish bowl and fired clay	2C
1048	1047	3.1	0	1010	14	78	(GRS) Straight sided bowl with bead rim	MC2-MC3
1052	1051	3.1	0	1028	5	58	(GRS) sandy and moderately sandy body sherds	MC1-LC4
1054	1053	3.1	0	1053	1	14	(GRS) sandy body sherds	MC1-LC4
1056	1055	3.1	0	1028	2	8	(GRF) body sherds	MC1-LC4
1058	1057	3.1	0	1010	46	438	(GRS) straight sided bead rim bowl/ dish x3, (COLC) roughcast body sherd, (GRS) sandy jar with rebated/cup rim, (COLC) body sherd with barbotine scale dec	MC2-MC3
1060	1057	3.1	0	1010	10	231	(GRF) jar with cordon at base of neck and everted rim, fairly fine and very micaceous. (COLC) with rough cast	EC2-MC3
1066	1065	3.1	0	1010	35	193	Small jar (GRF) bead rim, (GRS) nothing dateable	MC1-LC4
1068	1067	3.1	0	1067	84	1251	Samian dish with bead rim (CGSW?), 18/31, (COLC) small bag shaped beaker M-L2C, (NVC) small funnel necked beaker, (GRS) jars with everted rim (CK type) (GRS) body sherds, (UWW) (prob Nene Valley), (GRS) plain rim bowl Going B1, (GRS) jar, (CGSW) Drag 36 dish. With stamp (not clear) half of a vessel, vine leaf dec around rim, (GRS) (RED) includes poss sandy oxidised hadham product with pie crust/ shashed rim Marney 1989, Fig 33, 11 2C, B12/B30 body sherd of carinated jar/bowlith cordon at base of neck, carinated vowl with finger imprints on carination. Pie crust frilled rim decoration on these hard sandy wares is paralleled in Marney and suggested as Hadham products	MC2-LC2
1070	1069	3.2	0	1022	16	96	(GRS) sandy and moderately sandy incl jar x2	MC1-LC4
1071	1071	3.2	0	1022	2	15	(GRF) and (GRS)	MC1-LC4

Context	Cut	Period	Group	Feature Number	Count	Weight (g)	Description	Spot date
1077	1076	3.1	0	1076	20	230	(VRW) Verulamium bow with flat rim, (HAB) curving sided dish/platter? 1C sooted interior at base. (GRS) body sherds	L1C?
1079	1078	3.2	0	1022	4	35	(COLC), (RED) jar/ flagon with frilled rim and groove on neck.	EC2-MC3
1083	1073	3.1	0	1073	14	99	(COLC), (GRS)	EC2-MC3
1086	1073	3.1	0	1073	36	634	(COLBM) Colchester mortaria body sherd (poss from mortaria in 1089) AD140-200, straight sided bead rim bowl/dish (GRS) very sandy Going B4 (140+) colander in micaceous sandy orange fabric (RED), greyware body sherds (GRS), (UWW) fine (1 small sherd)	M-L2C
1087	1073	3.1	0	1073	13	250	Carinated /chamfered base bowl with bead rim, (GRS) very micaceous	MC2-MC3
1089	1073	3.1	0	1073	607	8714	Samian. E. Gaulish, C. Gaulish (EGSW), CGSW) poss some Colchester Samian (COLSW). Very worn, slip almost completely missing on some sherds although fragments are large. Forms include Drag 31 dish/bowl whole profile, Drag 33 cup whole profile, decorated Drag 37 bowl poss hunt sscene very worn, 2 or 3 Drag 33 cups Some scorched, ?Abraded curving sided bowl. 17 of these sherds are rims, prob from 6 or 7 vessels, (GRS) (GRF) mixture of many fabrics, some very sandy fewer moderate to fine bases body sherds, (GRS) (GRF) mainly straight sided bowls/ dishes Going B1, B2, B4 bowls, G24, G25 jars, occ globular beaker, two small beakers/ miniature jars one with whole profile. BB2 copies cooking pots (wide lattice and moderately splayed rims) post AD200, BB2 fully flanged (drop flange) bowls dishes. Going says these appear in the region AD260-80. 18 rims prob 5 or 6 different vessels. At least 2 different vessels drop flange (Going B6). Mostly cooking pots, plain rimmed dishes and drop flanged dishes/ bowls. (COLC) include decorated body sherd barbotine dec but can't decipher scene), bag shaped beaker rim, also some flat and pedestal bases in this group E2C-L3C so slightly residual here (as is samian), NVC indented beaker, NVC flanged bowl, Small amount OXRC incl bag shaped beaker worn slip, (fine (RED) quite a lot incl bag shaped beaker, (RED)? (UWW) fine, (UWW) fine flagon Young W15 - AD 240-300 poss OXW, (COLBM) Colchester Mortaria with flanged hooked rim and squared bead	M-L3C
1090	1073	3.1	0	1073	25	403	6 rims, incl BB2 Going B6 bead and drop flange (GRS) bowl, jar (Going G5), Sandy (GRS) Deep straight sided bead rim dish/ bowl with pointed bead rim (Going B4) 2 smaller jars in (GRF) and (GRS)	M3C
1091	1073	3.1	0	1073	52	421	(CGSW) bead rim, (GRS) bead and flange dish/bowl, two pie crust rims one jar (RED) and one prob straight sided bowl (RED) fine, (RED) fine small bag-shaped beaker, (GRS) black straight sided bowl dish with rounded bead rim. Sandy (GRS) G25 jar. (COLC) body sherd. Sandy (GRS) staright sided dish/bowl with groove defining outer rim.	MC3-LC4
1096	1094	3.1	Cremation 1094	1094	19	225	(GROG) with rilled surface, base pedestal. No rim. Sample <10> from cremation burial	1C
1098	1097	3.2	0	1022	1	14	(GRS)	MC1-LC4
1102	1101	3.1	Pit/Posthole Group 1099	1101	1	3	(NVC) body sherd with roulette	EC2-LC4
1118	1118	3.1	0	1076	2	10	(GRS)	MC1-LC4
1123	1122	3.1	Pit/Posthole Group 1099	1122	1	12	(GRS)	MC1-LC4
1127	1126	3.1	Pit/Posthole Group 1099	1126	1	2	(CGSW)	2C

Context	Cut	Period	Group	Feature Number	Count	Weight (g)	Description	Spot date
1139	1138	3.1	0	1067	34	456	(COLC), small beaker/hunt cup with barbotine dec, a very sandy oxidised bowl with flat multiple beaded rim (Going C16) reminiscent of a verulamium fabric but orange brown (RED) This form is E-M2C (residual?), G24 jar (GRS), (NVC) lid, Castor box?	M2C-M3C
1139	1138	3.1	0	1067	116	818	(CGSW) conical cup/bowl Drag 33, (COLC) bag shaped beaker rim and body sherd with barbotine dec incl bird and scales? (GRS) (GRF) incl 1 x jar with everted rim, (GRS) straight sided bowl with pointed bead rim and chamfered base x2., (GRS) curving sided bowl with bead rim	M-L2C
1141	1140	3.2	0	1140	8	30	(GRF) (COLC)	EC2-MC3
1147	1146	3.1	Pit/Posthole Group 1099	1146	1	3	Sandy (GRS)	MC1-LC4
1149	1149	3.2	0	1140	5	38	(GRS)	MC1-LC4
1150	1149	3.2	0	1140	1	43	(GRS) flat base	MC1-LC4
1155	1153	3.1	0	1153	5	35	(GRS) (COLC)?	EC2-MC3
1159	1158	3.2	0	1140	1	4	(GRF)	MC1-LC4
1165	1164	3.1	0	1076	37	221	(COLC) body sherd, (GRS) (RED), (BB2), almost all body sherds except 2/3 (GRS) jar rims everted	EC2-MC3
1166	1164	3.1	0	1076	34	281	(CGSW)/ (EGSW) base (COLC) very worn, (NVC) body sherd (GRS) 2x Cooking pot rims, (GRS) Going G24, (CGSW) small lid seated rim (Drag 46/Curle 15) very worn	MC2-MC3
1168	1167	3.1	Pit/Posthole Group 1099	1167	1	4	(GRS)	MC1-LC4
1174	1171	3.1	0	1171	1	54	LIA-ER (GROG)	LIA-ER
1189	1188	3.1	0	1169	19	122	(GRS) jar (Going G24), (GRF)	EC2-LC4
1196	1194	3.1	0	1180	12	90	bead rim bowl/ dish straight sides x2, (GRS), (RED) fine, (GRF)	MC2-MC3
1196	1194	3.1	0	1180	53	448	(BSW) poss Hadham black surf ware? (if so L2-E4C) (BSW) dark surf carinated bowl with vertical burnished line dec pointed bead rim Going C13? L1-2C, H2 (GSW) 1C, (COLBM) colc mortria (L1-2C?) Flagon/ jug handle with diagonal line dec, fine handle (GRF), fairly fine bead rim bowls, verulamium grey? Prob L1C? (EGSW)	L1-2C?
1198	1073	3.1	0	1073	68	912	Going H6 poppy Head beaker rim, M-L2C (COLC), (COLBM), (CGSW), (EGSW), (GRS) flagon rim some sherds scorched verulamium or grey verulamium? Poss L1C? (GRS) JB with plain rim straight sides, (Going B1) (GRS) globular beaker? 1C? with decoration in mid band, lines of diagonal incised dots	M-LC2
1201	1199	3.1	0	1199	5	143	(GRS)	MC1-LC4
1204	1202	3.1	0	1202	14	930	mostly a large storage jar in (GROG) with flat base handmade, oxidised with grey core. (GRS) two body sherds	LC1
1207	1205	3.1	0	1202	2	32	(GRS), incl jar everted rim	MC1-LC4
1209	1208	3.1	0	1199	3	25	(GRS), (COLC) dec body sherd roulette	EC2-MC3
1213	1212	3.1	0	1199	2	30	(GRS)	MC1-LC4
1231	1230	3.1	0	1199	7	50	(UWW), (RED), (GRS)	MC1-LC4
1233	1232	3.1	0	1010	24	142	(EGSW)? (COLC), Bag shaped beakers x2, (GRS) bead rim dish/bowl,	MC2-MC3
1235	1234	3.1	0	1010	2	14	(GRS) straight sided bowl with bead rim	MC2-MC3
1238	1237	3.1	0	1010	3	18	(GRS), (COLC) worn body sherd	MC2-MC3

Context	Cut	Period	Group	Feature Number	Count	Weight (g)	Description	Spot date
1242	1241	3.1	0	1010	3	41	(GROG), (GRS) groggy Savernake type (GROGC) but a local version	L1C
1242	1241	3.1	0	1010	3	20	(BSW), (GRS)	MC1-LC4
1243	1241	3.1	0	1010	47	350	(COLC) body sherds, (RED) jar everted rim, (GRS) plain rim dish	EC2-MC3
1246	1244	3.1	0	1010	14	265	(ASALA) body sherds, Drag 33 samian cup/dish (CGSW),(UWW) fine, (GRS) <27> samp	E-M2C
1248	1247	3.1	0	1228	1	4	(GRF)	MC1-LC4
1250	1249	3.2	0	1022	2	8	(GRS)	MC1-LC4
1259	1258	3.1	0	1251	2	6	(GRS)	MC1-LC4
1263	1262	3.1	0	1262	19	332	large storage jar with rolled rim very similar to one in context 1009 (STOR), (UWW)	MC1-LC4
1267	1266	3.1	0	1266	38	1433	(GRS) cooking pot/ jar with acute lattice dec, (CGSW) burnt, poss (COLC), (GRS) small body sherd. (ASALA), handle and rim S Spanish Amph. With cylindrical handle and flat topped sharply angled rim.	EC2-LC2
1272	1271	3.1	0	1266	11	53	(GRF) indented beaker, (RED) fine	L2-3C
1277	1268	3.1	0	1067	6	70	(RED)/ (UWW)	MC1-LC4
1278	1270	3.1	0	1053	1	7	(UWW), (RED), (GRS)	MC1-LC4
1280	1279	3.1	0	1228	8	345	(GRS) jars, (GRS) very large storage jar with rolled rim, (GRF)/ (LESTA) Essex/ London ware stamped with concentric circles and lines of horizontal dashes. Made at Hadham.	2C
1282	1281	3.1	0	1281	78	2817	(GRS) one large jar very sandy flat base Going G25 possibly complete (or almost)	EC2-LC4
1288	1287	3.2	0	1022	2	38	White ware mortaria body sherds (UWW), source not known, poss Nene Valley	
1295	1294	3.1	0	1294	69	906	SGSW (montans) pale fabric dull brownish red slip, bead rim 18/31 or R, (GRS) platter Going A1 (AD 40-70), dark surfaced Sandy small jar, Whiteware flagon (no rim with large ribbed handle (poss or Nene Valley fabric)	M-L1C
1301	1300	3.1	0	1007	4	47	(GRS) jar with everted rim cooking pot type colc (BB2)? (GRF) bowl straight sides bead rim	MC2-MC3
1305	1304	3.1	0	1007	1	7	(GRS)	MC1-LC4
1307	1306	3.1	0	1306	1	20	(GRS)	MC1-LC4
1313	1312	3.1	0	1028	15	324	(NVCM), Nene Valley mortaria/ Nene valley ware pinkish? (GRS), (ASALA)	MC2-MC3
1335	1334	3.1	0	1028	7	98	(NVC) Nene Valley, (GRS) pedestal base and body sherds.	M2C+
1337	1336	3.1	0	1010	8	170	(STOR) large bead rim jar, (GRS), (GRF) bead rim bowl with slightly curving sides poss 2-3C	MC1-LC4
1341	1340	3.1	0	1340	7	106	(GROG) body sherds and flat base sherd	1CBC to 1CAD
1353	1352	3.1	0	1251	2	7	(GRS)	MC1-LC4
1355	1354	3.1	0	1251	9	126	(GRS), (RED), incl large sand storange jar with bead rim ER?	MC1-LC4
1356	1354	3.1	0	1251	3	34	(RED), (GRS)	MC1-LC4
1358	1357	3.1	0	1255	1	34	(GRS)	MC1-LC4
1360	1359	3.1	0	1028	7	58	(GRS), (GRF), (COLC) small bag shaped beaker	EC2-MC3
1382	1381	3.2	0	1022	1	25	(GRS) flat base	MC1-LC4
1390	1389	3.1	0	1076	1	4	(GRS)	MC1-LC4

Context	Cut	Period	Group	Feature Number	Count	Weight (g)	Description	Spot date
1395	1073	3.1	0	1073	35	1280	(COLBM) large rim of colchester Mortaria very typical M-L2C form (Going D2), c.70% of a BB2 dish wth plain rim and burnished squiggle dec on side. (GRS) straight sided bowls with bead rim (one in black fabric with zigzag/ lattice burnished, (CGSW) bead rim bowl	M-L2C
1396	1073	3.1	0	1073	20	953	body sherds (GRS) (GRF), (2 jars RGRS) (COLC) body sherds from small pedestal beaker? (No rim), (RED) sandy flagon? With frilled rim and stabbed decoration round top of rim creamware (NVW) jar? With cornice moulded rim and wavy line around neck. M-L2C? Poss similar to Perrin Fig 66 330 profile but with more eaboarate rim. (COLC), Colc (BB2)? 3 different (GRS) bead rim dishes (Going B2 and Going B4) one nearly whole (B4) plain	MC2-MC3
1398	1397	3.1	0	1067	104	1902	All a mixute of greywares (GRS) occ (GRF) mostly very sandy, occ fine (RED), (GRS) plain rim straight sided dish, Sandy (GRS) dish Going B3 (100-410) poss a C20, Beaker Bag-shaped (Going H21) with roulette zone, 130-200, (GRS) sandy lid seated jar (CJ) (Going G5) Jars G24, G25	M-L2C
1400	1399	3.1	0	1399	1	29	(RED) Sandy	MC1-LC4
1402	1401	3.1	0	1399	2	8	(GRS)	MC1-LC4
2175	2174	2	0	2148	1	24	(GRS) plain rim dish/bowl	MC1-LC4
2213	2212	2	0	2148	1	53	(GRS) jar rim	MC1-LC4
2216	2214	3.1	0	2202	1	44	(GRS) flat base	
2220	2219	2	0	2148	3	62	(GROG), (MICW) body sherds	1CBC-1CAD
3040	3039	3.1	0	3039	5	422	(RED) Sandy large heavy flat base orange sandy fab with red iron? Inclusions (flat base amph?), (GRS)	MC1-LC4

Table 17. Catalogue of Roman pottery

B.7 Ceramic building material *by Simon Timberlake*

Introduction

B.7.1 A total of 20.14kg (187 pieces) of CBM (brick and tile) was recovered from the excavation. This compares with 6.12kg of CBM recovered from the evaluation phase (Levermore in Knight 2019). The latter report on the brick and tile from the evaluation has not been amalgamated with the current one at this stage of the post-excavation programme, on account of the minor differences in the methods of recording.

B.7.2 The Roman (mostly 2nd-3rd century AD) CBM was made up entirely of *pila* tile brick, stamp decorated and plain box flue tile, half box tile, *tegula* and *imbrex* and a small amount of flat roof tile.

B.7.3 A full catalogue inventory of this CBM assemblage has been provided below in Table 18.

Methodology

B.7.4 All the CBM was identified visually using an illuminated x10 magnifying lens. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcium carbonate, such as in the mortar. Standard reference texts (e.g Brodribb's 1987 *Roman Brick and Tile,* McComish 2015 *A Guide to Ceramic Building Materials* and Hefferan 2008 *Ceramic Building Material Recording*) were employed to categorize types.

Catalogue and description of CBM

B.7.5 Of the 20,141g of brick and tile recovered, all was identifiably Roman in origin, even though much of it was fragmented, and more than 25% considerably weathered and abraded, and perhaps therefore re-deposited several. More than half of this, although broken, was unabraded and some with refitting fragments were recorded.

B.7.6 The great majority of this consisted of fragmentary *pila* brick tiles (11,305g) amongst which could be recognized fragments of the smaller *laterculus bessalis* (3885g) associated most commonly with the brick columns designed for suspended floors and hypocaust systems, the top and bottoms of which were capped by the slightly more substantial *pedalis*, just one example of which was identified (1433g). Most of these brick tiles were wire cut, with sanded bottoms (and sometimes sides) on account of sand being used as a parting agent for separation from the moulds (McComish 2015). No complete fragments were seen either of these or of the box flue tiles (*tubulus*), the latter in this case being thinner (15-20mm) and more brittle, yet recognisable still by virtue of the 7-tooth comb decoration motifs (diagonal x-cutting and wavy) applied to their exteriors and the common grey-light brown soot discolourations to the fabric (a total of 864g of these tiles were recorded). Yet another closely aligned type was the half-box tile (583g or just 3 examples) with its recognisable wide moulded cut-away flange and similar comb decoration to the exterior. These partially hollow tiles were sometimes affixed to walls to facilitate air circulation, but in this case, it seems most likely that they were also associated with a hypocaust. Just 276g of flat roof tile was identified, though it remains possible that one or two of these may instead be

fragments of particularly thin *tegulae*. *Tegula* roof tile was relatively abundant (5604g) with fragments from a minimum of 20 different tiles and at least five different types (based upon the size and shape of the flange, profile of the arris (slope/curvature), thickness and the presence or absence of finger-applied groove decoration (Brodribb 1987, 15 fig.6). No obvious examples of the tile cut-aways were noted, yet upon one of these tiles there appeared to be a rimmed or moulded nail hole (1089(13) see Brodribb 1987, 11), whilst upon others the accidental forms of rain drops and also part of an animal paw print (1139(2)) was noted - left here as impressions upon the wet clay whilst the tiles drying. As was the case with the *pilae*, the impressions of the drag-cut of the wire could also be seen upon some of the sanded bottoms of the *tegulae* tiles. Generally, the flat bases of these tiles were 30mm thick or less, though in some cases they were equivalent to the thickness of a *pila* brick. *The imbrex* roof tile (1509g recorded) was on the whole much thinner than most of the other tile types (on average 12-13mm), and for this reason this tile was often more fragmentary, and occasionally, on account of the size of the pieces, difficult to recognize. Some of the tiles possessed marginally raised rims and also indentations or grooves upon their leading (downslope) edges where the tiles slotted in above the next (lowest) course, and upon which an *antefix* ceramic ornament might also have been fitted (Brodribb 1987, 29-30). Some of the tiles had more pronounced rounded curvatures whilst others were much shallower, some also had slightly square-round profiles. A minimum of four to five different types (designs) were recognisable, all or most of them narrower at the top end than the bottom.

B.7.7 Larger amounts of the various different sorts of tile and brick were recovered from the following contexts. Box flue tile: 1025, 458g; 1056, 289g; 1089, 210g. Pila: 1089, 3732g; 1219, 1433g; 1068, 1054g. Tegula: 1219, 1829g; 1089, 1630g. Imbrex, 1089; 666g. Whilst contexts such as 1089 and 1219 appear to be associated with moderately large amounts of generic tile and brick, suggesting the presence of buildings nearby, there may be other distinctions to be made, for instance a slightly larger amount of box flue tile from context 1025.

B.7.8 Seven different brick fabrics (RE1-RE7) were identified within this assemblage – all of them pink-red-orange-brown earthenware fabric types, some of them made of refined clay with few if any inclusions (RE7), some of them more sandy types (RE2-3), and others more lumpy clays with flint, grit and grog pellet inclusions (RE4). A full description of these fabrics is provided at the bottom of Table 18.

Assessment

B.7.9 A much better understanding of the full significance of this assemblage may be achieved through plotting the exact distribution of the various elements (e.g. roof tile and hypocaust brick) across the site. The survival of some of this as broken-up but otherwise fairly unabraded tile suggests that it comes from the primary fills of features, therefore contemporary with ditches and pits associated with former Roman settlement structures such as wooden buildings possessing traditional forms of Roman clay tile roofs and perhaps also a bathhouse or villa rooms with an underfloor/wall hypocaust system in place.

B.7.10 However, with the 2nd-3rd century AD waterhole (**1073**) within Area A containing some of the largest amounts of CBM in one of its fills (1089) could be acting as a sink or dump for building material and other waste cleared from the area surrounding it. In some respects, also this appears to be at the centre of the enclosed area of activity within this part of the Roman settlement.

B.7.11 Nevertheless, the presence here of a wide variety of (broken) tile and brick does imply that the probable location of these structures lies just a short distance away from the sampled features. Buildings associated with rural Romano-British vernacular settlements (or sometimes even with housing in a semi-urban context such as at Great Chesterford, Essex (see Brinson 1963, cited in Perring 1999, 98)) were more often than not timber-framed buildings with tiled roofs and elements of a hypocaust system that sometimes include brick and tile (*pila* column) suspended floors and box tile constructed internal walls. Externally such buildings would have had wall panels composed of wattle and daub coated with daub render, plaster, then whitewashed and painted.

Statement of potential

B.7.12 For a site with so few traces of significant building structures the brick and tile assemblage is both large and varied, despite its rather fragmented condition. The evidence suggests that we are looking at a group of moderately high-status buildings somewhere in the near vicinity. A re-examination of the archaeology in this light may yet reveal other clues, as is already suggested by the house finds and artefacts recovered from the main Romano-British settlement (Rodwell 1988). There is potential therefore in the analysis of the finds, if not in their distribution across the site, to be able to suggest some of the buildings represented and where these might have been placed. Depending upon the scale of the redeposition, clearance and subsequent truncation of the Iron Age and Roman levels this may or may not be possible, yet some useful parallels may still be drawn with other similar-sized settlements within this same area of Essex/ East Anglia, some of them with very similar levels of industry and with similar origins.

Recommendations

B.7.13 Prior to the preparation of the final excavation report/site publication the assemblage (including the material from the evaluation) should be re-examined briefly in order to revise/check on the catalogue descriptions and compare with other similar assemblages of brick and tile. An accurate GIS distribution plot of the CBM finds would be much more useful in interpreting their significance, alongside a coded representation of frequency.

Context	Nos	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
1019	1	55x40x40	62	RE3	grog	*pila*	Roman 3.1	small relatively undiagnostic frag with sand parting layer on base NB this has been re-used within a high temp furnace (iron smelting?) and facing sand layer has part-vitrified and slagged SEE Iron Slag

Context	Nos	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
1025 (1)	2	60x35x25	66	RE6		*pila*	Roman 3.1	burnt pila brick tile (re-fired in reducing environment)
1025 (2)	3	100x80x20(refit) + 65x65x20 (same tile)	378	RE1		box flue tile	Roman 3.1	three pieces (all associated) from one face of a broken sooted *tubulus* tile with characteristic 7-toothed (45mm wide) comb tooth x-diagonal design *
1025 (3)	2	50x62x11	62	RE5		half box tile?	3.1	plain extern – sooted – uncertain id
1025 (4)	1	35x30x17	18	RE5		box flue tile?	3.1	v small frag with external deep linear comb decoration
1036 (1)	3	40-50	22	RE7		*tegula*?	Roman 3.1	small splintery fragments from base?
1036 (2)	3	50x30x40(thick) +35+50	101	RE1		*pila*	Roman 3.1	v weathered fragments
1036 (3)	2	80x50x30 + 70x30x40(thick)	151	RE1(69) RE4(83)		*pila*	Roman 3.1	small fragments
1040	1	90x100x18	232	RE1	flint	half box tile	Roman 3.1	half box tile with 80mm+ cut-away in flange, sanded surface interior + comb decorated exterior (concentric + linear)
1044 (1)	2	65x40x40(thick)	139	RE4		*pila*	Roman 3.1	undiagnostic frags with sand parting surface underneath
1044 (2)	2	35x35x40(thick)	70	RE1		*pila*	Roman 3.1	weathered pieces
1044 (3)	1	65x65x42(thick0	174	RE4?		*pila*	Roman 3.1	a re-fired (burnt) frag thick brick with a ridged top – *pedalis*? With mortar
1044 (4)	1	60x50x18	73	RE1		*tegula*	3.1	part of flat base of tile?
1052 (1)	1	70x35x26	51	RE1		*pila*	Roman 3.1	small fragment (no x-section)
1052 (2)	1	70x30x20	72	RE6		box flue tile?	Roman 3.1	plain surface
1056 (1)	2	90x80x15 +100x50x15	289	RE1		half box tile	Roman 3.1	with trace of cut-away on flange plus overlapped wavy comb decoration ext*
1056 (2)	2	35x23x35	43	RE1		*pila*	3.1	weathered frags
1068 (1)	4	40x45x18 + 30x40x15 +40x25x16+ 30x25x18	110	RE6		box flue tile?	Roman 3.1	small fragments from prob same brick. Sooted and with traces of adhering mortar
1068 (2)	2	90x60x21 +45x50x18	251	RE1		*tegula*	Roman 3.1	flat basal fragments – possibly from same tile. Includes concentric finger décor + groove at base of missing flange
1068 (3)	4	170x90x30 + 60x50x40 + 70x60x35	946	RE1(582) RE3(346)	BF	*pila*	Roman 3.1	minimum 2 tile bricks – *laterculus bessales*? – thicker one has square corner
1068 (4)	1	70x55x35	108	RE1		*pila*	3.1	undiagnostic weathered frag with trace of mortar underneath
1070	1	55x40x30	57	RE4		*pila*	3.2	v weathered piece – redeposited?
1077 (1)	3	110x60x37 +30-40 115x70x35 (refit)	664	RE7(338) RE4(326)		*pila*	Roman 3.1	broken-up and probably burnt *laterculus bessalis* brick (1) and v weathered piece *pila*
1077 (2)	4	100x90x10 (refit) +30+40	168	RE1		*imbrex*	Roman 3.1	large refit piece of fresh broken tile with leading indented edge (and raised rim)

Context	Nos	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
								+ small weathered pieces of second tile
1086	2	40+45	18	RE3	grog	*pila*?	Roman 3.1	two small fairly undiagnost frags – waterworn from waterhole [1073]
1089 (1)	1	140x60x18	210	RE1	sand	box flue tile (*tubuli*)	Roman 3.1	with a weathered/waterworn surface. The edge of rectangular face has parallel and diagonal comb dec as keying. Sooted. Found within watering hole [1073] *
1089 (2)	2	105x130(wide)x13 (thick) refitting	252	RE7		*imbrex*	Roman 3.1	re-fitting piece from a gently rounded section – with sand parting upon underneath surface
1089 (3)	1	80x100(wide)x17(thick	173	RE7		*imbrex*	Roman 3.1	with finger-pressed moulded end forming a slight raised lip (Brodribb 1987,23) *
1089 (4)	1	90x110(wide)x20(thick	241	RE2	sand grit	*imbrex*	3.1	slightly shallower convex tile (weathrd
1089 (5)	1	120x100x27(thick)	495	RE1	sand grit	*tegula*	3.1	broken section: square profiled flange (50mm total height) with slight rounding to inner arris and with finger groove along base*
1089 (6)	3	90x105x15 + 70x80x21 + 70x70x18	405	RE1(195) RE3(210)	flint + quartz	*tegula*	3.1	small fragments from flat bases of minimum 2 tiles. One has finger dec concentric groove on upper surface
1089 (7)	2	100x60x30 (thick)	403	RE1	sand grit	*pila*	3.1	prob frags of pila brick tiles (*laterculus*) but could be thick bases of *tegulae* instead. One with a wire-cut face
1089 (8)	12	100x80x35 (thick)	960	RE4	quartz/ flint grit + grog	*pila*	3.1	fragments of rough-faced pila brick tiles, burnt and broken up. With sand parting on basal surface -*laterculus*?
1089 (9)	1	120x100x40	592	RE4		*pila*	3.1	a more highly fired example – prob *laterculus* (only thickness known).
1089 (10)	1	50x65(wide)x20(thick)	122	RE5		*tegula*	3.1	square profiled flange (42mm high + 22mm wide) fragment with sloping concave arris similar to Brodribb *ibid.*15 fig 6.4 *
1089 (11)	5	85x55x16 + 80x60x20 +40x70x20 + 60x45x18 + 55x65x26	462	RE1(237) RE3(60) RE4(164)	sand + quartz grit	*tegula*	3.1	small fragments of flat bases without flange but with (some) finger groove. One with concentric deco. MNI 3 tile
1089 (12)	25	75x70x35 + 60x65x42 + 40-80	1777	RE1(740) RE4(847) RE5(184)	flint + grit	*pila*	3.1	broken-up pieces of MNI 3 tile bricks – prob laterculus ranging from 35-42mm. One (RE1) has rounded corners.
1089 (13)	1	130x55x18	146	RE1	sand	*tegula*	3.1	waterworn frag of base with drag-wire cut marks and sand underneath and unusually large hole top (est.30mm with lip to 20 mm at base) perhaps asasas nail hole/ ventilation (Brodribb ibid.11)*
1091	1	70x65x20	88	RE4		*pila* ?	3.1	burnt fragment – non-diagnostic
1118	1	35	5	RE1		*tegula*?	3.1	v small frag – non-diagnost

Context	Nos	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
1139 (1)	4	90x50x30 +35-40	181	RE4	chalk + grog	*pila* ?	3.1	frags from a crudely-moulded pila tile brick – v highly fired (waster)
1139 (2)	3	115x75x25 +25+35	249	RE1	sand + grit	*tegula*	3.1	frags of base NB poss part of animal paw print on base
1149	8	16-30	25	RE2		*pila*?	3.2	small frags of x1– redeposited?
1155	2	100x90x15	122	RE3	sand+grit	*imbrex*	3.1	v shallow convex (square-round) with indent groove along leading narrow edge
1161	1	35x30x10	18	RE1		flat roof tile?	Roman?	non-diagnostic
1165	6	25-40	38	RE1		*pila*	3.1	broken-up and burnt frags-non-diagnostic
1166	8	35x40x40(thick) + 75x60x38 + 90-30	823	RE1(581) RE4(241)		*pila*	3.1	broken-up and burnt frags NB tile brick pieces of fabric *RE1 are strongly burnt and may have been used in salt production (i.e.assoc with briquetage)*
1173	1	70x30x22	55	RE1		*tegula*?	3.1	undiagnostic frag
1179	1	140x115x30-35	683	RE1?	flint	*tegula*?	3.1	prob a v thick tegula tile (base) given type of underside and slight concavity
1196 (1)	3	45x90x13+55x20x13 + 60x50x12	146	RE7(108) RE2(37)		*imbrex*	3.1	2 tiles – both with sand parting.The RE7 is prob a round-square profile
1196 (2)	2	145x60x40 +65x40x33	738	RE1	flint peb	*pila*	3.1	fragments prob from 1 tile
1196 (3)	3	50x40x25 + 30+40	49	RE1(40) RE2(9)		*pila?*	3.1	weathered pieces
1198 (1)	1	60x85x12	63	RE1	flint	*imbrex*	3.1	weathered
1198 (2)	2	55x40x32	71	RE3	quartz+grog	*pila*	3.1	undiagnost frag -reduce fired in middle
1219 (1)	1	235x190x28 (refit)	1580	RE2	flint + grit	*tegula*	3.1	large re-fitting mass of one side of a tile with square profile flange (45mm high + 30mm wide) similar to type Brodribb ibid,p14 Fig5/3 with straight to v slight concave arris. Flange finger groove + one concentric line décor + raindrop imprints on wet clay *
1219 (2)	2	170x130x40 (refit)	1433	RE3	flint + grit	*pedalis*	3.1	approx. 75% of what may be a *bessalis* but prob a *pedalis* pila brick instead. Has sand parting on basal surface and one side, plus trace of mortar attachment underneath *
1219 (3)	2	85x70x26 + 60x50x26	249	RE1		*tegula*?	3.1	prob small weathrd frags of a flat base
1233	1	80x45x16	51	RE7		*imbrex*	3.1	weathered and waterworn piece – shallow rounded
1238	1	40x40x12	18	RE4		*imbrex*?	3.1	v small piece – not v diagnostic
1242	1	115x95x30	478	RE1		*pila*	3.1	slightly burnt (and cracked) pila tile *bessalis* type with part faint double concentric dec on top (finger groove) and rough sand surface beneath

Context	Nos	Dimension (mm)	Weight (g)	Fabric	Inclusions	Identity/ use	Period	Notes
1243	2	55 + 60	36	RE1(17) RE4(19)		*tegula*?	3.1	small fragments
1277	1	70x50x11	43	RE7		*imbrex*	3.1	small piece shallow convex (unwthrd)
1291	3	103x92x13(refit) + 70	232	RE5		flat roof tile?	3.1	all part 1 tile – sanded surface on top*
1313	3	60x55x25 +45-55	102	RE1		*pila* ?	3.1	v weathered + waterworn – incomplete sections
1341	8	20-50	59	RE1		*tegula* ?	3.1	v waterworn undiagnostic frags
1358 (1)	3	40-35	44	RE2		*pila?*	3.1	coarse, burnt and now soft fabrics
1358 (2)	1	50x45x11	26	RE1		flat roof tile?	3.1	small fragment with broken away square nail hole (9x9mm) *
1395	1	65x50x20	81	RE1		*tegula* ?	3.1	small weathered frag
1396	1	55x30x40	59	RE3		*pila*	3.1	weathered frag of tile brick from waterhole
1398 (1)	2	55x55x13 + 75x100x20	232	RE7(44) RE2(188)	sand + grit (RE2)	*imbrex*	3.1	fine and coarse fabric imbrices (shallow convex)
1398 (2)	1	50x50x20	76	RE1		box flue tile?	3.1	undecorated corner - with adhering charcoal, ash + mortar. Might be tegula?
1398 (3)	6	50x45x30 + 30x30x30 + 55-35	178	RE1(118) RE4(59)		*pila*	3.1	small fragments from MNI 2 bricks
2175	2	85x80x22	331	RE1	sand	*tegula*	Roman 2nd-4th	flat base frags from 1 tile recovered M-LIA (Phase 2) ditch (redeposited)
2213	1	120x110x20	300	RE1	sand	flat bottom of *tegula*	Roman 2nd-4th ?	faint parallel lines on top are not combing dec but instead may be press marks from the use of board within mould?
3040	3	100x75x40 + 115+40	571	RE1		*pila*	3.1	corner of x1 *bessalis* – wire cut with sharp corner +sanded base/sides

Table 18. Catalogue and inventory of tile and brick (CBM)

Fabric types
RE1 = orange-red earthenware clay with rare inclusions of sand/grit and voids and with medium sandy (parting) surface underneath
RE2 = darker orange-brown very sandy fabric with sand, white quartz grit and flint inclusions
RE3 = orange-red slight sandy and coarser fabric with occ quartz grit and flint and grey grog (<10mm)
RE4 = similar to RE1+RE3 but much coarser lumpy clay fabric with some quartz and flint and grog + chalk and occasionally reduced interior
RE5 = an orange-brown brick-like fabric with v small voids and small grog particles
RE6 = strongly gritty grey-brown fabric
RE7 = orange-red refined earthenware clay (similar to RE1) but without inclusions except for v minor mica

B.8 Fired Clay *by Simon Timberlake*

Introduction

B.8.1 A total of 3.38kg (124 pieces) of fired clay was recovered from the evaluation and excavation of the site. The material from the evaluation (261g; previously reported on by Levermore in Knight 2019) has been re-recorded as part of his assessment and the

entire assemblage is considered here. The fired clay assemblage is composed of (generic) daub, briquetage and associated or other moulded clay objects.

Methodology

B.8.2 All of the fired clay was identified visually using an illuminated x10 magnifying lens. This was examined in detail for its form and fabric type. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of carbonate.

Catalogue of fired clay and worked clay (including briquetage)

B.8.3 The recorded total of 3383g of fired clay was found to be made up of 2803g (84 pieces) of probable briquetage, 499g (35 pieces) of undefined daub and 81g (five pieces) of probable loomweight. All of the briquetage, which included vessel fragments, supports and hearth clay, was Roman in date, or at least was recovered from Roman contexts/features. Likewise, the majority of the daub was Roman (238g), although some 140g was probably Iron Age (Period 2) in date, and another 121g of it was Neolithic-Bronze Age (Period 1). The largest single amount of briquetage (690g) was recorded from context 1058 (Period 3.1 Ditch **1010**, intervention **1057**), with other substantial assemblages coming from other Period 3.1 boundary/enclosure ditches in Area A.

B.8.4 All of the small 'daub' pieces examined were undiagnostic, except perhaps for a couple of pieces (from contexts 1044 and 1243) which had smooth flat surfaces and were probably examples of wall plaster. The briquetage, however, was more varied, and represented by at least 12 fabrics, some of them distinctive in being quite silty with a fair amount of organic as well as sand, grit, grog and flint inclusions and in some cases strongly fire-reddened and salt-bleached. Rather confusingly, some of these fabrics also appear to be present amongst the non-briquetage material. The better identification of these fabric types remains an issue which will need resolving.

B.8.5 Although much of this briquetage was very fragmentary and poorly diagnostic as regards the recognition of items such as supports, containers and other hearth related objects, a provisional inventory of this was attempted based upon the comparison of these items with other generic forms identified from some of the Essex Red Hill Late Iron Age to Roman saltern sites. The Kelvedon assemblage included fragments of a moulded square brick support (188g), some finger-pressed moulded clay (as attachments?) (164g), a round (70mm diameter) dome-ended pedestal support (190g), a wedge-shaped (pan?) support (200g), a pyramidal pedestal (60g), a possible triangular-shaped fire-bar (345g), an undefined plate or shelf (160g), parts of various brine vessel containers (318g), a small brine or salt pot made of briquetage clay with an inverted rim (10g), several fragments of possible salt moulds (one with a rim pedestal base) (155g), a fired moulded hearth base? (237g) plus fragments of what appears to be fired (but un-vitrified) hearth lining (294g). Still other fragments of briquetage were identified but were not recognisable as items (a total of 398g).

B.8.6 Similar examples to the suggested fire-bar and triangular/pyramidal supports are recorded in Sealey (1995,77) from Ardleigh, another salt-producing or processing site on the River Blackwater, whilst the discovery of salt processing briquetage at Kelvedon

is mentioned. Slightly more detail is provided in Rodwell (1988, 81-82) as regards the discovery of salt processing briquetage during the excavation of the Roman town at Kelvedon, which lies a short distance to the south-east of the present site. Rodwell describes what appear to be brine-containing vessels and pots as well as possible salt moulds, both of which resemble (to some degree) the fragments of the suggested containers described above. Clearly the current assemblage is a good deal more broken-up than that recovered from the town, although both assemblages were really very small in comparison to other salt producing/processing sites – in particular the 'Red Hill' salterns with their vast accumulations of briquetage and sleaching waste at the head of the Blackwater Estuary. This raises questions concerning the type of salt-making taking place at Kelvedon, some 10 kilometres or more upstream of the main salt-producing area.

Assessment

B.8.7 The non-metalworking fired clay assemblage from this site is small, yet is dominated, somewhat unexpectedly given its location, by the traces of another semi-industrial activity – the working of salt. However, Kelvedon and other inland Roman towns along the Essex coast (such as Colchester) may be considered as lying within the hinterland of the salt-producing area – indeed, given the size of the industrial production of salt it seems likely that important satellite urban centres such as Roman Kelvedon may have been involved in the administration and taxation of salt, if not its distribution – and perhaps also in that case its re-processing. Both Sealey (ibid.) and Fawn *et al*. (1990, 12) refer to the finding of briquetage at sites inland (Kelvedon, Maltings Lane (Witham) and Ardleigh) and discuss whether salt from the coastal production sites could have been traded in briquetage containers, and if so, whether these would require re-processing to package into smaller salt blocks (or into pots), and also whether following storage or travel, it would require drying. It seems possible therefore that the dissolving of the salt and its re-heating and crystallizing might be necessary, and to this end many of the items of briquetage furniture required for salt production would again be needed, but with an additional emphasis on the use of salt moulds and salt containers.

B.8.8 This may well be what we are witnessing within the excavated area of the current site, although the briquetage which has been recovered is clearly just the remains of a broken-up and discarded assemblage accumulating alongside domestic rubbish within the fills of these major Roman ditches. There is no reason to assume therefore that the site(s) of this salt processing work will have survived, or could be located, yet a good insight into the nature of this work may be afforded by a better understanding of the furniture and equipment.

Statement of potential

B.8.9 Given its poor preservation, an improved understanding of this assemblage may be difficult to achieve, although a renewed study of this and of comparable types of furniture (such as brine vessels, moulds and containers) from other sites holds significant potential for the better understanding of the inland salt industry and (in some small way) the role of this Roman town. The question remains as to what we are

missing, and indeed whether we are missing, the main focus of salt production in these urban outskirts, just as we seem to be within the centre of the Roman town? The further study of this briquetage holds the only potential for further work within the fired clay assemblage, the small amount of daub and fragmentary loomweight being both insignificant and relatively undiagnostic.

Further work

B.8.10 A distribution plot showing the exact location of the fired clay across the area of the evaluation and excavation will be a necessary precursor to the renewed study of this identified briquetage. Some basic chemical analysis of the briquetage using a pXRF on selected examples should provide some proof of their use for making salt (if this is still required). Items requiring illustration in advance of publication are listed (Table 19). The limited re-examination of the briquetage and literature search could involve 2-3 days work.

Context	SF no.	No frags	dimension (mm)	Wt (g)	Fabric type	Period	Artefact	Comments * = requires illustration
77 (1) (Tr 35)	11	2	30x17x17 +25x10x10	9	A	Rom 3.1	daub?	
77 (2) (Tr 35)		3	40x25x30 + 35x25x30 + 30x20x4	32	A	Rom 3.1	daub?	
140 (Tr 27)		1	70x60x45	141	C	Rom 3.1	moulded brick	part of a fired clay brick – briquetage?
1019		1	65x45x35	87	C	Rom 3.1	moulded clay	undiagnost except for fabric and evidence of round moulding of lump and kiln firing
1022		4	45x25x20 + 45x20x11	47	M	Rom 3.2	crenulated moulded clay rim	finger impressed moulded edge – possibly an affix for briq or other? *
1025 (1)		1	35x20x8	5	E	Rom 3.1	briquetage vessel?	small fragment of?
1025 (2)		1	35x30x20	18	A	Rom 3.1	daub?	
1031		6	50x30x20 + 40x25x20 + 40x25x25 + 30-45	121	K	Neo-BA	daub	small blocky weathered frags with some flat smoothed surfaces
1036 (1)		1	95x70x45	190	D	Rom 3.1	round pedestal	half of a crudely-made but well defined inverted mushroom shaped pedestal? With a roundish convex base. Salt production? Briq *
1036 (2)		1	45x20x20	17	A	Rom 3.1	daub	
1040		2	35-25	8	A	Rom 3.1	daub	similar to (1243)
1044 (1)		1	40x25x15	10	A	Rom 3.1	daub?	
1044 (2)		1	30x25x10	5	A	Rom 3.1	daub wall plaster?	
1044 (3)		2	30x30x25 + 60x35x15	40	A(15) D(26)	Rom 3.1	daub?	
1048		1	50x30x22	27	L	Rom 3.1	daub?	
1058 (1)		1	60x70x35-20	84	B	Rom 3.1	fired clay support/ receptacle	undefined: round-moulded exterior smooth concave surface c.35mm+ intern. Briq *

Context	SF no.	No frags	dimension (mm)	Wt (g)	Fabric type	Period	Artefact	Comments * = requires illustration
1058 (2)		2	85x65x55 (refitting)	200	G	Rom 3.1	wedge type support	uncertain – but appears this may have been part of a broken wedge support assoc with salt prod. Briq *
1058 (3)		2	80x90x40	237	H	Rom 3.1	hearth support	heavily sooted and burnt upon its flat surface – may have been associated with raised hearth. Briq
1058 (4)		5	70x50x15 + 40x30x20 + 35	75	G	Rom 3.1	briquetage	undefined fragments – burnt, sooted + cracked
1058 (5)		7	40x50x20 +35x30x20+30-40	69	A	Rom 3.1	briquetage	undefined
1058 (6)		1	40x45x10	15	I	Rom 3.1	fired clay	highly-fired clay - indeterminate
1058 (7)		1	32x20x15	10	G	Rom 3.1	pot vessel	Small sherd of a briquetage-type pot made of fired clay as vessel for liquid with inverted (18mm W) rim*
1068 (1)		8	25-45	57	F	Rom 3.1	briquetage?	undefined – amorphous lumps
1068 (2)		8	100x55x35 + 60x50x20 + 45x50x20 + 50x30x25 +40-25	294	F	Rom 3.1	hearth lining?	poss lining of boiling hearth – salt contamination – strongly re-fired
1068 (3)		1	40x25x10	10	F?	Rom 3.1	briquetage?	undefined
1089		1	50x50x24	35	B	Rom 3.1	clay support?	similar to 1058(1) – with salt bleach
1139 (1)		4	85x60x18 + 75x25x17 + 72x45x20 + 35x30x15 +	229	E	Rom 3.1	briquetage vessel?	part of a thick-walled well-made fired clay vessel (all associated same but not re-fitting) with salt bleaching/stain upon interior *
1139 (2)		3	35x30x16 + 30	30	F	Rom 3.1	briquetage	not-defined – with salt-reddening
1147		1	25	7	C	Rom 3.1	daub	
1166		5	40x30x20 +30	48	B(41) F(8)	Rom 3.1	briquetage?	undiagnostic
1189		1	40x25x22	20	A?	Rom 3.1	briquetage?	burnt/sooted on flat smooth face
1196 (1)		3	50x30x30 (refit)	32	F	Rom 3.1	pyramid pedestal	small narrow pedestal–strong fired*
1196 (2)		1	50x30x15	23	L	Rom 3.1	briquetage?	undefined
1233		1	60x60x10-40	108	L	Rom 3.1	rim pedestal base for container	poss a rim plinth support (fire-reddened) for a container such as a salt mould (See Rodwell p.82) *
1242		6	50x30x30 +45x30x15+20-30	51	A(20) B(25)	Rom 3.1	briquetage?	undefined finger-pressed (indented) lumps
1243		4	45x30x30+30-50	48	A	Rom 3.1	wall-surface daub	2 frags with smoothed surfaces
1246 (1)		1	95x110x60	345	G	Rom 3.1	triangular fire-bar or support	orig labelled as loomweight, it is clear same fabric as 1058(2) with trace of salt discolour. Triangular terminal evidently has been used to support (SEE Atkinson & Preston 2015 Fig 512). Briquetage? *
1246 (2)		2	50x30x35 (refit)	28	B?	Rom 3.1	pyramid pedestal	uncertain – but prob a briq support?
1246 (3)		1	40x25x15	9	E?	Rom 3.1	daub?	
1295		1	80x50x20-8 (refit)	47	A?	Rom 3.1	briq salt mould?	poss frag of crude-made container*
1398		2		49	F?	Rom 3.1	flat-base support	briq salt-bleached: 2 non refit frags of round support (c125mm diam)
2023		1	70x40x25	68	J	M-LIA 2	daub?	poss part loomweight but undiagn
2055		5	36x37x24 + 25-45	50	J	M-LIA 2	daub?	weathered undiagnostic – one is burnt/sooted on one side

Context	SF no.	No frags	dimension (mm)	Wt (g)	Fabric type	Period	Artefact	Comments * = requires illustration
2059		1	40x30x20	20	C	M-LIA 2	daub?	weathered - uncertain
2061		1	20x12x10	2	A	M-LIA 2	daub	waterworn undiagnostic
2073		4	45x32x25 + 35x30x22	68	C	M-LIA 2	loomweight?	waterworn – largest piece with trace of diagonal perforat (11mm)
2165		1	25x25x20	13	C	M-LIA 2	loomweight?	small worn poorly diagnostic
2205		2	60x30x30 +25	47	B	Rom 3.1	flat brick?	part of flat brick support? Briq
2207		6	80x45x25 + 45x43x15 +50x35x25+25-30	160	L	Rom 3.1	flat brick/ plate	carefully smooth flat moulded surface with faint trace of diagonal parallel lines. No salt bleach. Briq?*
2222		1	27x27x12	8	C	M-LIA 2	daub	waterworn undiagnostic
3040		1	50x40x25	30	C	Rom 3.1	moulded clay	crudely moulded - undiagnostic

Table 19. Catalogue of fired clay

Fabric series

A: SVT1 soft and light silty buff-pink coloured clay fabric with moderate amounts of burnt-out organic and occ minor sand, grit chalk and grog

B: CFVT1 a moderately dense hard variegated (poorly mixed) buff-light brown-pink clay fabric with which is slightly conglomeratic also, with inclusions of softish chalk (<10mm), flint grit and voids. Streaky swirl clay clay texture in places.

C: SF1 a hard dense red sandy fabric, crudely mixed, with small grit and crushed flint inclusions (<4mm)

D: SF2 similar to Fabric C but much finer and more silty groundmass with less sand and grit, but similarly dense and poorly mixed

E: FVT a lightweight but hard fine pink to grey silty fabric with v fine mica and occasional organic and small grit (<4mm) inclusions

F: SVT2 a fabric related to above but more organic, sandy and much more reddened from firing (briquetage-like)

G: CFVT2 a moderately well mixed hard silty buff-coloured to grey clay fabric with many small chalk + flint + organic inclusions

H: SG1 highly fired biscuit-like pink fabric with minor grit, sand and grog

I: S2 compact v fine grained whitish-pink fabric without inclusions

J: SFG1 a soft friable sandy silty pinkish fabric with some large inclusions incl flint

K: SG2 a very hard sandy daub with few inclusions, composed of a poorly mixed (swirled) sandy clay

L: SSTCG a hard reddish fine sandy fabric with large inclusions of rounded small pebble (<15mm), minor coarse sand and grit and fired red grog

M: SF3 a very coarse gritty hard sandy-silty fabric with strongly reduced interior

B.9 Stone *by Simon Timberlake*

Introduction

B.9.1 A total of 7.21kg (101 pieces) of stone were examined from this site. This includes 2.58kg (nine pieces) recovered from the evaluation phase (previously reported by Levermore in Knight 2019). Of this, 6.646kg (Some 90 pieces) was made up of worked

stone, mostly fragmentary Roman rotary quern, with the reminder comprising unworked burnt stones.

Methodology

B.9.2 All of the stone was identified visually using an illuminated x10 magnifying lens and compared where necessary with an archaeological worked stone reference collection. A dropper bottle containing dilute hydrochloric acid was used to confirm the presence or absence of calcite in the rock.

Catalogue and description of burnt stone

B.9.3 This rather small assemblage of burnt stone (560g (four pieces)) consisted of just three pieces of possible prehistoric utilised stone composed of cobbles of quartzite, siltstone and micaceous sandstone – all of which may have been gathered from local moraine or the river gravel terraces. All three cobbles had been lightly burnt, perhaps intended for use for cooking or boiling water. They appear to have been re-deposited within Roman features – mostly ditch fills.

B.9.4 All of the stone examined appeared to have been burnt, although the saddlequern rubber and the cobble of quartzite do appear to have been used as burnt stone, perhaps for heating water and for cooking. Both of the latter pieces are likely to be later prehistoric (Iron Age) in date, but these could well then have been redeposited within Roman features. Only the quartzite cobble saw a single use as burnt stone. A lump of burnt chalk recovered from context 1058 may have had a different origin – perhaps from a limekiln or pit used to make lime for the manufacture of mortar.

Context	Trench / Area	Nos. pieces	Weight (g)	Dimensions (mm)	Geology	Origin	Notes
140	Tr 27	1	336	90	metaquartzite	glacial	not worked
1036	Area A	1	64	60x60x8	lam siltstone	glacial	prehist?
1048	Area A	1	71	40x45x35	micac sstn		prehist?
1058	Area A	1	89	60x45x35	chalk		perhaps from a limekiln?

Table 20. Catalogue of burnt (unworked) stone

Catalogue and description of worked stone

B.9.5 A total of 6651g (97 pieces) of worked stone were identified. Most of this stone (4399g) was made up of fragmentary rotary lava quern recovered from Roman contexts, alongside a single piece of gritstone used as a whetstone (422g), and most likely Roman, and a rubber stone (1830g) made of dolerite which had been used with a saddlequern, and possibly therefore Iron Age in date (found re-deposited within a Roman ditch).

B.9.6 The saddlequern rubber stone appears to have been fashioned from a carefully selected glacial erratic cobble, whilst the piece of gritstone opportunistically picked up for use as a whetstone may have been a natural erratic also, although gritstone (Millstone Grit) was also one of the main sources of quernstone used in Roman Britain.

B.9.7 Unusually for a Roman assemblage the lava quern is almost all quite burnt and weathered, and in some case considerably broken up. To some extent this fragility in

the lithology of the basalt reflects the particular beds of the Mayen lava flow sequence quarried and used in this instance, given that other horizons from this source seem far more resistant to subsequent wear, weathering and heat source. The best preserved (and probably therefore least weathered) pieces of quern were recovered from contexts 1282, 1395 and 2209 – the first of these being one of the main contexts from which quern was recovered.

B.9.8 All identifiable pieces came from the upper stones of these large hand mill querns, the curvature of the rim pieces suggesting original diameters of between 300 and 500mm. In total, this assemblage may represent pieces from more than eight different querns. Those examples with diagnostic rims present confirm that these pieces are probably harp-dressed stones with raised kerbs typically referred to as 'Roman legionary' types. The raised kerbs on these stones represent a practical means to strengthen the rim for the purposes of attaching an iron and wooden handle – whilst keeping the weight of the quern low. An example of one of these raised kerbs can be seen in the quern stone recovered from context 1282. The raised kerbs on the querns recovered from these Roman features range from 30 to 40mm in width and in depth. In places some of the upper stones had worn to a thickness of only 15mm, although typically they would have been discarded, or else broke, when just 20-30mm thick. Fine vertical chisel marks can still be seen upon the rim of the quern fragment recovered from context 1345 – the fill of the Roman well/waterhole **1073**. Some of the associated fragments from these querns were re-fitting.

Contxt	SF no.	Eval/ Excav	Nos. piece	Wt (g)	Dimension (mm)	Identity	Wear (0-4)	Burnt (B)	Geology	Notes
86	14	Eval Tr 35	1	229	70x65x50 (thick)	rotary quern	4	B	basalt lava from Mayen	worn rim edge of upper? stone
139		Tr 27	3 (refit)	187	70x60x40 (thick)	rotary quern	4	B	basalt lava from Mayen	v worn + weathered lava quern
140	22	Tr 27	4 (refit)	1830	110x200 (original 200x200)	rubber stone	2	B	dolerite	double-sided use with large quern (bevelled)
1139		Excav Area A ditch	1	422	125x95x15	whetstone	2		gritstone (erratic)	small area of wear on concave surface - opportunistic use?
1182		Excav Area A pit	20	1107	100x90x22-42 + 2-50	rotary quern	4	B	basalt lava from Mayen	frags rim edge of U/S with raised kerb + tr harp décor (diam 500mm) *
1183		Excav Area A pit	13	228	70x30x40 (thick) + 10-35	rotary quern	4	B	basalt lava from Mayen	all small frags incl one of rim edge U/S with 30mm wide kerb and diam c.360mm
1189		Excav Area A ditch	28	468	90x50x30-20 +80x50x30-20 + 70-10	rotary quern	4	B	basalt lava from Mayen	v burnt + friable – largest pieces suggest 30mm wide kerb + diam c.300mm
1263		Excav Area A ditch	1	96	70x40x30 (thick)	rotary quern	4	B	basalt lava from Mayen	poorly preserved – prob piece of rim kerb U/S (c.300mm+?)

Contxt	SF no.	Eval/ Excav	Nos. piece	Wt (g)	Dimension (mm)	Identity	Wear (0-4)	Burnt (B)	Geology	Notes
1282		Excav Area A ditch	4 (refit)	1026	240x100x40-25	rotary quern	4	B	basalt lava from Mayen	less burnt all refit piece of U/S rim with 40mm wide kerb (diam 450mm) *
1341		Excav Area A pit	3	36	40x30x25	rotary quern	4	B	basalt lava from Mayen	burnt and v friable – non diagnostic
1395		Area A waterhole	2	145	70x55x35	rotary quern	3	B	basalt lava from Mayen	better preserved rim kerb (32mm wide) U/S with vert chisel marks on rim *
1400		Area A ditch	1	12	45x23x13	rotary quern	4	B	basalt lava from Mayen	small frag of grind surface (undiagnost)
2209		Area B ditch	2	574	135x95x30 + 35	rotary quern	4	B	basalt lava from Mayen	less burnt single piece U/S rim with 40mm wide kerb (diam 350mm)
2227		Area B ditch	1	18	32x23x18	rotary quern		B	basalt lava from Mayen	small undiagnos frag
3040		Excav Area C pit	13	273	85x60x15 (thick)+55-20	rotary quern	4	B	basalt lava from Mayen	frags from interior U/S: edge grain feed hole of c.120mm . Worn thin (15mm)

*Table 21. Catalogue and inventory of worked stone * = requires illustration*

Assessment

B.9.9 Lava querns and millstones imported from the production site at Mayen (via the port of Andernach on the Rhine) commonly crossed the North Sea in the form of stacks of blanks within the hold ballast of ships to be off-loaded at the main secondary distribution sites within the ports of London and Colchester (for Eastern England). Workshops in these Roman towns then made up the finished querns and millstones to locally preferred specifications, which would have included such variations as: the development of a raised hopper around the central eye or grain feed aperture within the upper stone (a type which Curwen (1937) described as the 'later Romano-British projecting hopper type'), the modification of completely perforated lower stones which allowed the iron spindle to pass through into an adjustable beam or wooden bench below, and the insertion of horizontal slots within the upper stone to take a wooden handle (Watts 2002, 37). However, the fashion of harp dressing the top surface of the upper stone and raising a kerb around the rim to facilitate the cutting of a 'L-shaped' hole for the spiked metal loop for a handle were all imported ideas which seemed to arrive with the first military use of imported lightweight lava quern, and thus these were commonplace (and probably traditional) models of the small querns which accompanied the military expansion and consolidation of Roman Britain.

B.9.10 The significance of the juxtaposition of some quite heavily burnt/weathered fragments of lava quern within the same feature as a (probably) earlier saddlequern-associated dolerite rubber stone is interesting. The most likely explanation for this being that the latter was redeposited, most probably linked to the earlier Middle-Late Iron Age settlement on-site.

Notes on the production and trade of quernstone from the Mayen – quarry source, Eifel Region Germany.

B.9.11 Quern production at Mayen begins in the Late Neolithic and was already considerably developed by the Late Iron Age (La Tène) period, although the height of production and trade with Britain and the Low Countries was not reached until Roman times. The latter expansion in production at Mayen followed the complete removal of the overburden of pumice ash deposits, and subsequently quarrying began on an industrial scale along a front 5000m long and up to 50m deep into the top of the less dense and more gas-rich (porous) bedded basalt lava flows, involving the total removal of at least one and a quarter million cubic metres of stone (Hörter *et al*. 1951,72). Boats laden with quern and millstone as ballast left the port of Andernach on the Rhine for London and Colchester. Quern blanks or rough-outs were prepared at the quarry site(s) themselves from the splitting and shaping of the polygonal-shaped columns of basalt detached from the cooling joints of the flows (Mangartz 2008, 66-67).

Statement of potential

B.9.12 The occurrence of lava quern but not other sorts of typically used Romano-British quern at this site is of some interest, simply on account of the absence of the latter. This is very unlikely to be an artefact of the period of occupation of this settlement, but much more a phenomenon of its proximity to Colchester which was one of the entry points on the east coast of Britain for this trade in lava quern from the port of Andernach on the Rhine. Thus, it may be significant but is very unlikely to have implications for the further study of the stone assemblage from this site.

Future work

B.9.13 Other than the illustration of the fragments indicated (in Table 21), and the preparation of an accurate site distribution plot of the stone to accompany the final report, little further work is required.

B.10 Glass *by Carole Fletcher*

Introduction and Methodology

B.10.1 Archaeological works produced a single shard of flat glass, weighing 0.003kg. The glass was scanned and catalogued, weighed and recorded. Glass that is not closely datable may be dated by association with the pottery and other material with which it was found. All dates given are those assigned to the pottery recovered from the context (see Appendix B.6, pottery catalogue). The terminology used in the report is taken from *Romano-British Glass Vessels: A Handbook* (Price and Cottam 1998). The glass is catalogued in the text below.

Factual Data

B.10.2 Archaeological works produced a very small assemblage of glass, a single shard weighing 0.003kg, recovered from ditch **1069**. The irregular shard is clear, pale blue green, with some small faults and is 3.7-3.9mm thick. The edges of the glass are chipped, although a short section is slightly rounded and may be an earlier break. Both

surfaces of the glass are slightly clouded and have a matt feel, with one surface rougher than the other. This is very probably the surface that would have been in contact with the mould.

Assessment

B.10.3 The shard was recovered alongside MC1-LC4 Roman pottery, however, the form of the glass is uncertain, either a highly abraded and weathered fragment of Roman vessel glass, possibly from a prismatic bottle, or a fragment of Roman window glass.

Statement of Potential

B.10.4 The fragmentation of the assemblage and its limited size means it has no potential to aid local, regional and national research priorities.

Recommendations for further work

B.10.5 No further work is recommended, beyond preparing a statement for publication and the catalogue acts as a full archival record.

Task list

Description	Performed by	Days
No further work is required, unless the site is published, when the information should be summarised for the publication	Author of publication	0.1

Retention, dispersal and display

B.10.6 The glass may be retained or deselected prior to archive deposition, dependent on the collection policy of the receiving museum.

B.11 Clay tobacco pipe *by Carole Fletcher*

Introduction and methodology

B.11.1 During the excavation, a single fragment of white ball clay tobacco pipe stem was recovered from a pit. Terminology used in this report is taken from Oswald's simplified general typology (Oswald 1975, 37–41), and Hind and Crummy (Crummy 1988, 47-66) and details of the find are recorded in the text.

Factual Data and assessment

B.11.2 A single fragment of undecorated clay pipe stem (0.001kg) was recovered from pit **1120**. The stem fragment is moderately abraded, clean and unburnt, with a reddish stain at one end. The stem is 37.3mm long and slightly oval, 5.0 x 5.4mm tapering to 4.7 x 5.1mm. The bore is slightly off-centre, and the mould seams are well trimmed but still obvious. The stem fragment is not closely datable.

Statement of potential

B.11.3 The assemblage has little potential to aid local, regional, and national research priorities. The pipe fragment does little, other than to indicate the consumption of tobacco on, or in the vicinity of, the site after *c*.1600.

Further work

B.11.4 This report acts as a full record, and no further work is recommended on this assemblage. If published, this report may be summarised for the publication.

Retention, dispersal and display

B.11.5 The clay tobacco pipe may be dispersed prior to archival deposition.

Task list

Description	Performed by	Days
No further work is required, unless the site is published, when the information should be summarised for the publication	Author of publication	0.1

B.12 Fuel residue *by Carole Fletcher*

Introduction and methodology

B.12.1 Fuel residue was collected by hand from ditch **1289**. The material was weighed and rapidly recorded, with basic description and weight recorded in the text.

Factual Data and assessment

B.12.2 Ditch **1289** produced an irregular fragment (0.002kg) of unburnt black bituminous coal. The coal is undiagnostic and not closely datable, although it may be contemporary with the other material that was recovered from the ditch, or it could be intrusive later material from a steam plough or threshing engine.

Statement of potential

B.12.3 The assemblage has little potential to aid the regional or local research objectives.

Recommendations for further work

B.12.4 This statement acts as a full record for the archive and no further work is required beyond summarising the information for publication.

Task list

Description	Performed by	Days
No further work is required, unless the site is published, then the information should be summarised for the publication	Author of publication	0.1

B.13 Waterlogged wood *by Hannah Pighills*

Introduction

B.13.1 A total of 12 wooden items are considered within this report, all recovered from the waterlogged deposit of a Roman waterhole (**1073**); all part of wood group 1084. It was this waterlogged deposit which created the anaerobic conditions necessary for organic preservation. The 12 items were a combination of worked, unworked, burnt and unburnt timbers.

B.13.2 This report's aim is to assess the potential of the waterlogged wood assemblage in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, dendrochronology, and conservation and retention.

Methodology

B.13.3 This report has been produced in accordance with Historic England guidelines for the treatment of waterlogged wood (Brunning 2010) and recommendations made by the Society of Museum Archaeologists (1993) for the retention of waterlogged wood.

B.13.4 Each item was recorded on site using a pro forma 'wood recording sheet', based on the sheet developed by Oxford Archaeology for the post-excavation recording of waterlogged wood. The metric data was measured with hand tools including hand tapes and rulers. The tool marks were recorded using a digital caliper. Where possible, species identification using morphological traits visible with a hand lens - oak (*Quercus* sp.) and ash (Fraxinus excelsior) - were noted.

B.13.5 The system of categorisation and interrogation developed by Taylor (2001) and the condition scale developed by the Humber Wetlands project (Van de Noort *et. al*.1995) have been adopted within this report. Joints and fixings have been recorded in accordance with the Museum of London Archaeological Site Manual (Spence 1994).

Condition of material

B.13.6 The condition scale developed by the Humber Wetlands Project (Van de Noort *et al.* 1995, table 15.1) was used throughout this report (Table 22). The condition scale is based primarily on the clarity of surface data. Each item is given a score which is dependent on the types of analyses which can be carried out, given the state of preservation. The condition score reflects the possibility of a given type of analysis but does not consider if the item is suitable for the given process.

Condition Score	Museum Conservation	Technology Analysis	Woodland Managment	Dendrochronology	Species Identification
5 Excellent	+	+	+	+	+
4 Good	-	+	+	+	+
3 Moderate	-	+ / -	+	+	+
2 Poor	-	+ / -	+ / -	+ / -	+
1 Very Poor	-	-	-	-	+ / -
0 Non-Viable	-	-	-	-	-

Table 22. Condition scale for preserved wood

B.13.7 If preservation varies within the item, the section with the highest level of preservation is considered when the item is given a condition score. Items that were set vertically in the ground often display relatively better preservation lower down and relatively poorer preservation higher up.

Results and assessment

B.13.8 The 12 items included one ash and 11 oak timbers; seven items showed signs of working, whilst five did not. Out of the seven worked items, two were stakes and three had mortise joints. See Table 23 for more detail.

B.13.9 The presence of similar items could suggest there may have been a correlation, but this could not be proven correct. It is possible they were part of a larger structure elsewhere, then after use dumped into the waterhole. Only four items (both worked and unworked) showed evidence of charring which would have been burnt before deposition. The presence of charring on just four of the items suggests they were not all correlated, as charring would be expected on more items. Similarly, if they were all associated with the presence of woodworm, evidence for this would be expected on all the items.

B.13.10 The positioning of the stakes was of interest, as these may have been in the waterhole during its use – possibly as shoring. However, this cannot be determined for certain, as there were not enough of them to suggest this.

B.13.11 There was no sign of woodworking in or near the feature in the form of woodchips, therefore it could be assumed these items were processed elsewhere before being dumped; supporting further the lack of correlation between timbers.

Wood Number	Condition	Species	Description	*In situ* orientation	Working marks	Dimensions (mm)	Timber Conversion	Charring	Other comments
1092	3	Oak	Planked stake. Large amount of tool marks suggest the extent of its working. Damaged on end opposite to the point.	Upright (pointed end down) on SE of pit	34 tool marks of similar dimensions. Range from 10x0.25 to 50x25mm	360 x 100 x 30	Tangentially faced	None	Heartwood present. Structural
1407	3	Oak	Dumped, naturally split timber. No tool marks observed.	Flat, running E-W	None	760 x 130 x 50	N/A	None	Overlayed 1411 Sapwood present

Wood Number	Condition	Species	Description	*In situ* orientation	Working marks	Dimensions (mm)	Timber Conversion	Charring	Other comments
1408	2	Oak	Plank, split both naturally and intentionally, heavy decay.	Placed on long narrow end, running N-S	22 tool marks with similar dimensions. Range from 20x40 to 40x40mm	1470 x 270 x 70	Tangentially faced	None	Overlayed 1409 Heartwood and sapwood present. Probably waste product from hewing a plank
1409	3	Oak	Naturally split bark with sapwood.	Flat	None	310 x 120 x 350	N/A	None	Overlain by 1408 Sapwood and bark present
1410	3	Oak	Piece of roundwood naturally broken off tree. No tool marks observed	Flat, running SW-NE	None	720 x 170 x 170	N/A	None	Heartwood and sapwood present
1411	3	Oak	Piece of roundwood naturally broken off tree. No tool marks observed	Flat, running SW-NE	None	143 x 160 x190	N/A	None	Overlain by 1407 Heartwood sapwood and bark present
1412	3	Oak	Plank with 2 mortises, one closed, one open – 220mm apart. Tool marks observed to shape the thin edge. Natural decay present	Flat, running SW-NE	5 tool marks. Range from 30x25 to 5x55mm Open mortise is 200x130mm. Closed mortise is 110x60mm	1060 x 170 x 55	Tangentially faced	None	Overlain by 1416 and 1417 Heartwood and sapwood present. Structural
1413	3	Ash	Piece of roundwood naturally broken off tree. No tool marks observed. Partial charring.	Flat, running E-W	None	1110 x 40 x 50	N/A	Partial charring on one surface.	Overlayed 1414. Heartwood and sapwood present
1414	3	Oak	Plank with one open mortise halfway down the piece. Both ends of piece show natural decay. Tool marks observed on flat surfaces and around mortise.	Places on long narrow edge, running NW-SE	7 tool marks observed. Ranging from 20x10 to 60x40 mm. Mortise is 540 mm long and 150mm from the edge	840 x 230 x 50	Tangentially faced	None	Overlain by 1413. Heartwood and sapwood present. Structural

Wood Number	Condition	Species	Description	*In situ* orientation	Working marks	Dimensions (mm)	Timber Conversion	Charring	Other comments
1415	3	Oak	Roundwood stake tapered to a point. Tapered end shows minimal damage. The untampered "top" shows severe natural decay. Tool marks observed and notch worked in possibly for insertion into ground. Large amount of tool marks suggest the extent of its working.	Upright (point down) in the center of feature.	25 toolmarks observed on piece most of them on the working of tapered end. Range from 40x10 to 150x30mm. Also evidence of axe getting stuck with a distinct chop mark 10x60mm. Notch is 340mm from tapered end, measures 50x20mm	630 x 90 x 90	N/A	Superficial charring on all surfaces. Damage occurred after charring	Positioning and lack of damage on worked end suggests item may have been in feature when in use.
1416	4	Oak	Multi-faceted plank, tapered to a point with 2 open mortises 180mm apart. Shows natural decay on all surfaces. Tool marks were observed.	Flat on south east of pit, running E-W	Charring has hidden the tool marks on one surface. 4 tool marks observed on uncharred surfaces, ranging from 20x10 to 50x20mm. Mortises have same dimensions, 60x100mm	150 x 100 x 50	Tangentially faced	Superficial charring on one surface.	Overlayed 1412 and 1417. Heartwood and sapwood present. Evidence of woodworm of unburnt surface, suggesting item was exposed before deposited in feature. Structural
1417	4	Oak	Beam with severe natural damage. A bore hole was started, but it appears to have hit a natural knot which caused damage and decayed away. Another knot has decayed away	Flat running E-W	Charring and damage has hidden the tool marks. No tool marks observed on bore hole.	830 x 120 x 100	Box quartered	Superficial charring on all surfaces.	Overlayed 1412. Overlain by 1416 Possibly structural. Heartwood and sapwood present

Table 23. Catalogue of waterlogged and worked wood

Retention and disposal

B.13.12 These items were disposed of on site, as requested. No further analysis is needed.

Statement of Potential

B.13.13 For a full report the photographs taken of the wood should be inspected in detail, along with the descriptions in Table 23 to see any potential of correlation missed in this report. The items were obviously oak and ash, so no further speciation would be needed.

APPENDIX C ENVIRONMENTAL ASSESSMENTS

C.1 Human skeletal remains *by Zoë Ui Choileáin*

Introduction

C.1.1 A single urned Late Iron Age or Roman cremation burial (**1094**) was identified at the site. The urn contained 227g of probable human remains, identified by size and robustness. Burnt sheep bone and bird bone were also identified within the fill (see App. C.2).

Provenance of material

C.1.2 Cremation deposit 1096 was contained within an urn dated to the Late Iron Age or Roman period and was buried in pit **1094**. The pit was 0.39m in diameter and 0.09m deep.

Methodology

C.1.3 The urned cremation deposit was excavated in spits in the laboratory. For each deposit, all material was passed through a series of stacked sieves, as recommended by McKinley (2004) and extraneous material, including grave/pyre goods were separated from the bone prior to analysis.

C.1.4 Age was assessed based entirely on general size and robustness.

Preservation of the Material

C.1.5 The feature had been truncated to an unknown degree. Preservation of the bone, specifically bone fragment size, was varied which affected the amount of information that could be gleaned from the assemblage.

C.1.6 Pit **1094** contained very little human bone identifiable to element and fragmentation was high with most bone being less than 5mm. Only skull bone and long bone fragments were identifiable, primarily this was based on size and robustness. The identifiable sheep bone within the fill was juvenile and less robust in appearance. Two tarsometatarsus from a small bird were also present but the fragments are too small to identify by taxon.

Results

C.1.7 Osteological details of the cremation deposit are summarised in Table 24.

C.1.8 The deposit contained the remains or partial remains of a single individual, either an adult or an older subadult/adult.

C.1.9 The weight of bone is very small however as the pit was truncated little can be determined as to whether this is representative of the original burial.

C.1.10 Most of the bone is white and well calcined, indicative of complete oxidation. (oxidised white). Calcined bone – where the material is uniformly oxidised white suggests that pyre temperatures were between 645-900^{0}C (Brickley and McKinley 2004, 11).

Cut	Fill	Urned / unurned	Depth (m)	Truncated	Weight (g)	No. individuals	Age
1094	1096	Urned	0.09	Yes	227	1	Adult/older subadult

Table 24. Summary of cremated material

Cut	Fill	Largest fragment (mm)	>10mm (g)	>10%	5-10mm (g)	5-10%	2-5mm (g)	2-5%	Total
1094	1096	39	57	25	113	50	57	25	227

Table 25. Fragmentation of cremated bone and weight per fraction

Statement of potential

C.1.11 The cremation pit was isolated with no other funerary activity recorded on site. It is likely that the burnt sheep bone and bird bone represent offerings on the pyre which was not uncommon in Roman cremation burials. Isolated Roman cremation burials are not uncommon throughout East Anglia and this pit adds to the growing corpus of information on Romano-British rural burial practice in the region.

Recommendations

C.1.12 The cremated bone has been fully recorded and no further work is required beyond editing the assessment report to produce a full archive report, which should also include a brief discussion of comparable burials from the local area and wider region.

C.2 Animal bone *by Zoë Uí Choileáin*

Introduction and Methodology

C.2.1 Excavations at the site uncovered a total of 592 recordable fragments of animal bone. This includes material from the evaluation previously reported on (Knight 2019), which has been reassessed as part of this assessment. Of these, 212 fragments were identifiable to taxon: bird, cattle, horse, pig and sheep/goat. The remaining material was categorised as large or medium mammal and is recorded in Table 27.

C.2.2 This assemblage is dated largely to the Roman period. Both hand-collected material and material from environmental samples have been recorded. The bulk of the assemblage is primarily from ditches and a large watering hole. A single cremation pit contained over 200 fragments of burnt sheep bone, all apparently from the same animal.

C.2.3 The method used to quantify this assemblage was a modified version of that devised by Albarella and Davis (1996). Identification of all bone was attempted but only those that could be clearly narrowed to species were used for NISP (Number of identifiable species) and MNI (minimum number of individuals) counts. Both epiphyses and shaft fragments were identified where possible. Fragmented elements are not counted multiple times which narrows down the assemblage and produces more accurate NISP and MNI results. MNI (minimum number of individuals) was calculated for all species

present. MNI estimates the smallest number of animals that could be represented by the elements recovered. Identification of the faunal remains was carried out at OA East. References to Hillson (1992), Schmid (1972) were used where needed for identification purposes.

C.2.4 The surface condition of the bone was assessed using the 0-5 scale devised by McKinley where 0 represents no erosion and 5 represents the total erosion of the surface bone (2004, 16, fig. 6).

C.2.5 For all identifiable bone butchery marks, burning and gnawing were recorded where observed. Tooth wear was recorded using Grant (1982) and fusion data is based on Silver (1970). Measurements of cattle bone was based on McKormick.

Results

C.2.6 The surface condition of the bone is variable however the main bulk represents a 2-3 on the McKinley scale (2004, 16, fig. 6), meaning that erosion is patchy but more extensive in some cases.

C.2.7 Four taxa are identifiable: cattle, horse, pig and sheep/goat. Three fragments of bird were identified but fragments were too small to attribute to taxon. Unfortunately, the small size of the assemblage does mean that any interpretation on prevalence would be greatly biased. The dominance of sheep/goat is highly biased by the presence of numerous burnt fragments probably deriving from single individuals in watering hole, **138** and cremation pit **1094**. A full summary of the number of identifiable specimens (NISP) and minimum of individuals (MNI) per taxon are presented in the tables below.

Taxon	NISP	NISP %	MNI	MNI%
Bird	3	1.42	1	20
Cattle	19	8.96	1	20
Horse	10	4.72	1	20
Pig	3	1.42	1	20
Sheep/goat	177	83.49	1	20
Total	**212**	**100**	**5**	**100**

Table 26. Number of identifiable specimens (NISP) and minimum number of individuals (MNI)

C.2.8 Fusion data is recordable from fourteen fragments. These are presented in Table 28. A mixture of fused and unfused bone is present. The unfused material almost exclusively burnt sheep bone.

C.2.9 Tooth wear data was present on four specimens and is presented in Table 29.

C.2.10 Only one example of butchery is present; heavy chop marks are recorded on a fragment of large mammal skull from ditch 1357.

C.2.11 In total 389 fragments of bone were burnt. Two hundred of these are medium mammal bone found with identifiable sheep/goat fragments in cremation pit 1094.

C.2.12 Two distal cattle metapodials from contexts 1358 and 2183 were complete enough to measure breadth. Both were below 55mm which suggests that they represent female cattle (McKormick 2007).

Statement of potential

C.2.13 Primarily, these specimens represent domestic waste. The assemblage is dominated by burnt sheep/goat bone from two main contexts. Although these significantly increase the fragment count, each only represents a single animal. Due to the small size of the assemblage few other conclusions can be reached as regards the butchery or dietary practices of this population.

Recommendations

C.2.14 The assemblage has been fully recorded. Further work should include the recording of any further faunal material obtained from the residues of bulk environmental samples. The records of the faunal assemblage will require updating when the final phasing and grouping of the site is carried out and a full archive report prepared.

Trench	Cut	Context	feature type	Taxon	Element	Erosion	count
37	32	33	Ditch	Large mammal	Long bone	2	1
35	76	77	Ditch	Medium mammal	Long bone	2	4
35	76	77	Ditch	Medium mammal	Rib	2	2
35	76	77	Ditch	Large mammal	Vertebra	3	3
35	76	77	Ditch	Cattle	Astragalus	3	1
35	85	86	Ditch	Large mammal	Metapodial	4	1
17	125	126	Ditch	Large mammal	Long bone	4	7
27	134	137	Pit	Medium mammal	Scapula	2	1
27	138	140	Pit	Sheep	Long bone	2	1
27	138	140	Pit	Sheep	Long bone	2	1
27	138	140	Pit	Sheep	Unid	2	25
27	138	140	Pit	Sheep	Phalanx	2	1
27	138	140	Pit	Sheep	Radius	2	1
27	138	140	Pit	Sheep	Femur	2	1
27	138	140	Pit	Sheep	Unid	2	100
27	138	140	Pit	Small mammal	Unid	1	1
27	138	140	Pit	Unid bird	Long bone	1	1
A	1022	1023	Ditch	Large mammal	Mandible	3	1
A	1035	1036	Ditch	Medium mammal	Rib	2	1
A	1039	1040	Ditch	Horse	Loose mand cheek tooth	3	9
A	1043	1044	Ditch	Sheep/Goat	Loose max cheek tooth	3	1
A	1057	1058	Ditch	horse	Astragalus	3	1
A	1057	1058	Ditch	Sheep/Goat	PH1	2	1
A	1057	1058	Ditch	Sheep/Goat	Metacarpus	2	1
A	1073	1089	Watering hole	Sheep/Goat	Radius	1	1
A	1073	1091	Watering hole	Medium mammal	Metapodial	2	1
B	1094	1096	Cremation Pit	Medium mammal	Indet	1	200
B	1094	1096	Cremation Pit	Medium mammal	Long bone	1	6
B	1094	1096	Cremation Pit	Sheep/Goat	Tarsal	1	3

Trench	Cut	Context	feature type	Taxon	Element	Erosion	count
B	1094	1096	Cremation Pit	bird	Tarsometatarsus	1	2
B	1232	1233	Ditch	Large mammal	Indet	2	2
B	1241	1243	Ditch	Sheep/Goat	Tibia	2	2
B	1241	1243	Ditch	Sheep/Goat		2	1
B	1241	1243	Ditch	Medium mammal	Indet	2	13
B	1241	1243	Ditch	Sheep/Goat	Tarsal	2	2
B	1241	1243	Ditch	Sheep/Goat	Astragalus	2	2
B	1241	1243	Ditch	Sheep/Goat	Humerus	1	1
B	1241	1243	Ditch	Sheep/Goat	Metacarpus	2	1
B	1241	1243	Ditch	Sheep/Goat	Femur	2	1
B	1244	1246	Ditch	Large mammal	Long bone	3	1
B	1244	1246	Ditch	Sheep/Goat	Tibia	2	3
B	1244	1246	Ditch	Large mammal	Flat/cubic bone	2	1
B	1244	1246	Ditch	Medium mammal	Indet	1	112
B	1244	1246	Ditch	Medium mammal	Long bone	1	15
B	1244	1246	Ditch	Sheep/Goat	Metapodial	1	1
B	1244	1246	Ditch	Sheep/Goat	Metapodial	1	1
B	1244	1246	Ditch	Sheep/Goat	Tarsal	1	5
B	1244	1246	Ditch	Sheep/Goat	Vertebra	1	6
B	1244	1246	Ditch	Sheep/Goat	Radius	1	3
B	1244	1246	Ditch	Sheep/Goat	Tibia	1	5
B	1244	1246	Ditch	Sheep/Goat	Femur	1	1
B	1244	1246	Ditch	Sheep/Goat	Humerus	1	3
B	1244	1246	Ditch	Sheep/Goat	Scapula	1	1
B	1244	1246	Ditch	Sheep/Goat	Loose mand cheek tooth	1	1
B	1255	1256	Ditch	Cattle	Tibia	2	1
B	1289	1291	Ditch	Large mammal	Indet	2	1
B	1316	1317	Ditch	Large mammal	Long bone	3	1
B	1328	1329	Ditch	Large mammal	Long bone	3	1
B	1357	1358	Ditch	Large mammal	Skull	2	1
B	1357	1358	Ditch	Cattle	Metapodial	2	1
B	1357	1358	Ditch	Cattle	Loose mand cheek tooth	3	1
B	2146	2147	Ditch	Cattle	Loose mand cheek tooth	2	1
B	2146	2147	Ditch	Pig	Mandible	2	1
B	2174	2175	Ditch	Cattle	Mandible	3	1
B	2174	2175	Ditch	Cattle	Loose mandibular row	3	1
B	2174	2175	Ditch	Cattle	Loose mandibular row	2	3
B	2174	2175	Ditch	Cattle	Loose mand cheek tooth	2	1
B	2174	2175	Ditch	Pig	Loose mand cheek tooth	1	2

Trench	Cut	Context	feature type	Taxon	Element	Erosion	count
B	2174	2175	Ditch	Medium mammal	Fibula	2	1
B	2182	2183	Pit	Cattle	Metatarsus	2	1
B	2182	2183	Pit	Cattle	Metapodial	2	1
B	2182	2183	Pit	Cattle	PH1	2	3
B	2182	2183	Pit	Cattle	PH2	2	1
B	2182	2183	Pit	Cattle	PH2	2	1
B	2202	2207	Pit	Large mammal	Indet	2	1
B	2208	2209	Ditch	Large mammal	Radius	3	1
B	2212	2213	Ditch	Cattle	Loose mand cheek tooth	3	1
Totals							**592**

Table 27. Catalogue of bone by context

Context	Element	Taxon	ProximalFus	DistalFus	Age Mths
1256	Tibia	Cattle	Unfused epiphysis	Absent	<42
1058	PH1	Sheep/Goat	Fused	Fused	>16
2183	PH1	Cattle	Fused	Fused	>24
2183	PH2	Cattle	Fused	Absent	>24
1243	Humerus	Sheep/Goat	Fused	Absent	>42
1246	Femur	Sheep/Goat	Unfused shaft	Absent	<30
1358	Metapodial	Cattle	Absent	Fused	>36
2183	Metatarsus	Cattle	Absent	Fused	>36
2183	Metapodial	Cattle	Absent	Fused	>36
2183	PH2	Cattle	Absent	Fused	>24
1243	Femur	Sheep/Goat	Absent	Fused	>42
1246	Metapodial	Sheep/Goat	Absent	Fused	>28
1246	Radius	Sheep/Goat	Absent	Fused	>42
1246	Tibia	Sheep/Goat	Absent	Unfused shaft	<24

Table 28. Fusion data for all taxa

Context	Element	Taxon	Side	Age in months
2147	Loose m3	Cattle	Unsided	30-31
2147	Mandible	Pig	Unsided	<17
2173	Loose mand row	Cattle	Unsided	30 +
2173	Loose mand row	Cattle	Unsided	30 +

Table 29. Tooth wear data for all species

C.3 Environmental samples by Rachel Fosberry

Introduction

C.3.1 Forty-eight samples were taken from features excavated at the site in accordance with the sampling strategy for this site which aimed to maximise the recovery of ecofacts and small artefacts from all feature types, phases and areas. Samples were taken from prehistoric and Roman deposits.

C.3.2 Samples taken during the evaluation of this site indicated that preservation of plant remains was poor with carbonised remains occurring with low density and diversity (Craven 2020).

C.3.3 The purpose of this assessment is to determine whether plant remains are present, their mode of preservation and whether they are of interpretable value with regard to domestic, agricultural and industrial activities, diet, economy and rubbish disposal.

Methodology

C.3.4 The samples were processed by tank flotation using modified Sīraf-type equipment for the recovery of preserved plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve.

C.3.5 The waterlogged samples had a portion examined whilst still wet and were then allowed to dry for subsequent assessment and quantification.

C.3.6 A magnet was dragged through each residue fraction for the recovery of magnetic residues prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds.

C.3.7 The dried flots were subsequently sorted using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 30.

C.3.8 Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers *et al*. 2006) and the authors' own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (2010) for other plants. Carbonized seeds and grains, by the process of burning and burial, become blackened and often distort and fragment leading to difficulty in identification. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.3.9 For the purpose of this assessment, items such as seeds and cereal grains have been scanned and recorded qualitatively according to the following categories:

= 1-5, ## = 6-25, ### = 26-100, #### = 100+ specimens

C.3.10 Items that cannot be easily quantified such as molluscs have been scored for abundance:

+ = rare, ++ = moderate, +++ = abundant
w=waterlogged

Results

C.3.11 Preservation of plant remains is through carbonisation (charring) and waterlogging and is poor with low density and diversity of items such as cereal grains, seeds, nutshells and plant stems. The carbonised remains are predominantly cereal grains that are mostly abraded and/or fragmented and can only occasionally be identified to species, such as wheat (*Triticum* sp.) and barley (*Hordeum vulgare*). Preservation of charred weed seeds is generally better. Preservation by waterlogging has occurred in some of the deeper deposits although the recovery of identifiable items such as seeds is poor. Horsetail (*Equisetum* sp.) stems and tubers are present in all of the waterlogged samples.

C.3.12 The results are discussed by phase:

Period 1: Neolithic and Bronze Age

C.3.13 Pit **1030** (Area A) produced a small quantity of charred hazelnut (*Coryllus avellana*) shell (approximately three nuts) in additional to flint debitage. Hazelnuts would have been an important wild food resource in the prehistoric period and their burnt shells are frequently recovered from Neolithic pits. The shells are the product of consumption that, if burnt, survives well in archaeological deposits which partly explains their frequent recovery (Jones 2000, 80). It is probable that the shells were discarded into a fire that had subsequently been swept up and deposited in the pit although the charcoal content of the samples is low.

C.3.14 Possible fire pit **3041** (Area C) produced a small amount of wood charcoal despite obvious charcoal noted during excavation. It is likely that it did not survive the flotation process.

Period 2: Iron Age

C.3.15 Ten samples were taken from features within Area B. Occasional cereal grains are present in most of the samples, but usually as single grains. The most productive sample is from the terminus of ditch **2148** which contains a single indeterminate cereal grain along with single seeds of stinking chamomile (*Anthemis cotula*), cleaver (*Galium aparine*), grass (Poaceae), dock (*Rumex* sp.) sloe (*Prunus spinosa*), bramble (*Rubus* sp.).

C.3.16 Pit **2150** also contained charred sloe seeds. Sloes are extremely bitter fruits but may have been considered more palatable in the prehistoric diet. It is also possible that the charred seeds are the result of the use of blackthorn wood as fuel.

Period 3.1: Roman (2nd/3rd century)

C.3.17 Twenty-nine samples were taken from features within Area A including eight samples from various slots in Ditch **1010**. Despite the obvious charcoal rich fills only ditch slot

1039 produced a significant amount of wood charcoal. Ditch slot **1234** produced sparse cereal grains, seeds of bird's foot trefoil (*Lotus corniculatus*), grasses, marsh marigold (*Caltha palustris*), rush (*Juncus* sp.) representing damp/wet meadow plants that may have been harvested in late summer for use as bedding material or fodder. Several of the samples from Ditch **1010** contain fragments of a charred, vesicular material that may be burnt food, such as bread.

C.3.18 Waterhole **1073** contains preserved seeds in fill 1197 that most likely represent plants that were growing around the edge of the feature. Sedge seeds, tentatively identified as false-fox sedge (*C. otrubae*) are frequent as are stinging nettles (*Urtica dioica*), a plant that grows on nitrogen-rich soils that may be an indicator of use of the watering hole by animals. Other plant taxa include horsetail, hemlock (*Conium maculatum*), rush, common nettle (*U. urens*) and elder (*Sambucus nigra*). Fragments of insects were also noted, along with egg-cases of water-fleas (eg. *Daphnia*). Upper fill 1396 of waterhole **1073** contains frequent charcoal.

C.3.19 Three samples were taken from two features within Area B. Pit **2202** produced two charred wheat grains, one from each fill sampled.

Period 3.2: Roman (3rd-4th(?) century)

C.3.20 Two samples were taken from ditch group **1022** with ditch **1063** containing moderate charcoal.

Assessment and statement of potential

C.3.21 The plant assemblages recovered from this site have limited potential to add to the information of the diet and economy of the site. The recovery of hazelnut shell from prehistoric pit **1030** is consistent with the date of the feature. Similarly, Iron Age deposits often produce a background scatter of charred remains, usually cereals. The samples from Roman deposits can be considered as consistent with a lack of human settlement. Such scarcity of charred plant remains can also be an indicator of later intrusions from more modern practice of stubble burning and are not considered reliable material for radiocarbon dating.

C.3.22 The samples from the watering hole produced very limited assemblages, mostly of remains of tough seeds that are more likely to preserve in these conditions.

Recommendations for further work

C.3.23 The sample flots have been fully assessed and recorded and no further work is required.

Sample No.	Context No.	Cut	Area	Feature Type	Phase	Feature/Group no.	Volume processed (L)	Flot Volume (ml)	Cereals	Weed Seeds	Tree/shrub	Charcoal (ml)	Flot comments	Pottery	Residue Charcoal (ml)	Residue comments
201	3043	3041	C	pit	1	0	16	10	0	0	0	10	sparse charcoal only	0	0	Burnt flint
202	3042	3041	C	pit	1	0	8	5	0	0	0	<1	negligible charcoal	0	2	
4	1031	1030	A	pit	1	1030	8	5	0	0	##	1	hazelnut shell	0	5	Flint debitage. Hazelnuts.
102	2084	2083	B	posthole	2	0	15	40	0	0	0	35	moderate charcoal	0	10	
101	2078	2076	B	pit	2	2076	32	30	0	0	0	2	sparse charcoal only	0	0	
103	2149	2148	B	ditch	2	2148	20	60	#	#	0	10	1 x indet grain, single seeds of stinking chamomile, cleaver, grass , dock sloe, bramble	#	5	
104	2175	2174	B	ditch	2	2148	18	10	#	#	0	10	occasional charred grains, single dock seed	#	10	
105	2176	2174	B	ditch	2	2148	16	40	#	0	0	10	1 x indet seed	0	5	
106	2201	2200	B	ditch	2	2148	20	100	#	0	0	50	1 x indet seed, moderate charcoal	0	0	
110	2211	2210	B	ditch	2	2148	20	30	0	0	0	5	sparse charcoal only	0	5	
111	2220	2219	B	ditch	2	2148	17	10	#	#	0	5	1 x indet grain, 1 x dock seed	##	15	
112	2222	2221	B	ditch	2	2148	17	20	#	0	0	15	2 x barley, 3 x wheat grain	0	25	
	2151	2150	B	pit	2		15	5	#	#	#;	0	1 x indet grain, 3 x sloe seed, 1 x vetch seed	0	0	
11	1083	1073	A	watering hole	3.1	0	20	100	0	##w	0	5	waterlogged Horsetail stems and stinging nettle seeds	#	0	
17	1183	1182	A	pit	3.1	0	8	10	0	0	0	8	indet charred material	0	10	
18	1185	1184	A	pit	3.1	0	8	10	0	0	0	5	sparse charcoal only	0	10	

Sample No.	Context No.	Cut	Area	Feature Type	Phase	Feature/Group no.	Volume processed (L)	Flot Volume (ml)	Cereals	Weed Seeds	Tree/shrub	Charcoal (ml)	Flot comments	Pottery	Residue Charcoal (ml)	Residue comments
19	1187	1186	A	pit	3.1	0	9	1	0	0	0	<1	negligible charcoal	0	0	
20	1193	1192	A	pit	3.1	0	18	15	0	0	0	0	sparse charcoal only	0	<1	
22	1089	1073	A	watering hole	3.1	0	17	50	#	0	0	1	1 x indet grain	##	5	
23	1198	1073	A	watering-hole	3.1	0	16	50	0	0	0	<1	waterlogged horsetail stem	##	2	
24	1197	1073	A	watering-hole	3.1	0	16	50	0	###w	#w	<1	waterlogged horsetail stems, and seeds of hemlock, sedges, nettles, rush, duckweed. Insect fragments	0	0	Waterlogged residue.
33	1396	1073	A	watering-hole	3.1	0	24	120	0	0	0	120	waterlogged horsetail stems, frequent charcoal	0	0	
203	3040	3039	C	pit	3.1	0	20	10	0	0	0	5	sparse charcoal only	#	<1	
3	1036	1035	A	ditch	3.1	1010	16	50	0	0	0	20	moderate charcoal	##	10	Calcined bone
5	1040	1039	A	ditch	3.1	1010	42	500	#	0	0	500	charoal rich. 1 x barley grains, indet charred material	0	0	
6	1058	1057	A	ditch	3.1	1010	20	40	0	0	#	15	2 x sloe seed, indet charred material	##	1	Calcined bone, iron object
7	1060	1057	A	cremation	3.1	1010	16	5	0	0	0	0.3	indet charred material	0	0	fired clay
25	1233	1232	A	ditch	3.1	1010	16	5	#	0	0	2	1 x indet grain, indet charred material	#	0	Calcined bone
26	1235	1234	A	ditch	3.1	1010	16	60	#	##	0	10	2 x wheat grains, 1 x indet grain, seeds of bird's foot trefoil, grass, marsh	#	<1	Roman intaglio Fe and glass ring; Fe hob nail; other Fe fragments. Calcined bone

Sample No.	Context No.	Cut	Area	Feature Type	Phase	Feature/Group no.	Volume processed (L)	Flot Volume (ml)	Cereals	Weed Seeds	Tree/shrub	Charcoal (ml)	Flot comments	Pottery	Residue Charcoal (ml)	Residue comments
													marigold, rush and brome			
27	1246	1244	A	ditch	3.1	1010	32	30	0	0	0	10	2 x legumes, indet charred material	#	5	Fe hobnail; disc, calcined bone
28	1243	1241	A	ditch	3.1	1010	50	100	#	0	0	60	1 x legume, 2 x wheat grains, moderate charcoal	##	0	Thin copper semi-circular object; possible bead
1	1027	1026	A	pit	3.1	1026	16	20	#	0	0	20	2x wheat grains	0	25	
2	1029	1028	A	ditch	3.1	1028	16	5	0	0	0	3	sparse charcoal only	##	5	
9	1068	1067	A	ditch	3.1	1067	20	20	#	0	0	2	1 x grain fragment	##	10	
12	1108	1107	A	posthole	3.1	1099	8	1	0	0	0	<1	negligible charcoal	0	2	
13	1115	1113	A	posthole	3.1	1099	8	5	#	0	0	0	1x indet grain	0	0	
14	1123	1122	A	pit	3.1	1099	16	10	0	0	0	4	sparse charcoal only	0	15	
15	1152	1151	A	pit / posthole	3.1	1099	6	5	#	0	0	4	1 x barley grain	0	50	
16	1157	1156	A	posthole	3.1	1099	4	1	0	0	0	<1	negligible charcoal	0	5	
21	1196	1194	A	ditch	3.1	1180	16	15	0	0	0	2	no preservation	##	2	Possible crem
31	1355	1354	A	ditch	3.1	1251	17	20	#	0	0	1	1 x indet grain	0	2	
30	1295	1294	A	gully	3.1	1294	16	5	#	0	0	<1	1 x wheat grain	##	2	
109	2209	2208	B	ditch	3.1	2208	18	30	0	0	0	10	sparse charcoal only	0	15	
10	1096	1094	A	cremation burial	3.1		2	5	0	0	0	1	negligible charcoal	0	0	
107	2205	2202	B	pit	3.1		16	10	#	0	0	10	1 x wheat grain	0	10	
108	2207	2202	B	pit	3.1		16	5	#	0	0	1	1 x wheat grain	#	10	
8	1064	1063	A	ditch	3.2	1022	17	50	0	0	0	50	moderate charcoal	#	10	
29	1250	1249	A	ditch	3.2	1022	16	30	#	0	0	<1	1 x wheat grain	0	1	

Table 30: Environmental samples

APPENDIX D PRODUCT DESCRIPTION

Product number: 1
Product title: Full archive report
Purpose of the Product: To present the results of full analysis of the site and address the research aims and objectives outlined in the UPD
Composition: Grey literature archive report deposited at Hertfordshire HER and ADS/OA online library
Derived from: Analysis of site records, specialist reports and data and background research
Format and Presentation: Grey literature client report
Allocated to: LB
Quality criteria and method: Checked and edited by TP/LM
Person responsible for quality assurance: LM/TP
Person responsible for approval: EP
Planned completion date: 2022

Product number: 2
Product title: Publication report
Purpose of the Product: To disseminate the key findings of the archaeological investigations
Composition: Published report, in accordance with the journal guidelines
Derived from: Grey literature archive report
Format and Presentation: Synthetic article in serial journal
Allocated to: LB
Quality criteria and method: Checked and edited by TP
Person responsible for quality assurance: TP/EP
Person responsible for approval: EP
Planned completion date: (at earliest) 2022

APPENDIX E RISK LOG

E.1.1 The table below lists potential risks for the PX analysis work.

No.	Description	Probability	Impact	Countermeasures	Estimated time/costs	Owner	Date updated
1	Specialists unable to deliver analysis report due to over running work programmes/ ill health/other problems	Medium	Variable	OA has access to a large pool of specialist knowledge (internal and external) which can be used if necessary	Variable	LB LM EP	May 2021
2	Non-delivery of full report due to field work pressures/ management pressure on co-authors	Medium	Medium-high	Liaise with OA management team	Variable	LB LM EP	May 2021

APPENDIX F HEALTH AND SAFETY

F.1.1 All OA post-excavation work will be carried out under relevant Health and Safety legislation, including the Health and Safety at Work Act (1974). A copy of the Health and Safety Policy can be supplied. The nature of the work means that the requirements of the following legislation are particularly relevant:

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

APPENDIX G OASIS REPORT FORM

Project Details

OASIS Number	oxfordar-3-421237		
Project Name	Monk's Farm, Kelvedon, Essex. PXA and UPD		
Start of Fieldwork	07/09/2020	End of Fieldwork	30/10/2020
Previous Work	Yes	Future Work	No

Project Reference Codes

Site Code	KLSR19	Planning App. No.	17/00418/OUT
HER Number	TBC	Related Numbers	

Prompt	Direction from Local Planning Authority – NPPF
Development Type	Residential
Place in Planning Process	After full determination (eg. As a condition)

Techniques used (tick all that apply)

☐	Field Observation (periodic visits)	☐	Part Excavation	☐	Salvage Record
☐	Full excavation (100%)	☐	Part Survey	☐	Systematic Field Walking
☐	Full Survey	☐	Recorded Observation	☐	Systematic Metal Detector Survey
☐	Geophysical Survey	☐	Remote Operated Vehicle Survey	☐	Test Pit Survey
☒	Open-Area Excavation	☐	Salvage Excavation	☐	Watching Brief

Monument	Period
Cremation burial	Roman (43 to 410)
Pit	Early Bronze Age (- 2500 to - 1500)
Pit	Early Iron Age (- 800 to - 400)
Enclosure	Middle Iron Age (- 400 to - 100)
Enclosure	Roman (43 to 410)
Well	Roman (43 to 410)
Pit	Roman (43 to 410)
Posthole	Roman (43 to 410)

Object	Period
Metalwork	Roman (43 to 410)
Coin	Roman (43 to 410)
Metalworking residues	Roman (43 to 410)
Flint implement	Lower Palaeolithic (-500 000 to -150 000)
Flintwork	Late Prehistoric (- 4000 to 43)
Pottery	Late Neolithic (- 3000 to - 2200)
Pottery	Early Bronze Age (- 2500 to - 1500)
Pottery	Iron Age (- 800 to 43)
Pottery	Roman (43 to 410)
Ceramic building material	Roman (43 to 410)
Briquetage	Roman (43 to 410)
Stone	Roman (43 to 410)
Human skeletal remains	Roman (43 to 410)
Animal bone	Iron Age (- 800 to 43)
Animal bone	Roman (43 to 410)

Charred plant remains	Roman (43 to 410)
Charred plant remains	Iron Age (- 800 to 43)
Waterlogged plant remains	Roman (43 to 410)

Project Location

County	Essex
District	Braintree
Parish	Kelvedon
HER office	Essex
Size of Study Area	*c*.1.4 ha
National Grid Ref	TL 8605 1932

Address (including Postcode)

Land at Monk's Farm, Coggeshall Road, Kelvedon, Essex, CO5 9PG

Project Originators

Organisation	OA East
Project Brief Originator	Teresa O'Connor (Essex Place Services)
Project Design Originator	Louise Moan (OA East)
Project Manager	Louise Moan (OA East)
Project Supervisor	Toby Knight (OA East)

Project Archives

	Location	ID
Physical Archive (Finds)	Braintree Museum	KLSR19/TBC
Digital Archive	OA East	KLSR19/XHTWBS19
Paper Archive	Braintree Museum	KLSR19/TBC

Physical Contents	Present?	Digital files associated with Finds	Paperwork associated with Finds
Animal Bones	☒	☒	☐
Ceramics	☒	☒	☐
Environmental	☒	☒	☐
Glass	☒	☒	☐
Human Remains	☒	☒	☒
Industrial	☒	☒	☐
Leather	☐	☐	☐
Metal	☒	☒	☐
Stratigraphic		☐	☐
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☒	☒	☐
None	☐	☐	☐
Other	☐	☐	☐

Digital Media	
Database	☒
GIS	☒
Geophysics	☒
Images (Digital photos)	☒
Illustrations (Figures/Plates)	☒
Moving Image	☐
Spreadsheets	☐
Survey	☒
Text	☒
Virtual Reality	☐

Paper Media	
Aerial Photos	☒
Context Sheets	☒
Correspondence	☒
Diary	☐
Drawing	☐
Manuscript	☐
Map	☐
Matrices	☐
Microfiche	☐
Miscellaneous	☐
Research/Notes	☒
Photos (negatives/prints/slides)	☐
Plans	☒
Report	☒
Sections	☒
Survey	☒

Further Comments

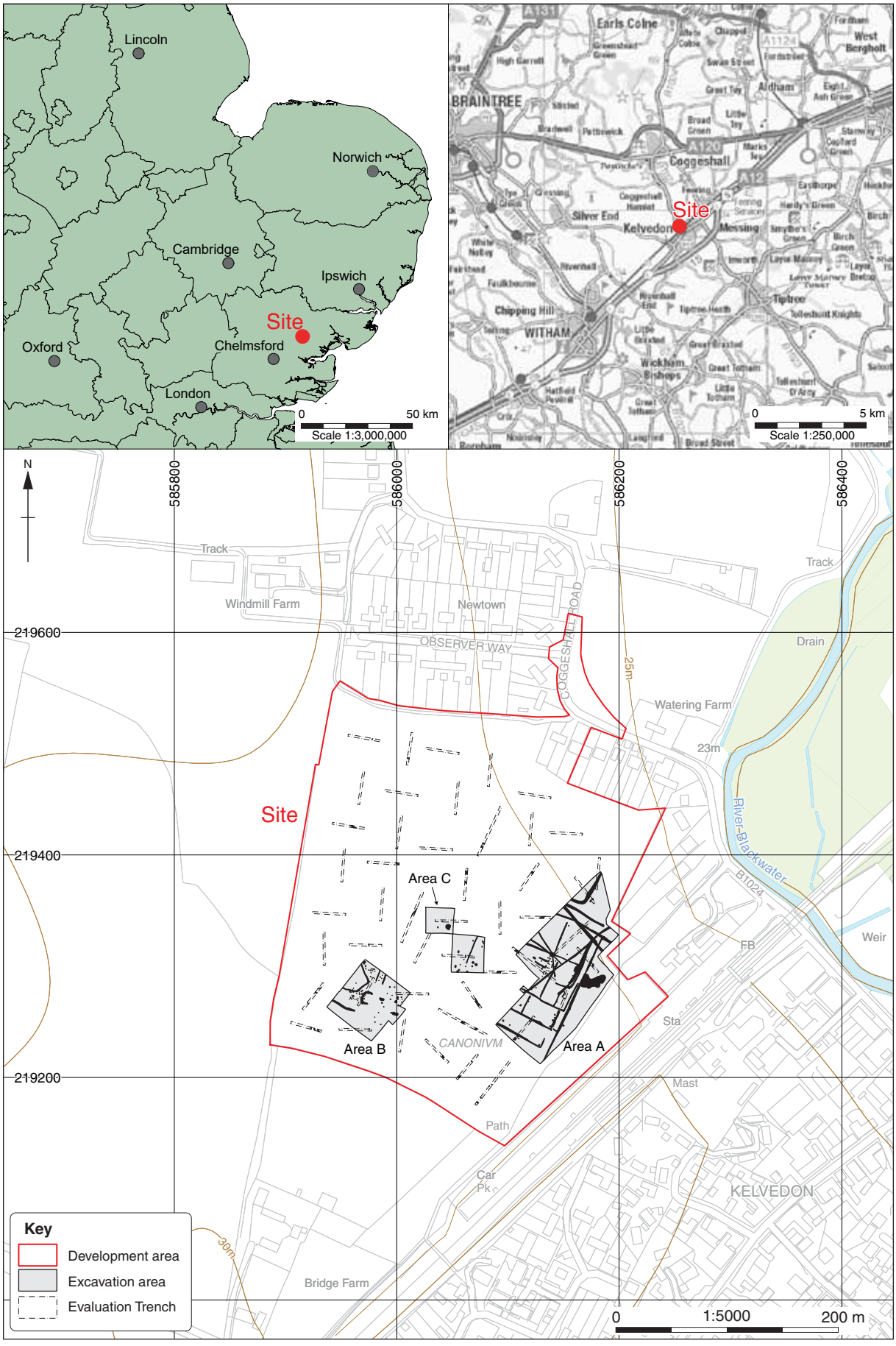

Figure 1: Site location

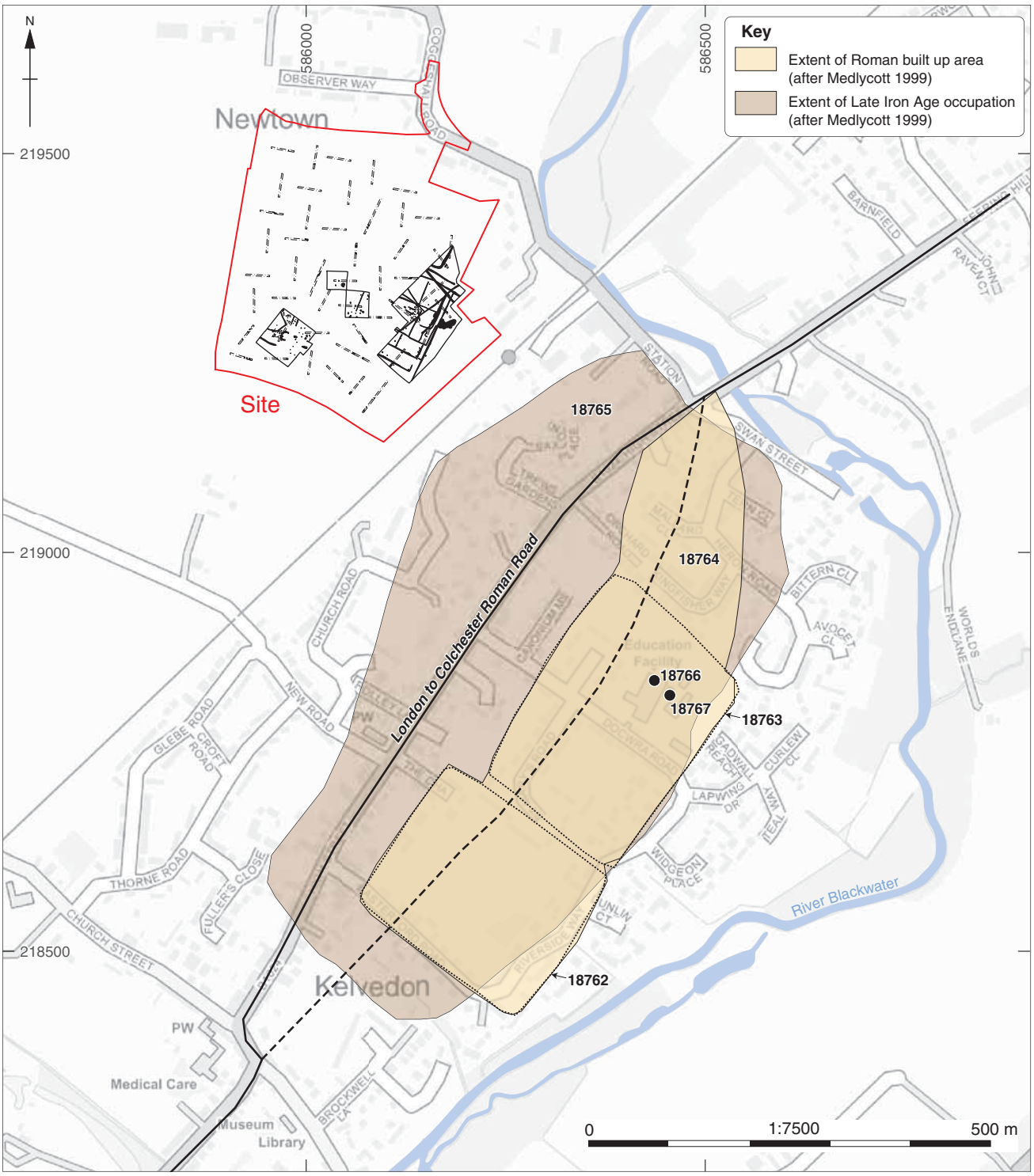

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Figure 2: Site location in relation to the extent of Late Iron Age occupation and the Roman town at Kelvedon (after Medlycott 1999), with selected HER records

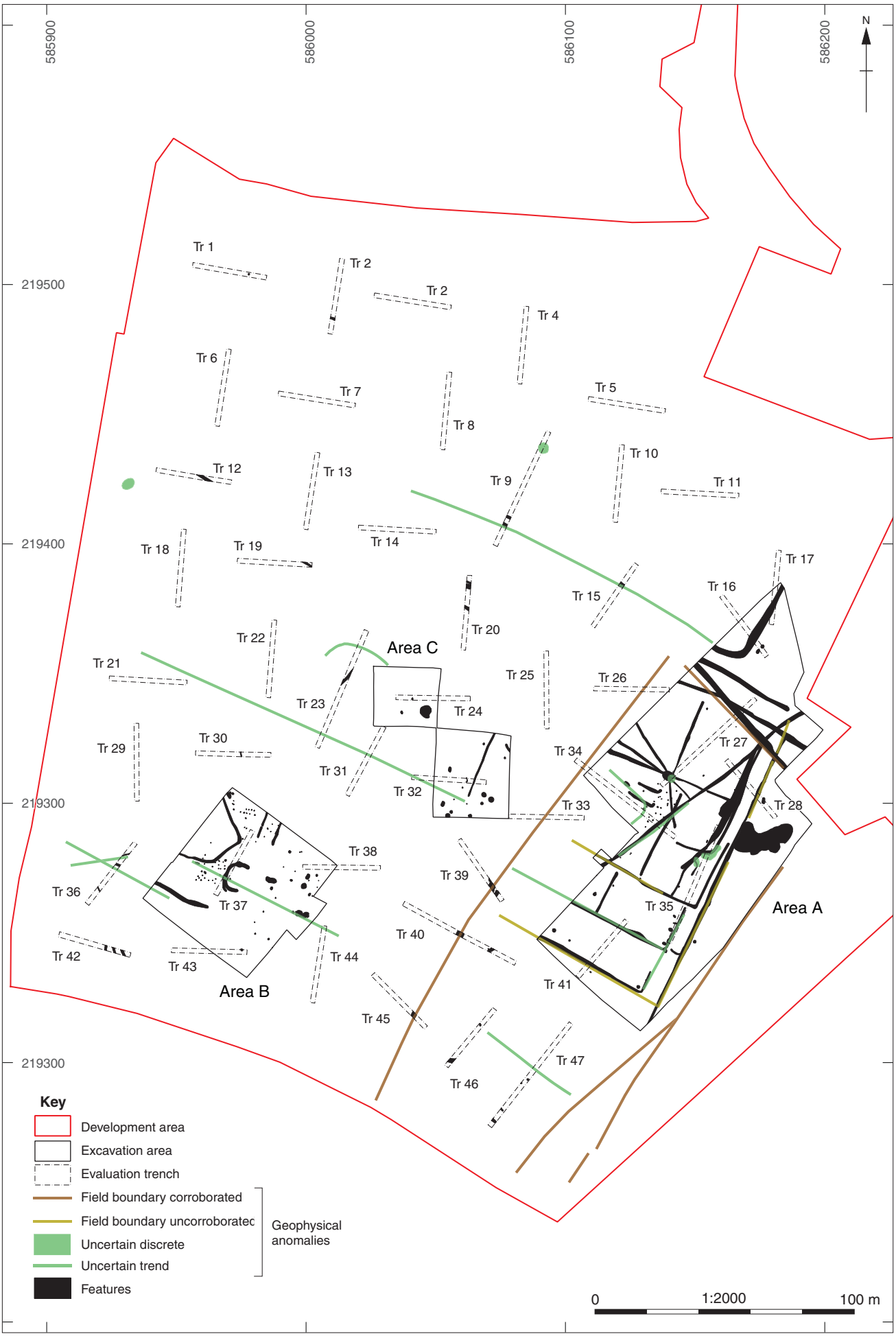

Figure 3: Overall plan of the excavations with evaluation trenches and results of the geophysical survey (after Sumo 2019; Fig. 3)

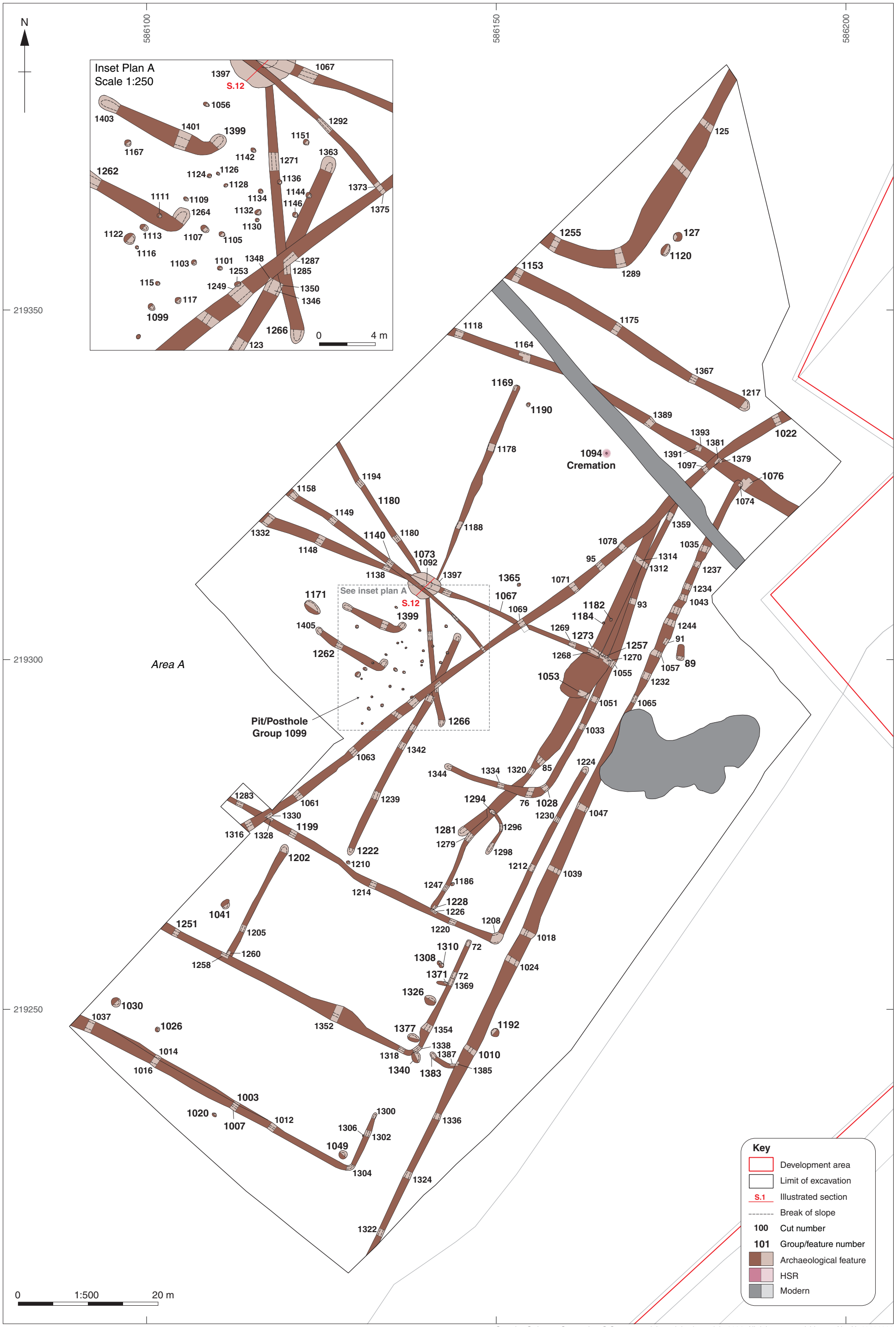

Figure 4: Area A: excavation plan

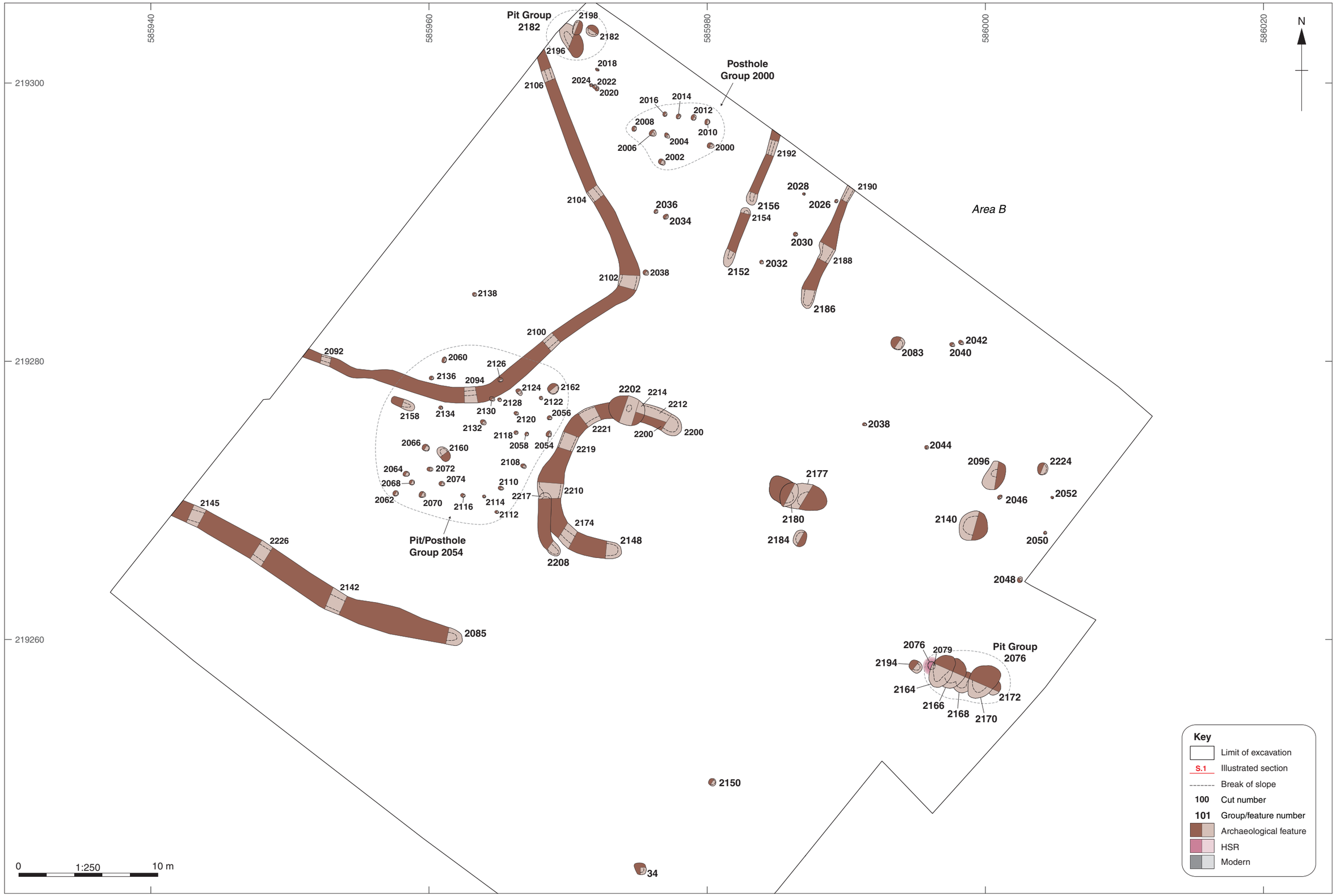

Figure 5: Area B: excavation plan

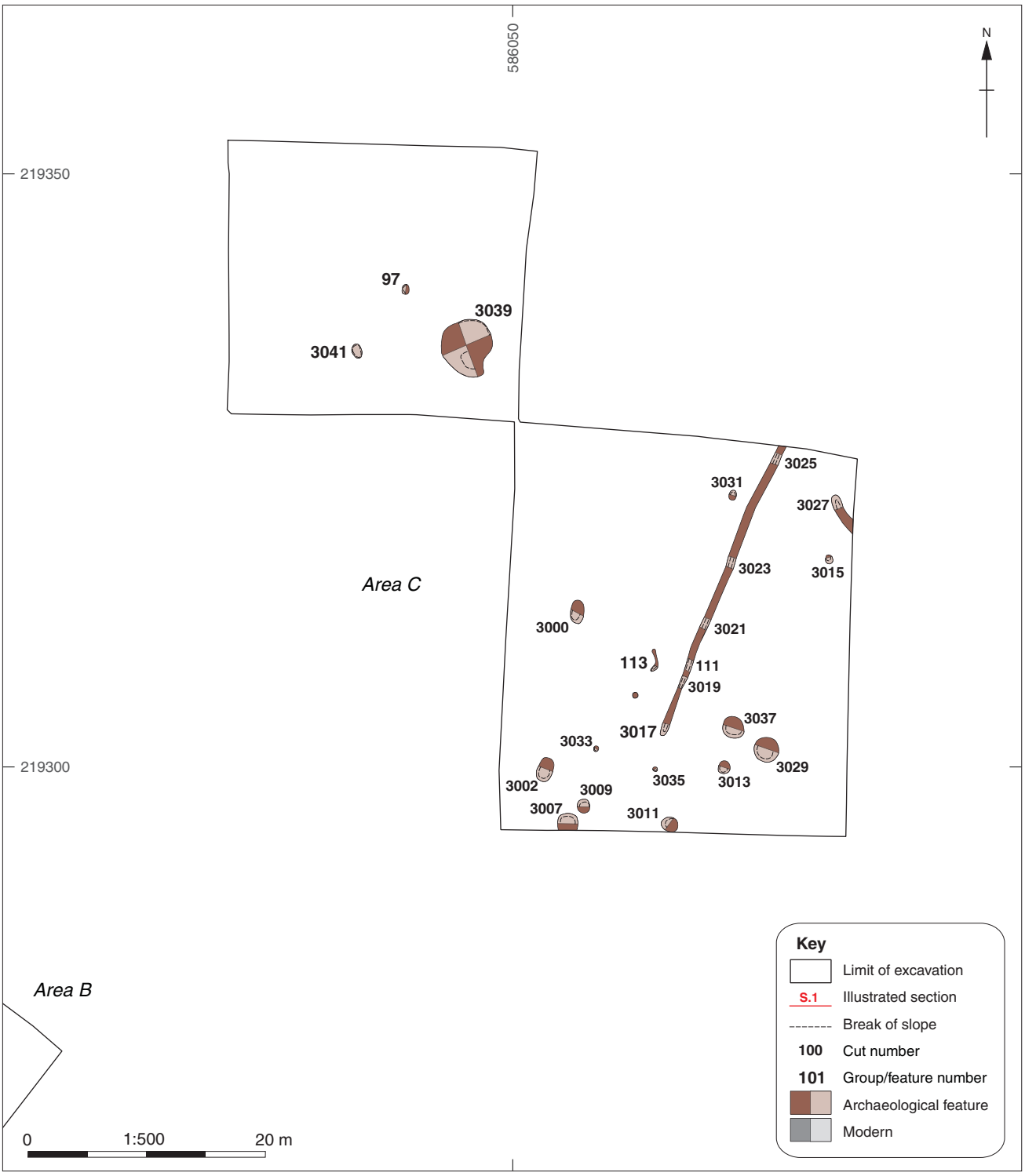

Figure 6: Area C: excavation plan

Figure 7: Area A: preliminary phase plan, with selected section

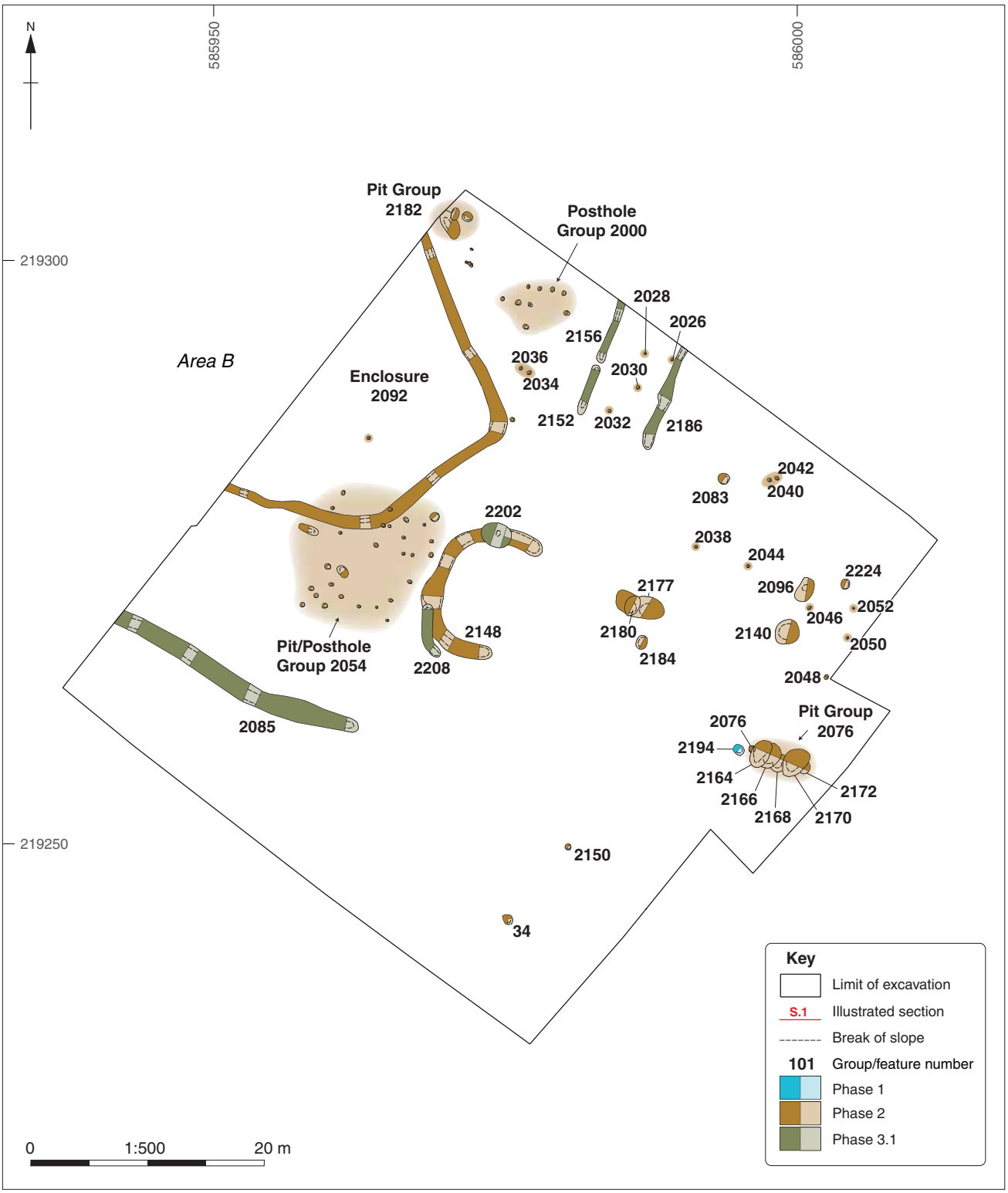

Figure 8: Area B: preliminary phase plan

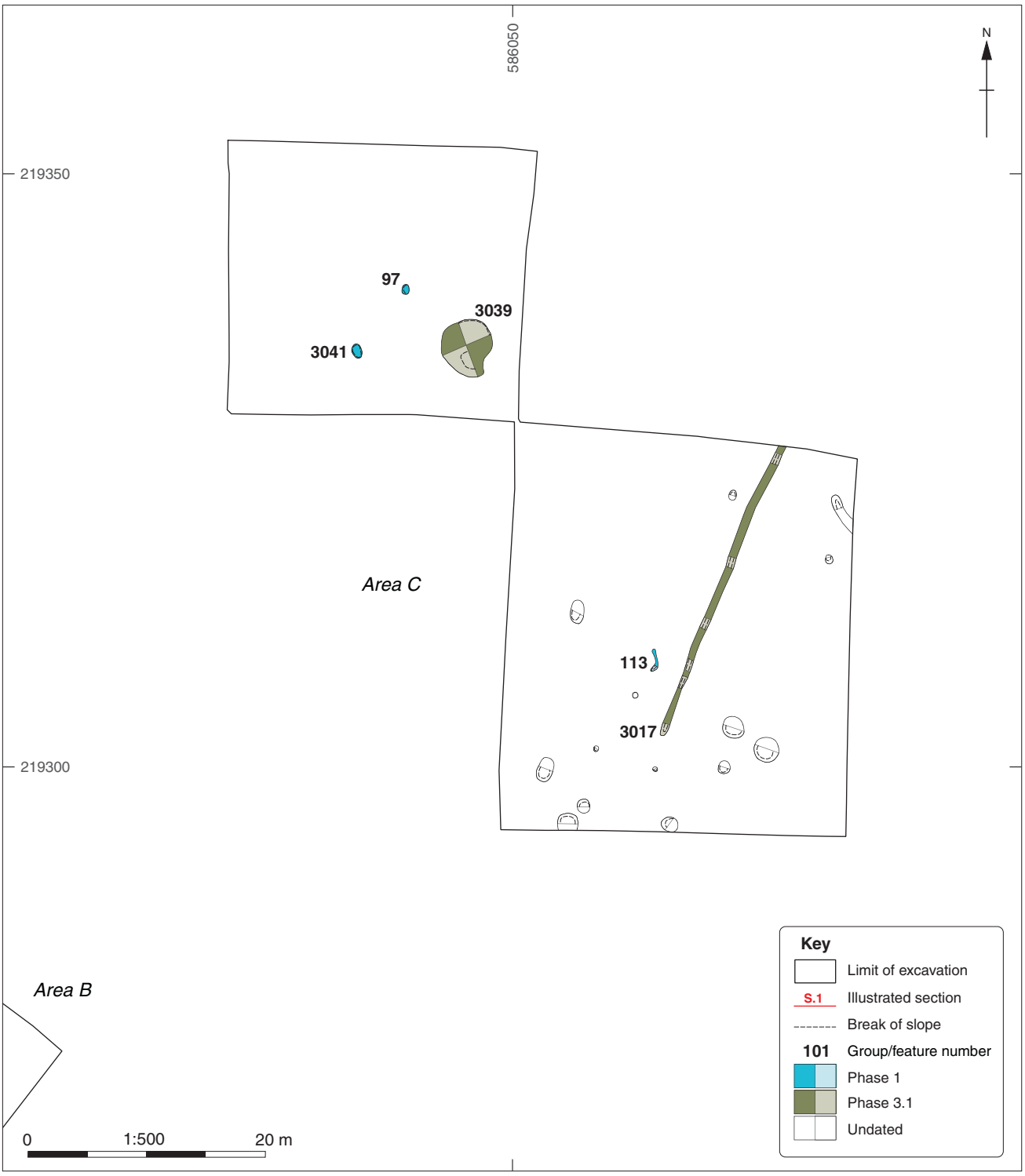

Figure 9: Area C: preliminary phase plan

Plate 1: Aerial view of Area A, looking south-east, with Kelevedon railway station and town beyond.

Plate 2: Aerial view of Area B, looking south-west.

Plate 3: Area C. Period 1, pit **3041**, mid excavation, looking south.

Plate 4: Area B. Period 2, C-shaped ditch **2148** looking east, intervention **2174** in the foreground and terminus **2148** beyond.

Plate 5: Area B. Period 2, C-shaped ditch 2148, terminus **2200**, looking west.

Plate 6: Area B. Complete pottery vessel (2077) in Period 2 pit **2076**, looking east.

Plate 7: Area B. Period 2, Pit Cluster **2076**, half-sectioned, looking north-east.

Plate 8: Area B. Period 2, pit **2140** looking east.

Plate 9: Area A. Period 3.1 Cremation burial **1094** prior to lifting, looking north.

Plate 10: Area A. Working shot of sampling underway along Ditch 1010, intervention **1241** in the foreground, looking south.

Plate 11: Area A. Period 3.1, well/watering hole **1073**, half-sectioned, looking north-east.

Plate 12: Area A. Period 3.1, well/watering hole **1073** mid excavation, with waterlogged wood (1084) exposed.

Plate 13: Area A. Period 3.1, stake 1092 *in situ* in base of well/watering hole **1073**, looking west (lower scale measures 0.4m).

Plate 14: Area B. Period 3.1 pit **2202**, looking west.

Plate 15: Area C. Period 3.1, pit **3039**, looking north

Plate 16: Palaeolithic handaxe recovered from pit **1041** (Period 1)

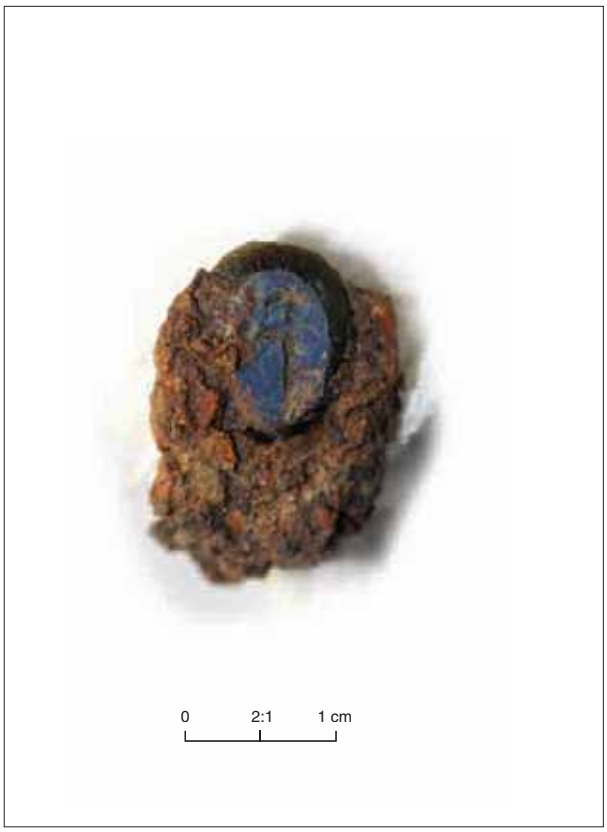

Plate 17: Iron finger ring (prior to cleaning/conservation) with blue glass intaglio (SF 20), from fill of Period 3.1 Ditch **1010** (intervention **1234**)

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