Clay Farm, Trumpington, Cambridgeshire

Post-Excavation Assessment

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Post-Excavation Assessment

Clay Farm, Trumpington, Cambridgeshire

Post-excavation Assessment and Updated Project Design

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Summary

Between May 2010 and May 2011 Oxford Archaeology East conducted a large-scale excavation at Clay Farm, Trumpington, on the southern fringes of Cambridge (TL 4520 5500), commissioned by consultants URS Scott Wilson for Countryside Properties Ltd in advance of the development of a new settlement to be known as Great Kneighton. The total machine stripped area covered 16.8ha, divided into Areas A to F (from north to south).

The excavation revealed multi-period archaeological remains from the Neolithic through to modern times. The earliest finds included Mesolithic microliths along with Mesolithic or Early Neolithic blades and cores. The earliest cut features included a small Early Neolithic pit and a number of Earlier Bronze Age pits. The most surprising discovery was the existence of a series of Middle Bronze Age field systems, enclosures and settlements that covered large areas of the site, in a part of region where such activity had not previously been recorded. The earliest land divisions were thought to be a series of linear ditches forming strip fields, orientated north-west to south-east, which survived to varying degrees through the entire site. A more intricate system of enclosures and field boundaries was constructed over these early ditches. Finally, discrete areas of settlement were established within the system of fields and enclosures (three were identified across the site). These settlement areas contained large assemblages of finds: the densest of these, Settlement 1 in Area B, contained nearly 4kg of Middle Bronze Age Deverel-Rimbury pottery, 20kg of animal bone, 10kg of struck flint and numerous worked bone implements indicative of craft activities.

An extensive area of Early Iron Age settlement was located within the Middle Bronze Age field system in Area A. The settlement was characterised by post built sub-circular structures, 4-post granaries or stores and pits of varying sizes. Large quantities of Early Iron Age pottery, bone and other waste were recovered from a large pit and in the upper fills of the earlier ditches. The main focus of Middle Iron Age activity was on the higher ground in Area C and consisted of a series of curvilinear ditches forming the eastern side of an enclosure or system of enclosures. Inside the enclosures to the west were a number of roundhouse structures, an oven and areas of pitting. This area of settlement showed continuity into the Late Iron Age. There were also extensive Late Iron Age field systems with evidence of nearby settlement in Areas B and E. In the latest Iron Age, immediately pre-Conquest, two high-status cremation burials were placed in pits in Area C. One was excavated during the evaluation, the other during the excavation. The latter contained at least eleven vessels, mostly imported fine tablewares, and accompanying grave goods. The cremated bone had been placed within a wooden box.

Early Roman land use focused on the south of Area C and much of Area D in the north of the site, and Areas E and F in the south of the site. It consisted of small fields and paddocks, which were particularly rectilinear in Area D. In Area C, the two Late Iron Age cremations were enclosed by a ditch and a number of other features. This has been interpreted as a form of cemetery garden. The principal Late Roman feature was a double ditched sub-circular enclosure or monument in Area F. It showed no evidence of domestic or agricultural use but the inner ditch contained the disarticulated remains of several adults, along with five Late Roman bracelets, large iron nails and butchered animal bones.

There was no major land use following the Roman period until relatively recently. Post medieval quarrying was intensive in parts of Areas A, B, D and E. During World War Two a series of ring ditches were constructed in Area B, to create banked enclosures for the housing of searchlights and associated stores. Areas E and F showed evidence of their use through the 1950s and 60s as the Cambridgeshire Agricultural Showground.

1 INTRODUCTION

1.1 Project Background

1.1.1 Oxford Archaeology East were commissioned by URS Scott Wilson on behalf of Countryside Properties Ltd to undertake archaeological excavations at Clay Farm, Trumpington, Cambridge (centred at TL 4520 5500; Fig. 1). The excavation followed a desk-based assessment, geophysical surveys, fieldwalking and subsequent evaluation. The site is located to the east of Trumpington and to the south of Cambridge. It is bordered by Long Road to the north, the Cambridge to London railway line to the east and Shelford Road to the south. The route of the Cambridge Guided Bus Way runs through the middle of the site.

1.1.2 This assessment has been conducted in accordance with the principles identified in English Heritage'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 The solid geology of the site comprises Lower Chalk with overlying drift geology of Second and Third Terrace gravels. The site is located along the western side of a wide valley, ranging between approximately 15 and 18m OD, east to west. The valley was once the course of the River Cam but is now occupied by the minor stream of Hobson's Brook. The brook flows from chalk springs at Nine Wells to the south, at the foot of the Gog Magog Hills.

1.3 Archaeological and Historical Background

1.3.1 An in-depth study of relevant archaeological sites, both local and regional, will be carried out during the analysis stage, as will a documentary and cartographic search. At this stage, a brief chronological overview has been included, which covers major sites, cropmarks and earthworks but not individual findspots. Those sites mentioned are shown in Fig. 2.

Neolithic

1.3.2 Many local sites have shown at least limited evidence of earlier prehistoric land use, either through the presence of small assemblages of Mesolithic and Neolithic flint work or the occasional pit or hollow containing Neolithic finds. However, there is also more tangible evidence of monument building along the Cam Valley. The most significant local site containing such features is Trumpington Meadows, 1.5km to the south-west, where the remains of two rare Neolithic circular funerary monuments have recently been discovered by Cambridge Archaeological Unit (Cambridgeshire Historic Environment Record MCB17990). The larger of the two began with a curvilinear ditch, probably dug as a quarry for a small mound. Close by was a grave containing the remains of four individuals. This group of features had been enclosed by a substantial circular ditch, in which were found sherds of Mildenhall and Peterborough ware pottery.

1.3.3 The Clay Farm Addenbrooke's Access Road Site 3 is located between Areas E and F and is therefore integral to the current project (CHER MCB17815; Timberlake 2007a).

Several Neolithic pits and tree throws containing worked flints were encountered. Several Neolithic pits were also discovered at Trumpington Park and Ride, adjacent to Trumpington Meadows (CHER CB15749; Hinman 2004). At Babraham Road Park and Ride, 2.5km to the east, the earliest features were attributed to the Late Neolithic – Early Bronze Age and included three inhumation burials, a scattering of Grooved Ware associated pits and two deep circular shafts or pits (CHER CB15253; Hinman 1999).

Earlier Bronze Age

1.3.4 There is currently limited evidence for Earlier Bronze Age activity locally. It includes a double beaker burial discovered at Trumpington Meadows and an Early Bronze Age pit cluster at the Addenbrooke's Access Road Site 3.

Middle – Late Bronze Age

1.3.5 The Middle and Late Bronze Age saw a major economic expansion in Lowland England, evidenced by the appearance of rectilinear field systems over wide areas in the Middle Bronze Age. In the fens, field systems and associated settlement are well documented within the Ouse Valley and the Flag Fen basin, due in part to large-scale gravel extraction projects. The southern fringes of the fens, specifically the Cam Valley, have yielded evidence for Middle and Late Bronze Age activity, but not on the same scale as further north. Local to Clay Farm, a triple ditched square enclosure was investigated on the Addenbrooke's 2020 Lands, 0.8km to the east on the opposite side of the valley (CHER 08339; Evans *et al* 2008). Trial trench excavation, based on cropmark and geophysical plots has shown that the ditches are substantial. Three radiocarbon samples from the ditches returned Middle Bronze Age dates (the earliest of the three dates was 1620 – 1440 cal. BC). At Babraham Road Park and Ride, two aligned, Earlier – Middle Bronze Age ditches, interrupted by a 5m entrance, were associated with timber beam slot-like features. The ditches yielded a radiocarbon date of 1755 – 1415 cal. BC. Approximately 4.75km to the east, at Fulbourn Hospital (CHER 11076), part of a large 'open' Middle – Late Bronze Age enclosure system with accompanying fence lines was recorded. The ditches were substantial, measuring up to 3.6m wide and 1.5m deep (Brown and Score 1998). A post built roundhouse attributed to the Middle Bronze Age was found at Granham's Farm, Shelford, 2.3km to the south-east (CHER CB15569), although no contemporary field systems were discovered (Evans *et al* 2008).

1.3.6 Five km to the north, on the north side of Cambridge, a small excavation at Harris Road (CHER 3362) revealed a single large ditch containing Late Bronze Age pottery in its upper fill. A radiocarbon sample from a secondary fill returned a date of 1460 – 1260 cal. BC (House 2010). Further downstream at the Cambridge Centre for recycling at Waterbeach (CHER MCB18419), work revealed a small Late Bronze Age settlement and part of a field boundary interpreted as an outlier of a larger field system (Masser 2000).

1.3.7 Upstream, south of Cambridge, the River Cam runs through chalk downlands. Evidence of Middle Bronze Age field systems has been uncovered at Sawston police station, 6km to the south-east (CHER MCB17152). Poorly dated ditches were discovered in two separate phases of evaluation (Cessford and Mortimer 2004; Mortimer 2006). During the later evaluation, a large quantity of struck flint was recovered from the upper ditch fills, dating to the second half of the 2nd millennium BC. A small assemblage of Middle Bronze Age Deverel-Rimbury and Late Bronze Age Post Deverel-Rimbury ceramic was also recovered, while a large red deer vertebra from the upper fill returned a radiocarbon date of 1450 – 1260 cal. BC. There is evidence for the continuation of this

field system across the north of the parish in the form of a group of rectangular or D-shaped enclosures which can be seen as a series of crop marks, stretching from the Iron Age fort of Borough Hill in the west (CHER MCB16941) across to Lynton Way in the east.

Iron Age

1.3.8 Two of the most significant monuments in the immediate area are the Iron Age ringworks of Wandlebury and War Ditches. Wandlebury, located on the edge of the Gog Magog hills, 4.5km to the south-east (CHER 04636), has evidence of Early Iron Age open settlement before the first defences were constructed in the Middle Iron Age, around the 5th century BC. A second rampart and ditch, built on the interior of the first, was constructed in the 1st century BC. War Ditches, located in Cherry Hinton, 3.2km to the east (CHER 04963), was first constructed *c*. 400 BC although the evidence suggests it was never finished. It was re-occupied in the Late Iron Age.

1.3.9 Local Early Iron Age sites include Trumpington Park and Ride and Trumpington Meadows where dense concentrations of pits were encountered. Some of the pits at the Park and Ride site contained selected and placed arrangements of both human and animal remains. At Glebe Farm, directly to the south-west of Clay Farm (CHER MCB16972), a minor Early Iron Age settlement focused around a waterhole was discovered (Evans *et al*. 2006).

1.3.10 The Late Iron Age is well represented in the area around Clay Farm. The Hutchison site (CHER CB15770) and 2020 Lands to the east both contained Late Iron Age settlement consisting of ditched enclosures and roundhouses. The Hutchison Site also revealed 11 pottery kilns, dating to around the time of the Roman Conquest. At Babraham Road Park and Ride, a series of shallow square-ended linear features were constructed, that do not have any known parallel. These features seemed to respect the earlier phases of prehistoric activity and in particular highlighted the position of the Bronze Age entranceway.

Roman

1.3.11 There is extensive evidence of Roman settlement and land use along the Cam Valley. Locally, the Late Iron Age settlements at both the Hutchison Site and the 2020 Lands continued into the Early Roman period. By the mid - late 1st century AD at The Hutchison Site the focus of settlement appears to have shifted eastwards, centred on a large sub-rectangular enclosure which was subdivided into smaller compounds. A possible east to west road was identified at the south end of the site and a Conquest period cemetery consisting of three urned cremation burials and sixteen inhumations was set in one corner of the enclosure system. Parts of the evaluation at Trumpington Meadows also revealed evidence for Romano-British field systems and settlement (Brudenell and Dickens 2007).

1.3.12 Approximately 0.8km to the south-east of Area E, a dense concentration of crop-marks can be seen on land to the east of Scotsdale garden centre (Scheduled Monument – SM 4461). These have been interpreted as a Roman site (possibly a villa) on the basis of the crop-marks and pottery found during fieldwalking, which dated between the 1st – 4th centuries. The crop-marks comprise a pattern of rectangular enclosures, trackways and hut circles.

1.3.13 Evaluation south of Brooklands Avenue, 1.5km to the north (CHER MCB15919), revealed evidence of Roman agricultural or horticultural activity dating to the 1st – 2nd

century. The features were broadly at right angles to the nearby *Via Devana*, and may have formed part of the extensive hinterland serving the nearby town (Kenny 2000).

1.3.14 The Roman road, the *Via Devana*, has been recorded at the Perse School, 1.3km to the north-east (Evans *et al* 2008), while War Ditches was utilised as a farmstead in the Roman period.

Saxon

1.3.15 There are Early and Middle Saxon remains both to the west of the subject site, near to the historic centre of the village of Trumpington, and to the east, under various parts of Addenbrooke's hospital and its surrounds. At Trumpington Meadows, close to the parish church, Late Saxon sunken-featured buildings have been found, along with several Saxon burials, including a rare bed burial (R. Patten pers. comm.). Evaluation and small scale excavation during water main work at Addenbrooke's (0.7km to the east of Clay Farm) uncovered a cluster of intercutting Early Anglo-Saxon pits and a well (CHER MCB17800; Timberlake 2007b). The features contained a small assemblage of decorated 5th-6th century Anglo-Saxon pottery, as well as bone waste, iron knife blades, burnt quern fragments fired and unfired clay. This group of features may represent the fringes of an Early-Middle Anglo-Saxon settlement. Middle Saxon activity was encountered at the Hutchison Site in the form of a curvilinear ditch, five wells, a pit and one, or possibly two, rectangular posthole buildings. It is possible the Early Saxon settlement found during water main work, shifted in the Middle Saxon period to the higher ground of the Hutchison Site.

1.3.16 At the Waitrose Site on Hauxton Road, 1km to the south-west (CHER CB14653), a series of ditched enclosures were found. Dating evidence was scarce but the presence of residual Roman pottery and Niedermendig lava quern suggested an Early or Middle Saxon date (Hatton and Hinman 2000). At Grantchester, 2km to the west, an Early Saxon sunken building was discovered. This was succeeded by a Middle Saxon defended manorial settlement delineated by a double ditch and bank (CHER 04922a; Alexander and Trump 1972). An evaluation within a medieval moated site in Great Shelford, 2.5km to the south, revealed a single ditch containing Early – Middle Saxon pottery, suggesting that a Saxon manor preceded the medieval one (CHER 3579; Gilmour 2011). Slightly further afield, in Cherry Hinton, 3.5km to the north-east, a previously unknown manorial centre was discovered at Church End (CHER 13014; Cessford and Mortimer 2003). The site revealed a major Early Medieval settlement, founded in the late 9th century AD and continuing in use until the early 12th century. Small amounts of prehistoric, Roman and Middle Saxon material indicate intermittent use of the site prior to the 9th century AD.

Medieval

1.3.17 The *Liber Eliensis*, written in the 12th century, refers to an Ealdorman Beorhtnoth giving to the monks of Ely a manor at Trumpington in about AD 991 (Wright 1982). By the time of Domesday the village consisted of 37 households (about 185 people including 33 peasants and 4 slaves), with four manors. A mill at Trumpington was held by William de Warenne. There was a weir rendering 450 eels and pasture for the cattle of the vill. By 1279 one hundred people held land there, when nearly 80 houses and cottages were recorded (*ibid*.). Another of the four manors was the Trumpingtons' manor house, recorded from the 1280s. It probably occupied the site of the present Trumpington Hall to the west of the village. A third manor was near the church before 1279, later rebuilt as Anstey Hall. The church of St Mary and St Michael was mostly built between 1200 and 1330.

1.4 Acknowledgements

1.4.1 The authors would like to thank Countryside Properties who commissioned and funded the archaeological work, and Annie Calder of URS Scott Wilson Ltd, who acted as the consultant for the site. Andy Thomas of Cambridgeshire County Council monitored the excavation. The site was metal detected by Steve Critchley, who made regular visits throughout the project and on a daily basis by Nick Richardson of L.O.C. Thanks also go to L.O.C. Plant Hire for providing the excavating machinery, and specifically to Nick Richardson who operated a 360º excavator for the duration of the project, stripped the sites, constructed the spoil storage heaps and helped out in many other ways.

1.4.2 A total of 55 members of staff worked on the excavation, including the authors. Sarah Henley and Louise Bush were the principal supervisors, and both conducted the site GPS survey, along with Dave Brown and Pete Boardman. The remainder of the field team were as follows: Adrian Burrow, Zoë Ui Choileáin, Nathan Chinchen, Graeme Clarke, Nicholas Cox, Brenton Culshaw, John Diffey, Tom Eley, Chris Faine, James Fairbairn, Mark Gibson, Nick Gilmour, Steve Graham, Michael Green, Katherine Hamilton, Anthony Haskins, Jon House, David Jamieson, Lindsey Kemp, Nadia Khalaf, Toby Knight, Stuart Ladd, Matthew Lees, Tom Lyons, David Maron, Rowan McAlley, Roberta Marziani, Patrick Moan, Stephen Morgan, Julian Newman, Sam Oates, Alex Pickstone, Nick Pankhurst, Rhiannon Philp, Stephen Porter, Neville Redvers-Higgins, Gareth Rees, Guilia Saltini Semerari, Victoria Skipper, Geoff Smith, Helen Stocks-Morgan, Dan Sykes, Nicholas Taylor, Jennifer Thurstan, Aileen Tierney, Gemma Tully, Stephen Wadeson, Jacob Warrender, Michael Webster and Al Zochowski.

1.4.3 In addition, 50 volunteers contributed to the project.

2 Project Scope

2.1.1 This assessment deals solely with the 2010 – 2011 excavations at Clay Farm. Two other sites will be examined during the analysis stage. Relevant parts of the Clay Farm evaluation (Evans *et al*. 2006), which includes the excavation area and the surrounding fields, will be integrated at the next stage rather than in this assessment. Similarly, the relevant part of the Addenbrooke's Road Corridor (Timberlake 2007a), which is located between Areas E and F, will be re-appraised.

3 Interfaces, Communications and Project Review

3.1.1 Both the evaluation of Clay Farm and the excavation of the Addenbrooke's Road Corridor (mentioned above in 2.1.1) were carried out by the Cambridge Archaeological Unit. Both are integral to the understanding of the Clay Farm excavation and therefore communication with the CAU is essential.

3.1.2 The Post-Excavation Assessment has been undertaken principally by Tom Phillips (TP) and edited and Quality Assured in-house by Project Manager Richard Mortimer (RM) and Post-Excavation and Publication Manager Elizabeth Popescu (EP). It will be distributed to the client (Countryside Properties) and their archaeological consultant, Annie Calder (AC; URS Scott Wilson) for comment and approval. The document will then be distributed to Cambridgeshire Archaeology Planning and Countryside Advice (Andy Thomas, AT) for approval.

3.1.3 Following approval of the Post-Excavation Assessment a meeting will be convened between AT, AC, EP, RM and TP to discuss post-excavation analysis and publication. As a result of this meeting a Publication Synopsis will be prepared.

3.1.4 In addition, following approval of the Post-Excavation Assessment, specialist meetings will be arranged to discuss and timetable the analysis stage of the work. Following these meetings a post-excavation analysis and publication timetable will be produced.

3.1.5 Meetings will be arranged at relevant points during the post-excavation analysis with AT and AC.

4 Summary of Results

4.1 Introduction

4.1.1 During project set-up and excavation the site was sub-divided into Sites 1 – 4, north to south. This included site 1 east and west, and site 2 north and south. At the beginning of post-excavation work these were re-named as Areas A - F with Area A in the north and Area F in the south (Figs. 1 and 3). The entire excavation area covered 16.8 ha; sizes for individual areas are listed in Table 1 along with original and updated names for each field.

Excavation	Post-excavation	Size (hectares)
Site 1 west	Area A	2.1
Site 1 east	Area B	3.4
Site 2 north	Area C	3.3
Site 2 south	Area D	2.5
Site 3	Area E	4.7
Site 4	Area F	0.8

Table 1: Excavation and post-excavation area names and sizes

4.1.2 The results of the excavation are presented below by period and then by each discrete area of settlement or land use, with site divisions (Areas) acting only as a guide to location.

4.1.3 Features have been assigned to a period when possible. The periods are as follows:

Period 1: Neolithic (c. 3800 – 2000 BC)

Period 2: Earlier Bronze Age (c. 2000 – 1500 BC)

Period 3: Middle – Late Bronze Age (c. 1500 – 800 BC)

Period 4: Early Iron Age (c. 800 – 350 BC)

Period 5: Middle Iron Age (c. 350 – 50 BC)

Period 6: Late Iron Age (including Late Pre-Roman Iron Age; c. 50 BC – AD 43)

Period 7: Early Roman (AD 43 – 200)

Period 8: Late Roman (AD 200 – 410)

Period 9: Post Roman (AD 410 – 1066)

Period 10: Medieval

Period 11: Post-medieval

Period 12: Modern

4.1.4 Finds and environmental information has been tabulated to provide a quick point of reference for individual features or groups of features within specific periods. Within the tables the following abbreviations apply:

NISP: Number of Identifiable fragments (animal bone)

CPW: Crop Processing Remains (Enviro.)

CPR: Charred Plant Remains (Enviro.)

WPR: Waterlogged Plant Remains (Enviro.)

C & W: Charred and waterlogged (Enviro.)

4.2 Period 1: Neolithic (c. 3800 – 2000 BC)

4.2.1 A significant quantity of Neolithic (and earlier) struck flint was retrieved from across the excavation areas. The earliest pieces included single Mesolithic microliths in Areas B and E, along with Mesolithic or Early Neolithic blades and cores in Areas A, B and E.

4.2.2 Neolithic struck flint was represented in all areas although the biggest concentration was in Area E where the bulk of the flint collected in the subsequent Middle Bronze Age (MBA) settlement area was clearly residual, being typical of Later Neolithic industries (Period 3, Settlement 1. See 4.4.15 below). In non-settlement related MBA features in Area E approximately 50% of the struck flint was residual and included a chisel type arrowhead, several scrapers, serrates and a bifacially worked tool, all being characteristic of Later Neolithic industries. The struck flint from all other later features in the area also contained a relatively high proportion of early material, up to 50%, and again the bulk of this was Later Neolithic, including a high number of competently produced scrapers. Numerous blades and a slender leaf-shaped arrowhead (SF 111) of Early Neolithic date were also found.

4.2.3 The presence of significant quantities of early flintwork testifies to the importance of this location and the longevity of occupation in the area, despite the fact that actual Neolithic features were rare on the site; only three could definitely be assigned to the period (Fig. 4). These included a pit in Area A and a pit and tree throw or natural hollow in Area B. Pit **6417** in Area A contained the most impressive assemblage of finds including a large assemblage of Early Neolithic Mildenhall ware pottery and 64 pieces of struck flint. The flint assemblage clearly represents the complete knapping sequence, although only a small proportion of what had been produced was included in the pit. Details of Neolithic features are listed in Table 2.

Feature No.	Feature type	Area	Pottery, No. sherds / g	Worked flint, No. pieces / g	Burnt flint (g)	Enviro.
5743	Tree throw/ hollow	B		19/365	356	
5788	Pit	B	Mildenhall ware, 2/16	2/82		WPR
6417	Pit	A	Mildenhall ware, 102/638	64/426		

Table 2: Neolithic features

4.3 Period 2: Earlier Bronze Age (c. 2000 – 1500 BC)

4.3.1 Earlier Bronze Age activity was again limited with only a handful of features across all six areas (Fig. 4). These consisted of small pits, the remnants of Earlier Bronze Age settlement. Amongst these was pit **6467** in Area A, a deep oval pit which contained fragments of a near complete comb-zoned Beaker vessel in its upper fill. Due to its proximity to the surface the vessel had unfortunately been broken. In the west of Area A another small pit (**6355**) contained most of the profile of an early type plain Collared Urn. An adjacent tree throw (**6349**) produced eight pieces of worked flint, including a

core, a number of blades and a possible burin made on a blade. Most of these pieces are likely to date to the Mesolithic or Early Neolithic and may be regarded as residual. Details of Earlier Bronze Age features are listed in Table 3.

Feature No.	Feature type	Area	Pottery, No. sherds / g	Animal bone: NISP / g	Worked Flint (g)
2210	Pit	E	Collared urn, 2/36		9
3695	Pit	E	Decorated Beaker, 2/18	1/26	
3697	Pit	E	Decorated Beaker, 1/5	1/15	
6349	Tree throw	A			66
6355	Pit	A	Collared Urn, 14/165		1336
6467	Pit	A	Near complete Beaker, 98/636		
6555	Pit	A			

Table 3: Earlier Bronze Age features

4.4 Period 3: Middle – Late Bronze Age (c. 1500 – 800 BC)

4.4.1 The Middle and Late Bronze Age have been grouped together at this stage as the Late Bronze Age (LBA) activity, in terms of features and finds materials, was not distinct or widespread enough to stand alone as its own phase. Most of the features within Period 3 have been termed Middle Bronze Age, supported by the ceramic evidence and by radiocarbon dates.

4.4.2 During the Middle Bronze Age an extensive field system was constructed over large parts of the site (Fig. 5). It consisted of both segmented and continuous ditches that divided the landscape into rectilinear fields and enclosures. The earliest land divisions were thought to be a series of linear ditches, orientated north-west to south-east, which formed a series of strips extending across the entire site and running across the contour. A more intricate system of enclosures and more substantial field boundaries was subsequently constructed within these early strip fields. Finally, discrete areas of settlement were established within the system of fields and enclosures. This three stage progression of division, enclosure and settlement has been used to summarise the results for the Middle Bronze Age and is summarised in Fig. 6.

The strip system

4.4.3 The earliest form of land division, the strip system, consisted of a series of narrow, regularly spaced, linear ditches, orientated north-west to south-east. The strips survived to varying degrees across the entire site; most were heavily truncated and only survived for a fraction of their original length, others may well have vanished altogether. The strips were best preserved in Area E (see Fig. 9, ditches **313**, **696**, **773** and **853**). Each of the strips in Areas E and F was c. 60 – 80m wide. In Areas C and D (Fig. 8) the spacing between ditches **10478**, **12005**, **12456** and **13082** was slightly greater at 90 – 100m. The subsequent phase of fields and enclosures overlaid the strips, truncating them in certain locations. This may explain the lack of evidence for strips in parts of the site such as Area B (Fig. 6) where the subsequent enclosures may have been constructed directly over the top of the strip ditches. The strips were generally poorly

dated; a few fragments of Middle Bronze Age pottery were retrieved from ditch **853** (10 sherds, 4g) and ditch **2124** (3 sherds, 41g), both in Area E.

Fields and enclosures

Areas A, B and north of C (Fig. 7)

4.4.4 The Middle Bronze Age field and enclosure system in the north of the site extended through much of Areas A and B, and into the northern part of Area C. It comprised a series of rectilinear fields formed by substantial ditches (the principal ones being ditches **4209**, **4217**/**10115**, **4250**, **4461**, **5228**, **5815**, **5998**, **6099** and **6103**/**5414**). The largest ditch was **5815** in Area A, measuring up to 4.48m wide and 1.54m deep (Fig. 28, section 1182). There was a distinct lack of contemporary features within the enclosures although evidence of fairly intensive settlement existed (Settlement 1, see 4.4.15). The topography is an important consideration in this part of the landscape. The eastern part of the field system was located on low, damp ground, around 12 – 13m OD, with the central north to south spine of the enclosures in Area B (ditches **5228** and **4250**) respecting the boundary between lower and higher ground.

4.4.5 Ditch **5228**, along this boundary, was extremely wet with waterlogging occurring within a few centimetres of the surface. This ditch, and the terrace step on its western side, followed the course of a palaeochannel; during excavation water still welled up into a pool at its northern end. Nine environmental samples were taken from this ditch and contained abundant waterlogged remains including several species of seed, berries (especially elderberries) and insects. Waterlogged wood was also retrieved including a stake (W04 in Appendix A.12) and three pieces of timber, one of which (W07) had a broken mortice joint. The material recovered from this feature, including the worked timber (W09) and evidence of woodworking debris, may simply be the result of woodworking in the vicinity. However, the material's position in the upper fill, and the structural timber (broken in antiquity) both point towards some or all of the material being derived from a structure that has either collapsed or been dismantled, potentially nearby. A long stretch of ditch **5228** was machined out to expose any concentration of wood in the lower fills. During this process it became clear that the ditch had been originally excavated in segments, each approximately 4m in length. The segments were only visible at this lower depth where natural geology was visible between each segment (see plate in Fig. 7). A possible south-western entrance into this enclosure was formed by the southern end of ditch **5228** and the western end of ditch **4209**. There were thin but quite extensive patches of gravel in the area between these ditch butts, having the appearance of rough metalling potentially designed to firm up a well-used but damp entranceway. An oval feature (**5281**), either a short length of ditch or a pit, was cut through the end of ditch **4209**. Given its location this feature may have been dug to aid in drainage at the corner of the field. At the surface of this feature a well preserved, small, side-looped and socketed spearhead was recovered (SF 182; see Fig. 10).

4.4.6 Close to ditch **5228** were a number of pits; some were obviously wells (such as **5657** – Fig. 27, section 1108 – and **5694**), others had a less obvious function but were probably still dug for the procurement of water (such as pit **5544**). Pits **5547** and **5792** both contained waterlogged remains in the form of numerous seeds of wetland plants, along with seeds of brambles and elderberries.

4.4.7 Other significant features included large waterholes **4358** in Area B and **10356** in Area C. The former contained environmental evidence in the form of waterlogged nettle seeds, duckweed and water crowfoot. A series of segmented ditch segments in Area C (ditches **10025**, **10486**, **10648**, **10690** and **13021**) appeared to form a staggered or segmented entrance into the enclosure system from the south. In the same area were a number of scattered pits, some of which contained significant quantities of burnt flint; such as pit **10021** (744g) and pit **10158** (over 2kg). Details of the principal ditches within the field system are listed in Table 4.

Ditch No.	Area	Pottery: No. sherds / g	Animal bone: NISP / g	Worked Flint (g)	Other finds	Enviro.	C14 date, 95% probability
4209	B	14/72	102/2723	1716		CPR	
4217	B	136/496	277/8211	2910		C & W	
4250	B	7/22	112/3839	1013		C & W	
4461	B	5/6	176/5862	507	SF168: Large saddle quern	C & W	Fill 4827: 1420-1260 cal. BC
5228	B	1/1	66/3086	628	Worked wood inc. roundwood and timbers	WPR	Fill 5259: 1420-1200 cal. BC
5815	A		141/11023	106	Fill 5967: fragments of human skull	WPR	
5998	A		21/818				
6099	A		14/145				
6103/ 5414	A		47/1901	24			
10115	C	14/51	91/2431	790			

Table 4: Principal Middle Bronze Age field system ditches, Areas A, B and north of C

Human skeletal remains

4.4.8 Human remains dating to the Middle Bronze Age in the northern fields included fragments of human skull from ditch **5815** (fill 5967) in Area A and a single femur from ditch **5564** (fill 5573) in Area B. The femur was that of an adult, although the sex of neither could be determined.

South of Area C and Area D (Fig. 8)

4.4.9 The Middle Bronze Age activity in the south of Area C and Area D contrasts with the more complex and developed field systems to the north and south. The early strips were present in both Areas C and D (ditches **10478** and **12005** in Area C, ditches **12456** and **13082** in Area D), between which sub-rectangular enclosures had been set, one in each area. In both instances these enclosures were three-sided, the north side being open. In Area C this was represented by enclosure ditch **10942**, heavily truncated by subsequent Middle and Late Iron Age activity and on a different alignment and layout. The dating evidence for ditch **10942** was poor, consisting of only 4 small sherds (5g) of Middle Bronze Age pottery. In addition, a possible saddle quern was found in the eastern terminal ditch along the southern arm of the enclosure (fill 11055,

SF 339). The stone appeared to have been deliberately placed in the terminal, with the worn side facing upwards.

4.4.10 In Area D the enclosure was formed by ditches **12560**, **12847**, **12887**, **12956** and **13041**. The eastern side of the enclosure truncated substantial earlier pits at its northern and southern ends (pits **12849** and **13044** – see Fig. 27, section 2155). These pits may themselves have been an early form of boundary marker and were mostly devoid of artefacts, apart from a rubbing stone in pit **13044** (SF 422). A further Middle Bronze Age feature, ditch **12407**, lay to the south of this enclosure, on a different alignment to all other contemporary features. It was a wide but very shallow ditch orientated east-northeast to west-southwest. The form and dimensions suggest it may have been excavated to construct a turf bank. To the south was waterhole **13276**, which has provisionally been dated as Middle – Late Bronze Age. The Middle Bronze Age features in Area D were poorly dated, with just 4 sherds of pottery (9g) being found in enclosure ditch **12887** (fill 13378).

Areas E and F (Fig. 9)

4.4.11 The field system in the south of the site was formed by a series of predominantly large rectilinear enclosures. The 'spine' of this system was a substantial linear boundary ditch, **1057** (Fig. 27, section 499), which extended for at least 200m across the higher ground in the west of Area E. Further substantial ditches such as **925** (Fig. 28, section 332) and **2768** radiated from ditch **1057**. Ditch **925** contained a sizeable assemblage of contemporary ceramics, distributed along its entire length and throughout its sequence of fills; at the western terminal of the ditch, where it abutted just short of ditch 1057, it contained 151 sherds (425g) of Deverel-Rimbury pottery, as well as a dog burial. Many of the ditches that made up the field system in Area E contained substantial assemblages of Middle Bronze Age pottery. Other elements of the field system included a large D-shaped enclosure, formed by ditches **728** and **1982** and a smaller enclosure formed by ditches **447** and **449**, which contrasted from the rest of the system in its size and form. The latter had many similarities to the small isolated enclosures seen in Areas C and D. In the west of the area, ditches **2161** and **2257** appeared to form a stratigraphically earlier square enclosure prior to the construction of the larger ditch **1016**. Ditch **2161** was also truncated at its southern end by an elongated pit or short length of ditch (**3371**).

4.4.12 Those principal ditches which contained finds assemblages are summarised in Table 5.

Ditch No.	Pottery: No. sherds / g	Animal bone: NISP / g	Worked Flint (g)	Other finds	C14 date, 95% probability
447/449		25/801	17	Human skull (HSR 722 cut **719**)	Fill 457: 1410-1210 cal. BC
728	4/18	97/2564	136	SF66: Cu alloy spearhead	Fill 906: 1420-1260 cal. BC
925	214/894	312/9288	1411	Dog burial in west terminal (cut **2917**)	Fill 1759 & 2912: 1420-1260 cal. BC (2 dates)
1016	3/9	128/4976	48		Fill 2684: 1450-1260 cal. BC (2 dates)
1057	35/302	343/11011	1398	Human skull fragments (fill 2530, cut **2528**)	

Ditch No.	Pottery: No. sherds / g	Animal bone: NISP / g	Worked Flint (g)	Other finds	C14 date, 95% probability
1982	25/287	160/7881	244	Fill 2380: Smoothed stone SF123: Saddle quern frag. SF129: Saddle quern frag.	
2161	14/84	22/908	11		
2257	5/46	38/860	26		
2768		75/2301	521		
3371	46/177	37/832	8		

Table 5: Principal Middle Bronze Age field system ditches, Areas E and F

4.4.13 There were two discrete areas of settlement within the field system, both in Area E. These are discussed separately below (4.4.17 – 20). Other contemporary features included a number of scattered pits, most representing wells or small waterholes (including **440**, **794**, **812**, **1213**, **1263**, **1637**, **1888** and **2030**). All of the wells were located around the 15m OD contour, as in fact were most of the Late Iron Age and Early Roman examples.

Human skeletal remains

4.4.14 One partial skeleton and six fragments of HSR, either skulls or longbones, were found in Area E. Skeleton 813 was found towards the bottom of pit **812**. The skeleton comprised a partial skull, arm bones and ribs and was approximately 30% complete. The skeleton was that of an adult, but it was not possible to estimate a more precise age. Interestingly the distal third of the left ulna had been amputated, leaving a stump of smooth remodelled new bone. Amongst the individual bones were three partial skulls, recovered from ditches **447** (HSR 722), **925** (tertiary fill 2910 of western terminal) and **1057** (primary fill 2530). The skull in ditch **925** was in the fill above the dog burial mentioned in 4.4.11.

Settlement

Settlement 1 (Area B; Fig. 10)

4.4.15 Ditch **4209** in Area B had silted up to perhaps two thirds of its depth when its upper levels became the depository for an extensive assemblage of settlement-related waste (fill group 4206; represented in Fig. 27, section 937 by fill 4587). This material was present throughout the central and eastern parts of the ditch and filled the feature to ground level, being up to 0.34m deep. Given the density of finds within the fill, an intensive excavation strategy was carried out with each metre of the upper ditch fill being assigned a separate context number with some divided again south and north to provide a more accurate picture of finds distribution within the feature. In total 68 context numbers were assigned. The fill matrix consisted of a humic material and contained large assemblages of pottery (4kg), animal bone (20kg), worked flint (10kg), burnt flint (11kg) and heated sandstones, as well as several pieces of worked bone and two copper-alloy artefacts (see Table 6). The large stuck flint assemblage is typical of later 2nd millennium flintworking industries and is dominated by crudely reduced waste pieces, flakes, occasional retouched implements and core tools. Of particular interest are two unusual arrowheads, both from the same 1m section (12104; SF 290 and 291). One represents an attempt to make a barbed and tanged arrowhead using an earlier,

recorticated flake. The other comprises an elongated tanged arrowhead, made from an earlier Neolithic blade. Environmental remains were preserved as a result of both charring (including spelt wheat, barley, vicia, tuber and brassica) and waterlogging (including elderberry). Also of relevance is an unusual copper alloy object, interpreted as a possible scabbard chape (SF 152, see photo in Fig. 10), which was found in top soil close to the settlement 1 ditch.

4.4.16 Two radiocarbon dates have been obtained from fill group 4206. One, taken from carbon residue on a sherd of pottery was surprisingly early; 1520 – 1400 cal. BC (95% confidence, SUERC-34847, 3185 ± 35BP). The second, taken from an animal bone, returned a date of 1420 – 1260 cal. BC (95% confidence, SUERC-35988, 3060 ± 30BP), which matches several other dates from the field system. The lack of settlement related features in the enclosure to the north suggests either that the features could have been located in the unexcavated area between Areas B and C or alternatively that the features either have not survived or did not include earthfast structures, pits and other sub-surface features. This may be explained by the generally wet conditions in this part of the site (around 12m OD). It it possible that the ground level was artificially raised before structures were erected, although this ground has been truncated by later activity.

Pottery: No. sherds / g	Animal bone: NISP / g	Worked flint (g)	Burnt flint (g)	Other finds	C14 date, 95% probability
488/3916	566/19849	10390	11353	1828g fired clay incl. SF171: Loom weight SF 286, 287, 454: Bone awls SF 172, 453: Perforated bone pins SF 173, 174, 175: Bone points SF 205: Carefully made bone spatulate object SF 176: Cu alloy artefact SF 204: Cu alloy pin	1520-1400 cal. BC (pot residue) 1420-1260 cal. BC (sheep/cattle bone)

Table 6: Finds details from Settlement 1

Settlement 2 (Area E; Fig. 11)

4.4.17 Within the Middle Bronze Age enclosure system in Area E, one area appeared to have been further enclosed within shallow, re-cut ditches (**821**, **907** and **995**) on three sides. The ditches enclosed a group of features including a rectilinear post-built structure consisting of approximately 15 postholes (structure **827**), a waterhole (**472**) and a number of smaller pits and/or wells. A large finds assemblage was retrieved from the northern ditch **995** and included Deverel-Rimbury pottery, animal bone, heated sandstones, struck flint (including three arrowheads) and the top of a human skull in the western ditch terminal. The proximity of structure **827** to waterhole **472** makes it unlikely that both existed at the same time, suggesting more than one phase of use for the area. Waterhole **472** (Fig. 28, section 97) contained a (possibly placed) sheep skeleton and the skull of a polecat in its primary fill. Pit **1010** was a small shaft-like feature filled with burnt material and may indicate a specific activity being carried out within the settlement. This area contrasts with Settlement 1 in many ways, chiefly due to the level of survival of the settlement features, although the finds assemblage itself is less than half that of Settlement 1. This could be related to a difference in function of the settlement areas (there is a dramatic difference in the quantities of contemporary flintwork for instance) or it may be linked to the difference in level (15m rather than 12m

OD) and therefore water table. A piece of cattle bone from ditch **995** returned a radiocarbon date of 1320 – 1120 cal. BC. This is significantly later than many of the dates for the field system itself and fits with the proposed theory of settlement being imposed on the already established enclosure systems (within the strip fields). The main features of Settlement 2 are summarised in Table 7.

4.4.18 A human skull fragment was recovered from the western terminal of ditch **995**. It had a deep striation which represents a cut or chop mark that had been made to the back of the head.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Worked Flint (g)	Other finds	C14 date, 95% probability
472	Waterhole	3/45	131/1482	99		
824	Group of pits	19/34	37/1676	38		
827	Structure	10/8	3/49	1		
973	Two tree boles	6/69	16/590	213		
995	Ditch	159/513	81/5401	427	Human skull frag. (fill 994, cut **995**) SF53, 58, 59: Flint arrowheads SF60: Possible rubbing stone	Fill 1655: 1320-1120 cal. BC
1010	Pit	8/94		8		
Total		**205/763**	**268/9149**	**786**		

Table 7: Settlement 2, Area E

Settlement 3 (Area E; Fig. 11)

4.4.19 To the west of Settlement 2, within the same earlier enclosure, was a second area of settlement features and debris. Somewhat more similar to Settlement 1 in Area B in that its main feature was an assemblage of domestic waste, possibly midden deposits (fill group 2376; represented in Fig. 27, section 485 by fill 2469), deposited into the top of ditch **1982** when it had almost completely silted up. The assemblage consisted of similar material once again; Deverel-Rimbury pottery, animal bone, worked flint and heated sandstones. There was also a group of nine postholes (**2432**), which although currently undated, would appear to be associated with the material found in the ditch. Details of the finds associated with Settlement 3 are listed in Table 8.

Pottery: No. sherds / g	Animal bone: NISP / g	Worked flint (g)	Burnt flint (g)	Other finds	C14 date, 95% probability
156/1285	168/5066	901	75	SF128: Worked and polished bone point SF129: Quern fragment SF137: Amber bead	Fill 3364: 1420-1260 cal. BC

Table 8: Settlement 3, Area E

4.4.20 The directly-associated finds assemblages from the three settlements are shown below in Table 9.

Settlement	Pottery: No. sherds / g	Animal bone: NISP / g	Worked flint (g)	Burnt flint (g)	Other finds	C14 date, 95% probability
1	488/3916	566/19849	10390	11353	Loom weight Worked bone awls and pins Cu alloy pin	1520-1400 cal. BC 1420-1260 cal. BC
2	205/763	268/949	786		HSR Arrowheads Rubbing stone	1320-1120 cal. BC
3	156/1285	168/5066	901	75	Worked bone Quern Amber bead	1420-1260 cal. BC
Total	**849/5964**	**1002/34064**	**12077**	**11428**		

Table 9: Total finds assemblages from the three Settlement Sites

Late Bronze Age

4.4.21 A distinct and separate Late Bronze Age phase was difficult to detect anywhere on the site. However, a few elements of the Middle Bronze Age field system did contain Late Bronze Age pottery in their upper fills. The most significant instance of this was the large boundary ditch (**1057**) in Area E, the upper fills of which (fill group 1054) contained 85 sherds (481g) of Late Bronze Age pottery along with animal bone (3458g) and worked flint (5345g). An unusual lead object was also retrieved (SF 71). Now folded in two, it was originally a thin, flat, almost butterfly-shaped object, and was probably cast with one surface bearing a raised abstract design. Although lead was widely used in the Bronze Age, lead objects are unusual, and only occasionally reported.

4.5 Period 4: Early Iron Age (c. 800 – 350 BC)

4.5.1 Early Iron Age land use was mainly restricted to an 'open' settlement spread across Area A (Fig. 12). The only other definite features were isolated pits in Areas C and F, the former probably representing outliers to further settlement immediately to the west, beyond the limit of excavation. There was also a low-level background scatter of Early Iron Age pottery in the tops of earlier features, and in later features, across Areas B and E.

Area A (Figs. 12 and 13)

4.5.2 The Early Iron Age phase was chiefly represented by the remains of a settlement built within the boundaries of the Middle Bronze Age field system and confined to the higher ground in Area A. The settlement spread over approximately one hectare and was characterised by post-built structures and pits, two of which were very large. The majority of the finds came from the south-eastern corner of Area A, suggesting this was the focus of activity. The post-built structures (Table 10) included two sub-circular structures (**5804** and **5882**), which almost overlapped with each other. There were also at least eight 4-post structures (perhaps granaries or other forms of store) and three other groups of postholes of indeterminate layout. The majority of the 4-post structures

were aligned along an MBA ditch line towards the west of the settlement area, presumably sheltered behind the hedgebank.

Structure No.	No. of postholes	Pottery: No. sherds / g	Animal bone: NISP / g	Environmental
5804	7			Moderate charcoal
5845	8			
5882	8			Moderate charcoal, uncharred elderberry seeds
5900	4			Charcoal, occ. charred grains
5931	4			Charcoal, occ. charred grains
6024	8			
6223	4			Charcoal, occ. charred grains
6231	4			Charcoal
6326	9	8/193		
6364	4			Charcoal, significant amount charred barley and wheat, chaff, weed seeds
6384	4	1/3	1/77	Charcoal, occ. charred grains
6421	4	7/96	12/419	Charcoal, occ. charred grains

Table 10: Early Iron Age post-built structures, Area A

4.5.3 Two very large pits were constructed along the line of the main Middle Bronze Age enclosure ditches (pits **5898** and **6162**). Both pits contained Early Iron Age midden-type material, but whereas pit **6162** to the north contained a moderately small finds assemblage (see Table 11 below), pit **5898** to the south contained a very large assemblage. The pit measured approximately 6m in diameter and was 1.4m deep (Fig. 28, section 1163). It had partially infilled naturally (to c. one third of its depth) when it began to be used for the disposal of large quantities of domestic waste. This included a regionally important assemblage of Early Iron Age pottery (29kg), 20 kg of animal bone, human bone, a copper alloy penannular ring or brooch (SF 267), worked flint and worked bone implements (including a pin-beater and a carefully made needle, used for the working of textiles and leather respectively). The finds assemblage was spread across a series of charcoal rich, humic fills. The worked flint was crude, even when compared to the Middle Bronze Age assemblages, and represents contemporary Early Iron Age flintworking. A radiocarbon sample taken from a piece of animal bone in fill 6032, one of the finds rich fills, returned a date of 550 – 390 cal BC (95% confidence, SUERC-35986, 2410 ± 30BP).

4.5.4 A number of smaller contemporary pits were also excavated in Area A. Pit **6433** had the appearance of a storage pit, and had a cattle cranium placed on its base, possibly as an act of closure. Pit **6414** was located to the north-east of 4-post structure **6364** and despite its small size contained 21 sherds (456g) of Early Iron Age pottery.

Feature No.	Pottery: No. sherds / g	Animal bone: NISP / g	Worked flint (g)	Other finds	Enviro.
5898	1559/28992	573/20408	2865	SF261, 262, 264, 261, 271: Worked bone artefacts SF267: Cu alloy penannular ring SF270: Loom weight Partial neonate skeleton (HSR 6550), adult skull fragment, neonate tibia	Substantial amount of charcoal, occ. charred grains of barley
6162	125/1348	141/5710	46	Adult femur	
6414	21/456	4/15			
6433		1/1159			Single grain

Table 11: Selected Early Iron Age pits, Area A

4.5.5 The uppermost fills of some of the larger Middle Bronze Age ditches became infilled in the Early Iron Age, with further dumps of domestic waste recovered from them. Fill group **5826** represented the upper fills of ditch **5815**, while group **5995** represented the upper fills of ditch **5998**. Both contained large assemblages of Early Iron Age pottery and other finds (Table 12). This was most noticeable along the stretch of ditch north of large pit **5898** and to the west of structures **5804** and **5802**.

Ditch/ Fill Group	Pottery: No. sherds / g	Animal bone: NISP / g	Worked flint (g)	Other finds
5815/ **5826**	684/10109	148/4903	1225	SF289: Substantial antler handle
5998/ **5995**	78/690	24/722	149	

Table 12: Early Iron Age in-filling of Middle Bronze Age ditches, Area A

Human skeletal remains

4.5.6 Two Early Iron Age crouched burials were found in Area A as well as a partial skeleton and another four instances of individual bones recovered from contemporary fills.

1.1.1 Skeleton 6036 (fill 6037, grave **6035**), a crouched inhumation, was recovered from a pit and was lying with the skull in the east end. The skull, torso and upper extremities were lying prone, with the legs on their left side. This was the best preserved skeleton from Area A. Features of the skull and pelvis were consistent with those of a female, while dental attrition and other traits suggest an age of between 20 and 30 years.

4.5.7 Skeleton 6394 (fill 6393, grave **6395**) was recovered from a rectangular grave in the north of Area A and was lying in a crouched position on their right hand side with the skull to the north. It was approximately 50% complete and comprised upper and lower extremities only. The individual is provisionally sexed as possibly female and aged between 36 and 45 years.

4.5.8 Large pit **5898** contained the partial skeleton of a neonate (HSR 6550, secondary fill 6139) consisting of skull fragments and bones from the upper extremities, torso and lower limbs. Despite its incompleteness the skeleton was in very good condition. Within the same fill was a complete frontal bone from an adult skull. In a different fill of the same pit (secondary fill 6075), a well preserved complete left tibia of a neonate was found.

4.5.9 Large pit **6162** contained an adult femur. The entire bone was abnormally thickened and heavy and while the diagnosis requires further analysis (by the application of radiography) Paget's disease is suggested. If confirmed, this would be the earliest recorded case of this particular condition.

Area C

4.5.10 There were two small Early Iron Age pits in Area C, both on the higher ground in the west of the area (Fig. 11). Pit **10787** contained 22 sherds of pottery weighing 175g, including sherds of a handled tripartite jar. Pit **10780** was located 10m to the south-east and again contained 22 sherds of pottery (83g) including the complete profile of a hemispherical cup.

Area F

4.5.11 A single pit (**593**) in Area F was dated as Early Iron Age by a small assemblage of pottery retrieved from the primary fill (16 sherds, 89g). The upper fill (549) contained crop processing waste. The pit was the only feature of this date recorded in the southern half of the excavation (Areas D, E and F) with the exception of a pit completely excavated in the trench evaluation.

4.6 Period 5: Middle Iron Age (c. 350 – 100 BC)

4.6.1 Middle Iron Age activity was recorded in Areas A, B and C (Fig. 14). The main concentration was on the higher ground in the west of Area C, consisting of a deep-ditched settlement enclosure. In Area A, also on the higher ground in the west of the field, several Middle Iron Age pits and a grave were discovered. There was activity to a lesser extent in the north of Area B, although the majority of the features here contained predominantly Late Iron Age and/or Conquest period assemblages and are therefore discussed below in section 4.7.2.

Area A

4.6.2 Limited evidence of a Middle Iron Age presence was recorded in the south-west of Area A (Fig. 14). Four pits (**6215**, **6276**, **6308** and **6351**) and a grave containing an adult burial (**6485**) were located within an area measuring approximately 30m^2 (Table 13). Of the pits, **6276** contained the most significant finds assemblage, including ceramics (22 sherds, 348g), animal bone, a swan-necked ring-headed brooch pin (SF 273) and an antler knife handle (SF 275), which had held a fairly large blade.

Human skeletal remains

4.6.3 Skeleton 6487 (fill 6486, grave **6485**) was found in a circular pit (presumably a disused storage pit) and was lying on its right hand side, with its skull in the north and facing west, its legs flexed and left arm extended behind. The evidence suggests the individual was a male who was over 35 years of age at death. Next to the head were the remains of a vessel, comprising refitting fragments of a substantially complete jar, missing only parts of the low wall and half the base. This is an important example of whole, or substantially whole pots being used as grave goods in the Middle Iron Age, and is paralleled locally by a burial at Wicken (Gilmour 2009).

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Other finds
6215	Pit	1/6	3/53	
6276	Pit	22/348	2/136	SF273: Cu alloy brooch pin SF274: Worked antler SF275: Antler knife handle
6308	Pit	18/189	13/544	
6351	Pit	41/246	5/41	
6485	Grave	48/816 (includes near complete pot with burial)	4/15	SF277: Small iron nail

Table 13: Summary of Middle Iron Age features, Area A

Area B

4.6.4 One definite Middle Iron Age feature was recorded in Area B although other elements of the field system, assigned a Late Iron Age date, may have originated in the Middle Iron Age, evidenced by a number of Middle Iron Age pot sherds in some of the ditches and in a small pit, **4201**, at the south of the area (Fig. 14). The single definite feature was a short length of ditch (**4172**) measuring 3m long, directly adjacent to a 5m length of curvilinear gully. The short length of ditch contained fragments of Middle Iron Age pottery from at least 12 different vessels (173 sherds, 919g), including the partial profile of five slack-shouldered jars. The feature also contained environmental remains in the form of cereal grains, chaff and weed seeds. In addition, a fragmentary copper alloy object (SF 161) tentatively identified as part of the pin of an intrusive Anglo-Saxon buckle (5th – 6th century) was recovered.

Area C (Fig. 15)

4.6.5 The Middle Iron Age was well represented in Area C. The western side of the field rose noticeably onto a gravel ridge at approximately 16m OD along its western edge. Located on this higher ground was the extreme eastern part of a Middle Iron Age settlement consisting of enclosure ditches, structures and pits (Table 14), which extended well beyond the limit of excavation. The settlement began with a series of small ditches, including **10076**, **10403**, **10539** and **10747**, roughly aligned along the 15m contour. An environmental sample from ditch **10076** contained waterlogged plant remains including spike rush and duck weed along with small amounts of charcoal. The presence of duckweed suggests that this ditch, even on this high gravel ridge, would have contained standing water, possibly seasonally.

4.6.6 The smaller ditches were superseded by a series of much larger ditches, which formed a system of enclosures. The principal outer ditches of this system (ditches **10031** – Fig. 29, section 1728 – and **10812**) followed the contour of the higher ground even more closely. The quantity of finds within the ditch fills suggest that habitation was occurring in the immediate area. Environmental evidence also points towards domestic activities; the samples produced small amounts of charred grain, chaff and crop weed seeds.

4.6.7 Two structures were found to the west of ditches **10031** and **10812**. Ring ditch **10986**, the partial remains of a roundhouse, consisted of a truncated eaves drip gully, open to the east, with possible internal postholes and associated external ditches. No pottery was recovered from the feature but there was a small quantity of animal bone and

sparse crop plant remains in the environmental samples. Directly to the south, almost abutting **10986**, was a second eaves gully, structure **11204**. This was more horseshoe-shaped, open to the south, and may represent the remains of an associated external structure rather than a roundhouse. It contained similar environmental evidence with the addition of possible remnants of burnt thatch or fuel.

4.6.8 A third structure, **10722** to the north, was horseshoe shaped and consisted of a deep eaves gully that was open to the east, an internal pit and several associated ditches including **10455**, a short length of re-cut ditch to the west, which contained the majority of the pottery and animal bone assemblage. All three structures were well dated and are broadly contemporary with the waste assemblages found in the main enclosure ditches.

4.6.9 A number of pits were also located within the enclosure ditches. The most notable was pit **11175** which contained the remains of some kind of oven. The pit was sub-square, measuring approximately 1.3m long and up to 0.7m deep. It contained a large quantity of collapsed *in-situ* fired clay (10060g). Pottery from the pit included 7 sherds (282g) of 'late La Tène-style' grooved ware.

4.6.10 To the north of ditch **10031** was a series of at least two parallel ditches orientated west-northwest to east-southeast, extending across the width of Area C (including ditches **10042** and **10361**). The two ditches may have been constructed to create a bank in between as the two were only *c.* 5 to 10m apart and parallel to each other. This boundary re-established one created in the Middle Bronze Age by ditch **10478**, which was part of the strip system and shares a similar orientation. Both ditches were poorly dated; a total of 8 sherds (74g) of Middle Iron Age pottery was retrieved, including an unusual cordoned sherd from ditch **10361**. Environmental evidence from the same ditch comprised waterlogged plant remains including seeds of sedges, water crowfoot and pond weed.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
10031	Ditch	99/1224	135/13516	Charred grain, chaff & crop weed seeds	
10455/ 10722	Structure	70/1549 5/70	46/1577 11/204		
10812	Ditch	61/659	180/5637	Charred grain, chaff & crop weed seeds	SF311: Quern frag.
10986	Roundhouse		3/109	Crop plant remains	
11175	Pit/Oven	68/890	18/589		Fired clay - 10060g
11204	Structure	2/50	17/449	As **10986**, with possible burnt thatch or fuel	

Table 14: Principal features of Middle Iron Age settlement, Area C

Human skeletal remains

4.6.11 Middle Iron Age HSR in Area C comprised an un-urned cremation, a pit containing both human and animal bone and a fragment of femur in a ditch (**10042**).

4.6.12 Un-urned cremation 10923 (pit **10924**) was located directly between roundhouse gully **10986** and associated gully **11204**, suggesting it had been deliberately buried in this location and was therefore contemporary. A few identifiable bone fragments survived.

4.6.13 Pit **10832** in the north of Area C contained a badly damaged partially articulated skeleton, which was accompanied by several animal bones including part of a cattle cranium. The inhumation has provisionally been dated as Middle Iron Age due to its proximity to Middle Iron Age features. It was not possible to estimate the sex or age of the individual.

4.7 Period 6: Late Iron Age (including Late Pre-Roman Iron Age; c. 100 BC – AD 43)

4.7.1 Much of the Late Iron activity at Clay Farm comes at the very end of the period with the introduction of the first wheel-thrown pottery, more commonly termed the Late Pre-Roman Iron Age. In the north of Area B, a field system that probably had its origins in the Middle Iron Age became heavily used in the Late Iron Age (Figs. 16 and 17). In Area C there was continued use of the settlement established in the Middle Iron Age. There was also a high status cremation in the south of Area C, dated immediately prior to the Roman conquest. In Area E, extensive activity was discovered on the higher ground in the form of a field system, partially set out in relation to the extant Middle Bronze Age enclosure system, within which sat a house enclosure, waterholes and pits.

Area B (Fig. 17)

4.7.2 Abutting the Middle Bronze Age field system in the north of Area B was an area of field system and settlement which had the appearance of having developed organically. A significant assemblage of Middle Iron Age pottery was found in possible roundhouse gully **4172** (165 sherds, 882g; see Fig. 14 for location), as well as lesser amounts in other features, providing a likely date of origin for the field system and settlement. However, it is also possible that on full analysis parts of this system will subsequently prove to date to the Middle Bronze Age, particularly among those ditches on a west-northwest to east-southeast alignment.

4.7.3 The principal ditches of the enclosure system included **4022**, **4120** and **4157**, which formed an almost pentagonal shaped field. The western side of ditch **4120** followed the approximate line of the 13m OD contour. The majority of the contemporary finds came from the north end of ditch **4120** and features to the west, suggesting any area of more dense settlement may have been on the higher ground to the west. An almost intact horse burial was recovered from ditch **4022**. Unfortunately, post-medieval quarrying had almost completely removed earlier features in the north-west of Area B.

4.7.4 Within the pentagonal shaped field was roundhouse **4793**, which consisted of a complete eaves drip gully, measuring 10m in diameter with an east facing entrance. Finds from the gully included a mixture of Middle and Late Iron Age pottery, fired clay and animal bone. Somewhat surprisingly, the roundhouse was located off the higher ground at approximately 12.5m OD.

4.7.5 A number of pits, some clearly waterholes, others less obvious but still probably used for procuring water, were located on the fringes of the field system. A number were clustered together in the north-east corner of Area B including pits **4052**, **4060**, **4077**, **4089** and **4104**, all measuring between 0.6 – 0.9m deep. Most of these pits contained

no finds. Selected features from the Late Iron Age activity in Area B are summarised in Table 15.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
4022	Ditch	84/783	56/2584		
4104	Pit	104/595	18/550		
4120	Ditch	418/3948	93/2714	Occasional charred grains and chaff	SF190: Possible small plain bangle
4157	Ditch	141/1294	75/2067	Occasional charred grains and chaff	
4793	Roundhouse	57/231	15/253	Charcoal only	

Table 15: Selected Late Iron Age features, Area B

Area C (Fig. 18)

Settlement

4.7.6 The upper levels of several of the Middle Iron Age ditches in Area C were re-worked or infilled in the Late Iron Age, including the main enclosure ditches. Many of the fills contained an unbroken sequence of ceramic development spanning the Middle and Late Iron Age. This is clearly demonstrated by ditches **10031** and **10812** where Late Iron Age pottery was stratified immediately above deposits containing only Middle Iron Age wares. To see such a clear change between the ceramic assemblages in successive fills is unusual and could imply a hiatus in occupation. Further analysis and radiocarbon dating will be required to address this.

4.7.7 These contexts yielded 45 sherds (501g) of Late Iron Age pottery in total, with a further 120 sherds (2052g) coming from the area's other ditches such as **10077** and **10624**. These were shallower and narrower than the originals, and represented continued use of the enclosures with possible evidence for reinstatement or 'cleaning out' of the ditches. Given the continued use of this part of the site in the subsequent Early Roman period it is likely that some features dated as Early Roman may have been established in the Late Pre-Roman Iron Age and that the division between these two periods is more fluid than suggested here. This will be borne out by further analysis.

4.7.8 There was another group of features in Area C which have tentatively been dated as Late Iron Age. They comprised five small sub-rectangular 'structures' spread out across the lower, wetter, eastern half of the field (structures **10833**, **11159**, **11460**, **11684** and **12065**). Each was formed by a shallow sub-rectangular ditch or gully, which was continuous when truncation had not occurred. All five were orientated roughly north to south and had internal dimensions of approximately 3 x 2m. All were 100% excavated and were completely devoid of finds or environmental evidence. A further example was excavated in Area E (**844**).

Pre-conquest cremation

4.7.9 A circular pit (**10909**) 1.49m in diameter and 0.3m deep, was located in the south-west of Area C. Within the pit was a high status cremation burial. The cremated bone itself had been placed in a wooden box, which partially survived. Many of the fittings from the box also survived including a complete hinge and two partial hinges, a number of small

decorative plates, a large lock plate, and various studs. The cremated remains (10913) comprised 935g of bone including identifiable fragments of skull, upper and lower limbs and several teeth. Preliminary observations suggest that this deposit comprises the remains of a single adult.

4.7.10 Accompanying the cremated remains were at least eleven vessels, mostly imported fine tablewares including samian, terra nigra and terra rubra and a large (Hofheim) flagon and an almost fitting lid. Two samian cups have been tentatively dated to AD10 – 30 while the terra nigra vessel has a wider date range, between AD14 – 79. Out of three terra rubra vessels, a cup and a platter date to between AD20 – 65 and a pedestal cup to AD10 – 50. This comprises a range of high-status accessory vessels typically associated with eating and drinking, possibly representing vessels used at the funerary feast, which were then placed with the deceased in the grave. Other finds included two bone objects inside the wooden casket; a fragmentary toggle or cheekpiece, which was burned, suggesting it may have been amongst the pyre goods, and a pin with a single ring-and-dot motif on the top. Other grave goods included a small glass vessel (SF 333: a near complete unguent bottle of strong, translucent purple colour, measuring 6.6cm in height) and an extremely well preserved chatelaine set (toiletry set, possibly dating to AD 30-50; SF 340). Bulk soil samples were collected from the pit itself and the contents of the vessels and the box were later processed. No evidence of plant remains associated with a funerary feast were discovered.

4.7.11 Only 4m to the east was a second cremation, excavated during the evaluation (Evans *et al*. 2006). The pit was sub-square in shape, roughly 1.4m x 1.5m. Again, the burial proved to be high status with six vessels, eleven metal artefacts including three silver attachments or fastenings, and two bone gaming counters. The burnt bone was spread out in five discrete deposits.

Human skeletal remains

4.7.12 In addition to the remains in cremation grave **10909** and the accompanying cremation excavated in the evaluation, discussed separately above in 4.7.9, Area C contained a small cemetery comprising two urned cremations and one badly damaged inhumation in the north-west of the area.

4.7.13 Urned cremations 10286 (pit **10287**) and 10313 (pit **10314**) were both badly truncated by later ploughing; only the very bottoms of the urns and their contents had survived. Some identifiable fragments survived indicating both were adults but the potential for more precise age or sex estimation is very limited.

4.7.14 Inhumation 10325 (grave **10322**) was directly to the west of the two urned cremations. Like the cremations, it had been heavily truncated by later plough activity. The grave was orientated south-west to north-east and the skeleton was lying with its head in the west end and on its right hand side, facing south, with legs semi-flexed. Approximately 25% of the skeleton had survived. The overall morphology of the bones suggested they were those of an adult, but it will not be possible to determine a more precise age or to estimate the sex of the individual.

Area E (Fig. 19)

Enclosures and settlement

4.7.15 Late Iron Age settlement in Area E was extensive, spread out over approximately 2ha in the higher western half of the area. It was characterised by a series of rectilinear fields, bounded by mostly shallow, narrow ditches. While there was clearly evidence for

a level of planning in the original layout, it also had the appearance of having developed organically, and to an extent to have developed within, or around extant Middle Bronze Age enclosures. Ditches **2126**, **2742**, **2884** and **3053** were narrow linear ditches which formed the outer perimeter of the system and had a planned appearance. Within this were much smaller enclosures formed by more sinuous ditches, which were probably modified as necessary. Dating evidence was present in most of the field ditches, but never in great quantities.

4.7.16 An oval enclosure (**1843**) was distinct from the rest of the field system. It was formed by a curvilinear ditch measuring up to 1.26m wide and 0.52m deep. It enclosed a space measuring 18m x 13m with a well defined entrance to the east. A large assemblage of finds was recovered from the ditch, including pottery (423 sherds, 3775g), animal bone (1882g) and fired clay (495g). One pottery sherd had been re-shaped into a spindle whorl. A neonate burial (SK 1995; see 4.7.19) had also been placed in the northern part of the ditch. The enclosure contained no internal features but given its size and shape and the large assemblage of domestic waste recovered from the ditch, it is likely to have been a house enclosure. A typical Late Iron Age roundhouse would have fitted comfortably in the western half of the enclosure, leaving enough space for a porch area to the east.

4.7.17 There were three further Late Iron Age structures in Area E, including two small circular structures (**3130** and **3216**) formed by narrow, shallow gullies. Structure **3130** measured only 3.5m in diameter internally, while structure **3216** was even smaller at just 2m. The function of these structures in unclear at this stage although some form of hay-rick is a possibility. The third structure (**1633**) survived as a partial gully. It contained relatively large amounts of fired clay (1242g) and a small quantity of crop processing waste which may be significant as it may indicate the presence of a corn-drier or a hearth/oven in which crop processing waste was used as fuel.

4.7.18 Other contemporary features included a number of pits, mostly shallow, and at least three waterholes (**364**, **1333** and **3258**). The pits were scattered throughout the fields with the only obvious concentration being in the north-west of Area E where a group were aligned roughly north to south. Of the three waterholes, only **3258** contained a significant finds assemblage, including pottery (147 sherds, 2064g), dated predominantly to the early 1st century AD. Selected Late Iron Age features in Area E are summarised in Table 16.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
1333	Waterhole	1/27 (LBA)	15/433		
1633	Gully	18/161	35/454	CPW	Fired clay – 1242g
1843	Enclosure	423/3775	64/1882		Fired clay – 495g HSR 1995 - neonate
2126	Ditch	56/1042	21/434		
2742	Ditch	60/587	2/30		
2884	Ditch	17/272	3/95		Fired clay – 11g
3053	Ditch	20/178	2/2		
3130	Structure	17/81			
3216	Structure	12/37	2/3		
3258	Waterhole	147/2064	42/1558		Fired clay – 16g

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
3544	Pit	11/264	13/205	CPW	

Table 16: Selected Late Iron Age features, Area E

Human skeletal remains

4.7.19 Four neonates were found within 'grave cuts' in pits and ditches: 1995 (fill 1994, grave **1993** within house enclosure ditch **1843)**; 3174 (fill 3193, grave **3194**); 3298 (fill 3297, grave **3299** within ditch **3189**); 3594 (fill 3593, grave **3595**). They were either buried lying in crouched positions on their right hand side (3174, 3298 and 3594) or on their front with the head to one side (1995). All were generally well preserved being either 80% or 90% complete with slight to moderate fragmentation. All skeletons had at least one complete bone (either a tibia or a femur) and tooth buds surviving which allowed age to be estimated. The measurements and stages of dental development for all suggest that they were between birth and 28 days old when they died.

4.7.20 Skeleton 2565 (fill 2564, grave **2566**) was located in the south-west of Area E. Approximately 45% of this skeleton had survived. The individual had been buried in an extended position and was lying on their left hand side with their head to the north. The preservation of the pelvis, skull and intact long limb bones means that it will be possible to examine this skeleton for age, sex, stature, the presence/absence of non-metric traits and pathology. Provisional observations suggest that the skeleton was probably female and aged between 25 and 35 years.

4.8 Period 7: Early Roman (AD 43 – 200)

4.8.1 Early Roman settlement and land use was intensive across some parts of the site, with two particular concentrations in Areas C/D and Areas E/F, with limited activity extending into Area B (Fig. 20). As in earlier periods, its main characteristic was a system of rectilinear fields or enclosures, although there was variety within this, particularly when comparing Area D to Area E. There was also evidence for several structures and a well preserved (although possibly unused) pottery kiln. A distinct and unique feature discovered in Area C has been interpreted as a cemetery or memorial garden, which enclosed the two pre-conquest cremations.

Area B (Fig. 20)

4.8.2 There was limited Early Roman activity in Area B. The main feature was a linear ditch (**4024**=**4213**=**10204**), which extended on a north-northeast to south-southwest alignment, from the area of Late Iron Age activity in the north to the southern limit of excavation, and continued into Area C to the south to a total length of 325m. The ditch was badly truncated, only surviving to an average depth of 0.25m. It contained very few finds considering its length, including 21 sherds of Early Roman pottery (175g) and 1005g of animal bone.

Areas C and D (Fig. 21)

Enclosures and settlement

4.8.3 In Area C the system of enclosures established in the Middle Iron Age on the higher ground and re-worked in the Late Iron Age was again referenced in the Early Roman period. A new outer ditch (**10029**) was constructed, possibly to re-establish the original

bank. The limited finds assemblage and lack of environmental evidence from ditch **10029** suggest that this area may now have been away from the main settlement. At the southern end of the Iron Age enclosure system the Early Roman activity became far more intensive with a series of parallel linear ditches (including **11561**, **11636**, **11680** and **11837**) orientated north to south, which were truncated by some, and truncated other, east to west orientated ditches (such as **11601** and **11673**).

4.8.4 In Area D the system of small fields or enclosures was remarkably regular, formed around the spine of the system, ditch **11981**. The fields were small, with ditches that were wide but shallow, perhaps suggesting use for crops rather than as pasture. Selected ditches in Areas C and D are listed in Table 17.

4.8.5 One ditch (**12590**) was noteworthy for the large assemblage of finds and environmental remains retrieved from its fill. It did not quite conform to the layout of the rest of the ditches in Area D and was only 14m long and no more than 0.25m deep, yet it contained nearly 16kg of mainly 2nd century pottery along with animal bone, a large fragment of a rotary quern, two iron artefacts and a number of charred seeds which still require identification. The ceramic assemblage consisted of a mixture of forms including storage jars, amphora, mortaria, finewares and utilitarian cooking vessels.

Ditch No.	Area	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
10029	C	71/1133	131/6833		
11561	C	107/2864	43/2096		
11981	D	23/429	29/784		
11996	D	90/1561	26/1563		SF456: Upper quern or millstone fragment SF370: Whittle-tang knife blade SF375: Enamelled chatelaine type plate brooch, 2nd century
12242	D	24/434	20/1036		SF374, 378, 379: Three plain bangles (fill 12284)
12590	D	1520/15840	68/1301	Charred seeds, require identification	SF457: Poss. millstone SF464: Lower rotary quern Fill 12850: Rotary quern fragments SF443: Iron nail SF448: Iron blade

Table 17: Selected ditches of Early Roman settlement, Areas C and D

4.8.6 At least three structures were associated with the field system in Areas C and D (Table 18). The first was a small but well preserved roundhouse in the south of Area C (Fig. 21a). Roundhouse **12459** consisted of an eaves drip gully measuring just 6m in diameter. It had an east facing entrance with an internal posthole located on each side of the entrance. The southern posthole (**12471**) contained part of a saddle quern or a rubbing stone. There was a shallow, elongated central pit containing burnt material, which could have been the remains of a central hearth. Two environmental samples collected from the central pit yielded charred grains of wheat that were poorly preserved, possibly due to repeated burning. The roundhouse clearly truncated the top of the infilled Middle Iron Age enclosure ditch, indicating that the ditch had completely gone out of use at that location or it had been deliberately infilled and levelled before

the roundhouse was constructed. Pottery from the gully, one post hole and the central pit dated predominantly to the 2nd century.

4.8.7 To the east of ditch **12590** in Area D was rectangular structure **12913**. It consisted of a group of postholes, some of which were quite substantial and more like pits. In the north-east corner of the structure was a well defined rectangular pit which had a ramp-like feature leading into it and two associated beamslots. It was not conclusive that the rectangular pit was associated with the rest of the building but it correlated well with the north-east corner of the structure and may have represented a sunken part of the building. Ditch **12861** may also have been associated with the building as it extended around the south-east perimeter of the building. The features relating to structure **12913** contained a fill with a high humic component as well as considerable quantities of pottery (mostly from the rectangular pit). Samples from the rectangular pit contained crop processing waste in the form of charred cereal grains, abundant chaff elements and crop weed seeds and the samples from the associated post holes and beam slots contained occasional charred crop remains. Combined with the quern fragments and fragments of mortaria found in ditch **12590** and a further quern fragment in ditch **12625** to the south (SF 413), a possible function for the structure may have been crop processing with more specific tasks such as corn drying also taking place. The third structure within these areas, Structure **11847**, is discussed below in 4.8.8.

Structure	Area	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
12459	C	45/383	11/90	Gully: sparse wheat and barley Central pit: charred wheat grains	SF 407, 408, 410: hand-forged nails. P/h **12471**: Saddle quern/ rubber frag.
12913	D	222/2199	15/146	CPW: cereals, chaff, weed seeds	SF418: Fe nail SF437: Fe plate, in p/h **12692**

Table 18: Early Roman structures, Areas C and D

The 'cemetery garden' (Figs. 21 and 22)

4.8.8 In Area C, the two high status cremation burials from the preceding period were enclosed in what has been interpreted as a formal cemetery garden. A rectangular ditch (**11588** – Fig. 29, section 1857) enclosed an area of approximately 60 x 35m, within which were the two cremations along with a series of six parallel narrow ditches (**11748**) and two narrow ditches (**11650** and **11705**) which appeared to form a pathway into the enclosure. The infilling of the enclosing ditch provided dating for the end of the life of the feature; an assemblage of early to mid 2nd century pottery, approximately 100 years later than the burials themselves. The ceramic assemblage did not display any unusual characteristics and finewares were scarce – it is suggested the material is unassociated with the use of the garden and represents middening at the end of its use. Directly to the south side of the putative garden was a rectangular post built structure (**11847**), measuring approximately 23 x 10m. Given the dimensions of the structure, the postholes were not particularly large, suggesting perhaps that this was more of a fenced enclosure or an insubstantial structure, rather than something akin to an aisled barn. Due to the location of the structure, an association with the 'garden' is possible. Preservation of environmental remains was generally poor, with the only waterlogged remains - seeds of wetland plants - coming from one of the postholes in structure **11847**.

4.8.9 The overall, formal layout of the features had the appearance of a garden incorporating planned vegetation, perhaps low hedges and trees. The fact that the 'garden' encloses but is slightly later than the burials is key and adds the element of memorial - the burials took place at around 40 AD and the enclosing ditch became infilled around a century later, perhaps putting the construction of the 'garden' in the second half of the 1st century AD. The features of the 'cemetery garden' are summarised in Table 19.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
11588	Ditch	245/4767	64/1215	Unidentified charred seeds	SF317: La Tène III brooch
11650	Ditch	7/53	3/42		
11705	Ditch	6/117	12/148		
11748	Parallel ditches	5/4	9/126		
11847	Post built structure	7/77	4/23	WPR: seeds of wetland plants from one posthole	

Table 19: Summary of Early Roman 'cemetery garden', Area C

Human skeletal remains

1.1.2 Skeleton 10896 (fill 10965, grave **10966**) was recovered from a north to south aligned grave in the west of Area C, directly to the east of ditch **10029**. The individual had been buried in an extended, supine position with their head in the north end, facing west. A 1st century copper alloy Colchester type brooch was found in the region of the individual's right shoulder (SF 310). The skeleton was approximately 40% complete. No indicators had survived that would allow the age of the individual to be estimated. However, their overall size suggests that they are the remains of an adult. Provisionally, surviving indicators suggest that the individual may have been female.

A.1.3 One inhumation (skeleton 13057, fill 13056, grave **13058**) of Early Roman date was excavated in Area D and comprised the remains of a discrete, articulated skeleton. The individual was lying in a rectangular grave, on their right hand side with their legs semi-flexed and their skull in the west end facing south. The skeleton was approximately 40% complete. Preliminary analysis suggests that the skeleton was that of an adult male.

1.1.4 There was also an instance of human skull fragments in the northern terminal of ditch **11561** (fill 11576) in the south of Area C. The remains comprised two conjoining fragments of skull of an adult of unknown sex. The bone had been modified including one margin, in the region of the frontal sinus, that was highly polished. Transverse striations, possibly scrape marks from a sharp tool, were also present. These modifications suggest that the bone had been defleshed and deliberately worked.

Area E (Fig. 23 and 23a)

Enclosures and settlement

4.8.10 In Area E the Early Roman activity showed continuity from the preceding period with a field system bounded by shallow ditches spread over several hectares. A number of features scattered across the area contained crop processing waste, providing clues as to the economy of the site. Ditch **702** formed what could loosely be called the outer

boundary of this system. Within this was a series of smaller enclosures which contained features including a pottery kiln (see 4.8.12) and an area of waterholes and small wells. The wells were located off the higher ground, in a low-lying wet area to the north and there was a specific concentration of features containing crop processing waste in the same area; in ditches **1278** and **1647**, and in small waterhole **2254**. In the east of Area E were a series of shallow, long running ditches, following the contour between what were presumably wet and dry areas during the Early Roman period. The longest running of these was ditch **305**.

4.8.11 Three small square enclosures to the south-west of the area (**1378**, **1414**=**2669** and **3012**) shared similarities in size and layout and may have shared specific functions. To the east of these, waterhole **932** was located directly to the south of ditch **702** and contained a large assemblage of pottery as well as both charred and waterlogged plant remains. Charred grain, chaff and crop weed seeds provide evidence of further disposal of burnt crop processing waste, while duckweed is evidence of the feature containing standing water. The feature truncated three ditch terminals of the Middle Bronze Age field system. Other waterholes included **1538** and **2104**. The principal Early Roman features in Area E are listed in Table 20.

4.8.12 Pottery kiln **2122** consisted of a figure of eight shaped pit 2.3m long. The main chamber was clay lined and contained two pedestals, and was connected to a stoking pit via a short flue. The stoking pit was unlined and was approximately double the size of the main chamber. There was evidence of collapsed structure throughout the feature including kiln bars and a third pedestal. Only four sherds of Early Roman pottery were retrieved from the kiln (46g). There was also a complete lack of wasters anywhere near to the kiln. Combined with the fact that a lot of the furniture did not appear to have been well fired, this suggests the possibility that the kiln was never used or failed during its first firing. Kilns of this form and date are common on sites locally. At The Hutchison Site, Addenbrooke's Hospital, eleven conquest period kilns were discovered (Evans, Mackay and Webley 2008, 57), some of which shared similarities with the Clay Farm example. The environmental samples collected from the kiln produced an interesting assemblage comprising charred chaff elements including glume bases and detached embryos (possibly suggesting malting activities) and a diverse seed assemblage including dock, vetch (*Vicia* sp.), grass seeds, goosefoot (*Chenopodium* sp), peas (*Pisum* sp.) and wetland species including sedges and bull rushes. Amphibian bones were also noted.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP/ g	Enviro.	Other finds
305	Ditch	6/34	21/400		SF508: Quern frag.
702	Ditch	361/12304 (included 10168g of amphorae from cut **996**)	57/1623		
932	Waterhole	164/1849	29/550	WPR: duckweed CPW: grains, chaff, crop weed seeds	Fill 931: Poss. Quern frag.
1378	Ditch (square encl.)	34/167	20/515		

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP/ g	Enviro.	Other finds
1414= 2669	Ditch (square encl.)	380/1710	36/383	Occasional grains	
1538	Waterhole	85/933	102/4654		SF142, 513: Lower rotary quern frag.
1793	Waterhole	283/1064	62/1279		
2104	Waterhole	137/1317	32/950	WPR: weeds seeds, insects	
2122	Kiln	6/77		Charred chaff elements inc. glume bases. Diverse seed assemblage	
2294	Pit	19/496	18/522		SF118: Upper millstone
3012	Ditch (square encl.)	65/1160	11/218	Charred seeds and grains	

Table 20: Summary of principal Early Roman features, Area E

Buried subsoil

4.8.13 Part of the Early Roman settlement in Area E was sealed by what could best be described as a buried, preserved subsoil (layer 1700). It filled the natural dip formed by the pronounced ridge running approximately north to south in the west of Area E, directly to the east of post-medieval boundary **2147**/**2824** (see Fig. 26). It covered an area approximately 100m north to south and 20m east to west, measuring up to 0.4m deep. It was not an *in situ* Roman subsoil as it contained a mixture of finds but it was clearly sealed by the subsoil which covered the whole of Area E. The layer was intensely metal-detected and test-pitted and produced a number of metal artefacts including a Late Iron Age Class II potin (SF 37), a fragment of a Colchester type brooch (SF 32) and a well preserved Roman enamelled seal box (SF 39; probably of 2nd century date).

Burials

4.8.14 Skeletons 1351 and 1352 (fill 1353, grave **1350**) were buried side by side in the same grave, in supine and extended positions. The grave was located directly to the north of ditch **702** in the centre of Area E. Both skeletons were approximately 50% complete. Sufficient indicators had survived in both skeletons to estimate that one was a possible female (1351) and one was a possible male (1352). The male may have been younger (possibly by more than a decade) than the female, but this requires further analysis.

4.8.15 The only other Early Roman human bone found in Area E was an adult femur found in waterhole **2104** (fill 2105) in the north of the area. The femur had cut marks and a polished margin, possibly as a result of having been worked.

Area F (Fig. 23)

4.8.16 The main Early Roman feature in Area F was a set of six cultivation strips enclosed in a small field. The strips (**526**) were narrow, parallel ditches, orientated east to west, typically 0.4m wide and only 0.1m deep, potentially constructed for the cultivation of a

particular crop. Unfortunately, environmental samples collected from the cultivation strips did not contain any evidence of preserved plant remains. One of the cultivation strips (cut **548**) contained an adult burial in the eastern terminal (HSR 531, see 4.8.18). This set of cultivation strips was located directly to the south-east of another set, orientated north to south, excavated prior to construction of the new road (Timberlake 2007). Very limited evidence of this second set existed along the northern edge of Area F (**588**).

4.8.17 The cultivation strips were enclosed by ditches **170**, **223** and **568**. Ditch **223** contained substantial evidence of crop processing waste in the form of spelt chaff including glume bases, spikelet forks and rachis fragments along with charred grain and crop weed seeds including grass seeds, vetch, rye-grass, goosefoot, dock, knotgrass and fumitory (*Fumaria officinalis*). Fill 1147 from an adjacent pit (**1148**) contained similar assemblages suggesting that this was an area where corn drying may have been taking place. Ditch **533**, to a lesser extent, also contained crop processing waste. In the south of Area F was evidence of further small fields (ditches **139** and **175**). The principal Early Roman features in Area F are listed in Table 21.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Enviro.	Other finds
170	Ditch	12/72	7/1007		
175	Ditch	1/9	7/579		
223	Ditch	13/178	31/413	CPW: spelt chaff, charred grain, weed seeds	
526	Cultivation strips		2/15		HSR 531 in cut 548
568	Ditch		12/245		

Table 21: Summary of principal Early Roman features, Area F

Burials

4.8.18 Skeleton 531 (fill 547, cultivation strips **526**) was located in the eastern end of one of the cultivation strips. Orientated east to west, it comprised a skeleton that was approximately 40% complete and was represented by remains of skull, arm and leg bones. Despite its poor condition, it was possible to conclude that the skeleton was an adult and, based on a surviving occipital protuberance, possibly male.

4.9 Period 8: Late Roman (AD 200 – 410)

4.9.1 Despite the fairly extensive Early Roman presence on the site, most of this had disappeared by the Late Roman period. There was limited evidence in the north-west of Area D for the continued use of the Early Roman field system. The other Late Roman feature contrasted markedly from anything else on the site; a double ditched sub-circular monument in Area F.

Area D (Fig. 24)

4.9.2 Part of the system of Early Roman rectilinear fields in Area D was utilised into the Late Roman period. This was restricted to the north-west corner where some modifications were made to the existing layout. Several features, along with the tops of some of the

earlier ditches, contained 3rd - 4th century pottery including Nene Valley Colour Coats and Oxfordshire red and white wares. These are summarised in Table 22.

Feature No.	Feature type	Pottery: No. sherds / g	Animal bone: NISP / g	Other finds
12325	Ditch	34/339	3/51	
12327	Ditch	6/44	5/35	
12365	Ditch	5/133		
12376	Ditch	7/92	1/9	
12396	Ditch	15/133	8/245	SF386: Fe square-sectioned bar, possibly chape or bent nail
12484	Pit	1/19		
12558	Ditch	2/9		

Table 22: Summary of principal Late Roman features, Area D

Area F

The 'monument' (Fig. 25)

4.9.3 At the southern end of Area F was a double ditched sub-circular enclosure. The enclosure lay partially beyond the limit of excavation; therefore it is not known whether or not the ditches would have formed a complete circuit and if so, whether this may have been circular or more oval in shape. The diameter of the enclosure from the inside of the inner ditch north to south was 26m. The inner ditch (**115**) was the larger of the two measuring up to 1.5m wide and 0.61m deep, although it was deeper on the southern side (Figure 27, sections 2 and 4). The outer ditch (**104**) measured up to 1.2m wide and 0.28m deep. In one section along the southern arm, the outer ditch had been re-cut wider and deeper. There was a consistent gap of 2.5m between the two ditches. There were no contemporary internal features in the enclosure.

4.9.4 The majority of the finds were retrieved from the southern half of the inner ditch. Fragments of human bone were found in the upper ditch fill, spread over approximately 15m. Fill 246 (cut **119**) contained a spread of disarticulated bone found in association with a group of five Late Roman bracelets and butchered animal bones. The human bones include fragments of skull, femur, clavicle, tibia, ribs, vertebrae, radius and possible pelvis. Preliminary observations suggest that they represent one individual, although further analysis is needed to confirm this. No features had survived that will allow the sex or age of the remains to be estimated. Ancient modifications identified on the bones include burning on one, and possibly two, skull fragments and cut marks on a fragment of clavicle. This may have been made to de-flesh the bone, possibly as part of a mortuary processing ritual. In addition, the fracture margins of a probable tibia shaft had features indicative of dry or wet bone breakage.

4.9.5 Along the ditch to the east were several more small groups of disarticulated bones and single bones (context/HSR numbers 653, 654, 658, 661, 662, 663 and 799). They comprised fragments from several different parts of the skeleton, including small (for example, patella) and large bones (for example, lower limb bones and pelvis), although there was a preponderance of skulls and fibulae. The fragments represented several individuals, but it was not possible to estimate, at this stage, the minimum number of individuals. The majority of bones were probably those of adults, based on their overall size. Three skull fragments had been burnt. Two of the fragments were buff white with

blue/black tips (context 661) and one of the fragments was blackened along one of its edges (context 246). This colour variation indicates differential exposure to heat, the white colour being consistent with bone that has oxidised due to high temperatures and the black/blue colours being consistent with lower temperatures, even singeing. Approximately three further fragments of bone (all context 246) were noted for discolouration, being a grey/green colour in places. This is probably the result of contact with metal in the burial environment. Probable or possible ancient cut marks were noted in passing on several fragments. Also at the eastern end of this spread of human bone was a scatter of 21 nails, about half of which were large. Further discrete dumps of butchered animal bone were interspersed with the human bone. A fragment of cattle bone was selected for radiocarbon dating and returned a date of 210 – 390 AD cal. (92.8% confidence, SUERC-36393, 1760 ± 30BP).

4.9.6 The ceramic assemblage consisted mainly of small abraded sherds of Early Roman redwares with the majority coming from the inner ditch. The largest ceramic fragment was the base of a partial bowl found in the inner ditch, which was shell tempered and had strong internal wear marks. A fragment of rim from the same vessel was recovered directly adjacent but in the outer ditch. Two sherds from a Late Roman Nene Valley jar were also recovered, as well as a Late Roman miniature bead and flange colour coated mortarium. The finds from the enclosure are summarised in Table 23.

Feature	Pottery: No. sherds / g	Animal bone: NISP / g	Human bone	Metalwork
Outer ditch **104**	11/105	19/495		
Inner ditch **115**	79/1075	202/3783	Fill 246: fragments of skull, femur, clavicle, tibia, ribs, vertebrae, radius and possible pelvis. Burning on skull frag, cut on clavicle. Further scatter of bone representing several adults. 3 skull fragments were burnt. Cut marks on several fragments	SF1-4, SF7: 5 Late Roman bracelets 21 Fe nails, mainly large, several were clenched

Table 23: Summary of finds from Late Roman monument, Area F

4.9.7 Apart from this one area of finds in the upper part of the ditch, the fills of both inner and outer ditches were sterile and had no organic component. Environmental results from bulk sampling were also poor. These factors, coupled with the presence of the human bone strongly suggest a non-domestic function. The human remains may have been redeposited, perhaps from a nearby cemetery, in the very late or post-Roman period and the 'monument' is potentially linked to late Roman funerary activity.

4.10 Period 9: Post-Roman (AD 410 – 1066)

4.10.1 There were no features identified as post-Roman (and pre-Medieval) anywhere on site. Parts of the Roman field system may have continued in use into the 5th century but finding datable evidence for such activity is often difficult due to the re-use of Late Roman ceramics. This may have been the case in Area D where there was a cluster of Late Roman features in the north-west corner. A number of pottery sherds here have been spot dated as 3rd – 5th centuries, suggesting possible land use on the higher gravels into the 5th century.

4.10.2 A Saxon presence was almost entirely absent on the site. A few features, again in the north-west of Area D and provisionally dated as Late Roman, contained pottery which is potentially Early Saxon. Ditches **12259** and **12376** both contained single sherds of possible Early Saxon date. In Area B, a faceted pin head with ring-and-dot decoration was recovered from natural hollow or tree throw **5437** (fill 5439; SF 185), and may be of Middle Saxon date. Also in Area B, a fragmentary object from a short length of well dated Middle Iron Age gully **4172** (fill 4171) has been tentatively identified as part of the pin of a buckle, and potentially of 5th – 6th century date, although the stratigraphic position of this object should prompt a review.

4.11 Period 10: Medieval

4.11.1 There was no evidence of medieval ridge and furrow anywhere on the site, suggesting it either did not survive to a sufficient depth or that the land had been used as pasture during the medieval period. The latter is more likely as there was also an almost total absence of medieval finds. Medieval finds such as pottery and ceramic building material will often be present in relatively large numbers within subsoil and the upper levels of larger, earlier features, put there through manuring of the fields under plough. A lack of such finds suggests this material was never brought in, and with a lack of physical evidence for ridge and furrow, and the corresponding lack of truncation, suggests a pastoral landscape from the end of the Roman period until relatively recent times.

4.12 Period 11: Post-Medieval

4.12.1 A number of boundary ditches across the site were recorded as post-medieval, some of which appear on the Ordnance Survey First Edition of 1888. These included a shallow, sinuous ditch in Area E (ditch **2147**=**2824**), which ran for at least 200m, extending beyond the northern and southern limits of excavation (Fig. 26). Some of these boundaries may have originated in the medieval period although there was no clear evidence to support this suggestion.

4.12.2 There were several areas of intensive post-medieval gravel quarrying on the site. The northern part of Area A had been affected by quarrying, as was the entire north-west corner of Area B. These two areas of quarrying were linked by an east to west trackway consisting of a series of wheel ruts. The trackway ran alongside a large post-medieval boundary ditch in Area A (**6247**). A second area of quarrying affected the north-west corner of Area D, removing parts of the Early Roman settlement. There were areas of strip quarrying in the north-west and south-east of Area E. These were originally thought to be the result of coprolite mining. However, excavation proved them to be no more than 0.5m deep, which did not penetrate below the gravels.

4.12.3 One of the quarry pits in Area B contained an assemblage of late 19th century bottles within its backfill. There were at least seventy bottles and jars represented, both glass and ceramic.

4.13 Period 12: Modern

4.13.1 Two separate areas contained significant modern features (Fig. 26). The first was a group of eight World War Two ring ditches in Area B. The second consisted of a number of features in Areas E and F relating to the use of that part of the site for the postwar Royal Agricultural Show.

Area B

4.13.2 The World War Two ring ditches were the remains of an anti-aircraft searchlight battery. The ditches were originally excavated to provide a protective bank or blast wall. The size of the ditches and the area they enclosed varied. The smallest (ring ditch **4350**) had a diameter of 11m with a ditch measuring 2.25m wide and 0.37m deep. The largest (ring ditch **4417**) had a diameter of 22m with a ditch measuring 4.9m wide and at least 0.9m deep. All eight ring ditches were sample excavated to ascertain depth and for assemblages of contemporary material culture. The finds retrieved included broken plates (some date-stamped 1942), wooden fence posts, a paint can and fragments of carbon rod, which would have been used in the searchlights. A number of services were discovered along the north-eastern edge of Area B, close to the road, which may have been associated with the battery.

Areas E and F

4.13.3 The south end of the site, directly north-east of Shelford Road, was used as the location for the Royal Show on three occasions; 1951, 1960 and 1961. The events only lasted for a few days on each occasion but still managed to leave their mark in the archaeological record. In addition to old service pipes and cables a number of rectangular pits were encountered in Areas E and F which showed signs of intense burning. They were filled with charred material and other debris. The presence of asbestos in these meant excavation was not possible but some form of temporary but intense fire is a likely interpretation.

5 Factual Data and Assessment of Archaeological Potential

5.1 Stratigraphic and Structural Data

The Excavation Record

5.1.1 All hand written records have been collated and checked for internal consistency, and the site records have been transcribed onto an MS Access Database. Quantities of records are laid out in Table 24.

Type	*Quantity*
Context registers	244
Context numbers	9489
Plan registers	18
Section registers	53
Sample registers	170
Plans	Approx. 750
Sections	1971
Black and white films	Approx. 100
Colour slide films	Approx. 75
Digital photographs	Approx. 5600

Table 24: Quantification of excavation records

Finds and Environmental Quantification

5.1.2 All finds have been washed, quantified, and bagged or boxed. Total quantities of the main finds categories per period are listed in Table 25. The totals refer to the quantity of a given material in all features assigned to a specific period, including residual and intrusive material.

Period	Pottery (kg)	Animal bone		Worked Flint (kg)	Fired Clay/ CBM (kg)
		NISP	Weight (kg)		
Neolithic	0.654	2	18	0.873	
Earlier Bronze Age	0.849	5	99	1.345	0.117
Middle - Late Bronze Age	9.493	4678	142016	37.946	2.210
Early Iron Age	36.020	1044	37041	4.588	9.075
Middle Iron Age	12.015	956	45200	2.892	14.310
Late Iron Age	39.801	1478	37662	3.917	6.814
Early Roman	128.144	2407	62755	2.851	38.514
Late Roman	2.522	266	17451	0.031	0.409
Total	**229.5**	**10836**	**344.25**	**54.5**	**71.5**

Table 25: Quantification of finds by period

5.1.3 Environmental bulk samples were collected from a representative cross section of feature types and locations. Bulk samples were taken to analyse the preservation of micro- and macro-botanical remains. Pollen samples were also collected. They are summarised by feature type in Table 26 and by period in Table 27.

Sample type	Ditches	Pits	Waterholes/ wells	Postholes	Burials	Other	*Total*
Flotation	385	192	24	96	47	84	*828*
Pollen/ micro-morphology	10	1	7				*18*

Table 26: Quantification of samples by feature type

Sample type	Neo.	EBA	MBA	EIA	MIA	LIA	ERB	LRB	P-med	Undated	*Total*
Flotation	3	3	296	81	92	125	185	13	2	28	*828*
Pollen/ micro-morphology			17			1					*18*

Table 27: Quantification of samples by period

Range and Variety

5.1.4 Features on the site included ditches, pits, waterholes, postholes, gullies, inhumation burials, cremations and tree throws. The ditches were mainly boundary or enclosure ditches of varying sizes. Large pits or pond-like features with organic primary fills were interpreted as waterholes. There were a number of structures on the site including Middle Bronze Age post-built structures, Early Iron Age post-built roundhouses Middle to Late Iron Age and Roman roundhouses, where only the eaves drip gully had survived, and other post-built structures such as Early Iron Age 4-post granaries or stores.

Condition

5.1.5 Preservation of features was good across the excavation area. It was difficult to determine the level to which features had been truncated although it is thought that there had been limited plough-truncation over much of the area. An apparent lack of ploughing prior to relatively modern times meant there was no evidence for medieval ridge and furrow on the site.

5.2 Artefact Summaries

Earlier Prehistoric Pottery (Appendix A.1)

Summary

5.2.1 A total of 1930 sherds (11540g) of earlier prehistoric pottery were recovered from the excavations with a mean sherd weight of 6.0g. The material dates from the Early Neolithic through to the Middle Bronze Age, although over 80% of the assemblage is of Middle Bronze Age origin. The overall condition of the material varied between contexts, but generally was good to very good and included large fresh pieces as well as un-abraded small to medium-sized fragments that occasionally retained carbonised residues.

5.2.2 Early Neolithic pottery included a large assemblage of Mildenhall ware from a single context (102 sherds, 638g) in context 6418 (pit **6417**, Area A). Mildenhall ware was also present in Neolithic pit **5788** (fill 5789, Area B) and was residual in four later features. Early Bronze Age pottery included fragments of a near complete fine, comb-zoned Beaker (98 sherds, 636g) from pit **6467** (fill 6468, Area A). Residual Beaker fragments

were also identified in three later features in Area E. Collared Urn/EBA pottery was found in Early Bronze Age pit **2210** (fill 2207) in Area E. Early Bronze Age urn fragments included 2 sherds (18g) from layer 2516, also in Area E. Most of the profile of an early type plain Collared Urn (tapered rim, collar diameter narrower than the shoulder) was present in pit **6355** (fill 6356) in Area A (14 sherds, 165g).

5.2.3 The later group belonged exclusively to Middle Bronze Age or Deverel-Rimbury wares. The Deverel-Rimbury assemblage can be separated by form and decoration into two, possibly three groups or distinct assemblages. Familiar traits, such as small to medium-sized straight or barrel sided profiles with simple flattened rims, along with horizontal cordon decoration, were present throughout the collection. Equally, the prevailing shelly fabric represents a standard Deverel-Rimbury fabric for this region. Parts of unusual, small fineware burnished cups or jars with incised decoration were also identified amongst the more familiar pieces. Significantly, at least two discrete groups (Area B & Area E) can be identified and these were separated by a distance of approximately 800m.

Statement of Potential

5.2.4 The Deverel-Rimbury pottery represents the most important component of the Clay Farm earlier prehistoric pottery assemblage. The scale and domestic character of the material alone make it stand out but equally significant is the context of the assemblage. The 2nd millennium BC field system sites of Cambridgeshire have to date produced comparatively little Deverel-Rimbury pottery outside of cemetery contexts. Up until recently, domestic Middle Bronze Age ceramics have been conspicuous by their absence, especially when contrasted with the increasingly impressive domestic assemblages of Beaker and Collared Urn being generated by similar landscapes (see Evans & Vander Linden 2008, Evans et al 2009). Of the two key assemblages at Clay Farm it is the Area B group that stands out as unusual in that it comprised mainly thin-walled, almost delicate forms (an attribute not normally ascribed to Deverel-Rimbury Wares) with decoration techniques that appear to be peculiar to this context. In many ways the Clay Farm Middle Bronze Age pottery is unique in that it affords an opportunity to interpret the morphology and depositional history of two similar Deverel-Rimbury assemblages of different composition but within the same landscape context.

Later Prehistoric Pottery (Appendix A.2)

Summary

5.2.5 A total of 3662 sherds (52779g) of later prehistoric pottery were recovered from the excavations, with a mean sherd weight (MSW) of 14.4g. The material dates from the Late Bronze Age (LBA) though to the Late Iron Age (LIA), though the bulk of the assemblage is of Early and Middle Iron Age origin.

5.2.6 The assemblage of Late Bronze Age and Late Bronze Age/Early Iron Age pottery included 157 sherds (950g), with a low MSW of 6.1g. The only noteworthy feature assemblage derived from fill group 1054, the tertiary silts of MBA ditch **1057** in Area E. This contained 85 sherds of Late Bronze Age pottery weighing 481g. In general, the LBA pottery is suggestive of dispersed activity, rather than settlement *per se*. In fact it is possible that sherds became scattered across this landscape as a consequence of Late Bronze Age manuring practices involving the deposition of refuse from local surrounding settlements.

5.2.7 A substantial assemblage of Early Iron Age pottery was recovered, totalling 2190 sherds weighing 36020g. This represents 60% of the overall later prehistoric assemblage by sherd count or 68% by weight. The largest single assemblage came from large pit **5898** in Area A (948 sherds, 20146g). The Early Iron Age assemblage features a wide range of profusely decorated coarseware jars, and a variety of largely plain but angular fineware bowls. Assemblages with these characteristics are generally thought to have a currency between c. 800-600/500 BC. To date, few groups of pottery with these characteristics have been recovered from southern Cambridgeshire.

5.2.8 The pottery assigned to the Middle Iron Age comprised 978 sherds, weighing 11850g. This represents 27% of the overall later prehistoric assemblage by sherd count or 22% by weight. The majority of the Middle Iron Age pottery (72%) came from the settlement in Area C. The Middle Iron Age assemblage constitutes a typical plain ware assemblage from southern Cambridgeshire, dominated by a range of slack-shouldered jars, globular bowls, and a series of tub-shaped vessels; mostly made in dense sandy fabrics. In the immediate landscape similar groups of pottery are well attested.

5.2.9 The pottery assigned to the Late Iron Age comprised 337 sherds, weighing 3959g. This represents 9% of the overall later prehistoric assemblage by sherd count or 8% by weight. It dates between c. 50 BC-AD 50, and consists of sherds in a range of grog and sand tempered fabrics. The wheel-made component is small, but there are a number of combed and cordoned sherds within the group. Most of the pottery was recovered from Area C, where some ditches contained a sequence of ceramic deposits spanning the Middle and Late Iron Age. Although none of these assemblages are particularly large or especially important in themselves, it is rare to find stratified sequences of material for this period in southern Cambridgeshire. These deposits therefore offer the opportunity to date and better understand the chronology of ceramic change.

Statement of Potential

5.2.10 The excavations at Clay Farm have yielded a large assemblage of later prehistoric pottery. The group consists of ceramics dating from the Late Bronze Age through to the Roman conquest, and includes a regionally significant group of Early Iron Age material. The size of the assemblage, which is larger than most published examples, allows for a detailed discussion of the practices surrounding the use and deposition of ceramic at the site and provides the opportunity to refine our understanding of ceramic chronologies in this period. As there are deposits of pottery dating from various stages of the Iron Age, there is also the scope to investigate the nature of ceramic change from c. 800 BC through to c. AD 50 in this setting. More significantly, since there is a legacy of fieldwork in the Clay Farm environs, and the Cam Valley generally, the patterns gleaned from the study of this material can be set within a broader landscape context.

Latest Iron Age and Roman Pottery (Appendix A.3)

Summary

5.2.11 A total of 15153 sherds, weighing 174.283kg of Latest Iron Age, Early Roman and Romano-British pottery were recovered during the excavation. Each chronological group represents approximately one third of the assemblage, although the Early Romano-British material is slightly more prolific. The pottery is significantly abraded with an average sherd weight of 11.5g. The majority of the assemblage has been retrieved from ditches, with a significant amount also found in pits. It is a large, well-

recorded assemblage of pottery recovered from an area of rich archaeological remains, which indicate an agricultural landscape with some monumental and memorial aspects. The pottery consists mostly of domestically produced utilitarian coarse wares although some imported and traded specialist wares are also present, specifically thirteen accessory vessels from a single high-status Early Roman cremation burial.

Statement of Potential

5.2.12 The preliminary work undertaken during assessment has shown that there are discrete phased groups of pottery, with varying characteristics, that once fully analysed could further our understanding of how pottery was made, used and deposited at a time of dynamic change in Roman Cambridgeshire. The assemblage also has the potential to be used as a broader interpretative tool and may be used, in conjunction with other classes of finds, to address wider research questions. The Study Group for Roman pottery (Martin and Wallace 2002) has identified several areas of research that this assemblage could significantly contribute to including spatial patterning in assemblages, consumption patterns, the impact of Romanized tastes, the function of ceramics and intra-site organisation.

Lithics (Appendix A.4)

Summary

5.2.13 The excavations resulted in the recovery of 3481 pieces of struck flint and over 38kg of unworked burnt flint fragments. For assessment the material was rapidly scanned and no statistically based technological, typological or metrical analyses have yet been conducted. The assemblage represents one of the largest, if not the largest, from any later prehistoric settlement site in the region. A not-insignificant proportion of this material clearly pre-dates the Middle Bronze Age settlements, suggesting occupation at the site spanned the Mesolithic and possibly Upper Palaeolithic through to the Bronze Age. However, the bulk of the material, perhaps over 80%, has technological and typological traits consistent with later 2nd and 1st millennium BC flintworking traditions. These traits include short, unstructured reduction sequences, the frequent use of poor knapping-quality pebbles, the production of thick, often short flakes and a paucity of formal tool types with retouched pieces dominated by simple scrapers and irregularly edge-retouched flakes. Working edges were also made on otherwise unmodified pebbles (core tools). A lack of discretion in selecting raw materials is reflected in the high number of disintegrated cores. Perhaps the most interesting individual assemblage is the substantial collection of flintwork deposited into the top of a Middle Bronze Age ditch in Area B (Settlement 1), but other foci of flint production, use or discard have also been identified.

Statement of Potential

5.2.14 The assemblage is clearly of great regional and possibly national significance and has the potential to address a number of important research themes.

5.2.15 The pre-Middle Bronze Age flintwork can contribute to studies of landscape occupation, working practices and questions concerning continuity, both in terms of land use and technological change. It can add to, and enhance understandings of, the growing body of late Glacial to Early Bronze Age sites previously investigated along this stretch of the Cam Valley.

5.2.16 The Middle Bronze Age and Iron Age assemblages are impressive in size and closely contextualized. Although some advances have been made, the definition of the specific typological and technological changes in struck flint industries through the late 2nd and the 1st millennia BC is still poorly documented. Furthermore, the nature and significance of struck flint production and use have been little explored and there has been even less emphasis placed on understanding the social consequences of flintworking during these periods. Detailed analysis of the Clay Farm assemblages will permit a much greater understanding of raw material selection, reduction processes and the social significance and roles of flintworking during these periods. Further contextual work to separate and more-closely define chronological differences in the later prehistoric industries will allow an appreciation of technological changes from the later 2nd through to the 1st millennia BC, developments that are poorly understood at the present. The distribution of the material can also contribute to an understanding of the spatial organisation of flintworking within the settlement and enclosures, and explore specific depositional practices during these periods. The apparent emulation of earlier arrowhead types and widespread reuse of earlier flintwork gives an added chronological dimension to this material and can provide an avenue into understanding later prehistoric perceptions of the past and on flintworking as a traditional occupation.

Metalwork (Appendix A.5)

Summary

5.2.17 In total, 309 items of metalwork were recovered from the excavation, comprising 185 copper alloy items, 99 fragments of ironwork, 21 lead objects and 4 silver items, dating from the Middle Bronze Age (MBA) to the present day. Copper alloy objects included two MBA spearheads, pins, bracelets and coins. A large number of copper alloy objects in Area C come from the fittings of a single casket burial (cremation burial **10909**). The majority of the ironwork consisted of hand forged nails along with other items such as a number of blades.

Statement of Potential

5.2.18 It is clear that many of the copper alloy finds have the potential to further inform the dating and interpretation of features on the site. The small group of Bronze Age artefacts is of interest, although only one of the objects is likely to be in its primary place of deposition. Although Late Iron Age and Romano-British material is well known throughout East Anglia, and numerous comparanda can be provided for most of the objects recovered, there remains further potential for study. The coins have an obvious potential to refine dating on the site, as do the brooches, and many of the other less precisely dated objects serve to reinforce dating provided from other sources. The Romano-British assemblage comes mainly from ditch fills. It is perhaps of interest that it is almost completely confined to coins and personal items from clothing or adornment. This apparent concentration could add to the further interpretation of activity on the site.

5.2.19 The ironwork and lead objects have very little potential for further analysis. There is effectively no potential to contribute to any refinement of dating on the site, except in assessing the stratigraphic integrity of individual contexts. Both will, however, contribute marginally to understanding the nature of activity and potential structures on the site, primarily in the Roman period. The potentially Bronze Age lead object (SF 71) is a rarity, and thus of intrinsic interest.

Industrial Residues (Appendix A.6)

Summary

5.2.20 A total of 2.910kg of industrial residues was recovered during the excavation. The residues recovered consisted of vitrified non-magnetic slag. Late Iron Age pit **3215** in Area E contained the largest single assemblage of material; 2.816kg of heavily vitrified clay. The material is very light in weight with large and consistent voids and has been heated at high temperatures for a lengthy, and consistent period of time. There is no metallic element present within the material, suggesting that it is from a non-metallic process which involved long periods of exposure to high temperature, possibly in a kiln.

Statement of Potential

5.2.21 Pit **3215** aside, the small assemblage of metalworking debris from the site is of limited potential and can probably be described as a typical background spread of slag associated with many sites where iron production and/or manipulation has occurred in the near vicinity.

Worked Bone (Appendix A.7)

Summary

5.2.22 A total of 34 fragments of worked bone and antler, representing probably 20 objects, were submitted for assessment. All were from stratified contexts and most were in very good condition. Six bone objects were recovered from Area A, primarily from features dated to the Early Iron Age, four of them from large pit **5898**. This group comprised a bone point from fill 5911 (SF 262); a carefully-made double-ended point (fill 5910; SF 264), possibly a pin-beater and made from a fragment of longbone; a flat sub-oval spatulate object resembling a tie-on label, with a small hole in one end (fill 5962; SF 266); and a needle. A substantial antler handle came from a fill (5971; SF 289) of ditch **5826**. A second antler handle came from Middle Iron Age pit **6276** (fill 6280; SF 275) and would appear to have been intended for a fairly large blade. Area B produced eight bone objects, all of them from Middle Bronze Age ditch fill group 4206 (Settlement 1). These included four simple bone points, perhaps awls, and two perforated pins from contexts 5144 (SF 172) and 12105 (SF 453), possibly made from pig fibulae. A well-made and almost complete bone point, cut from the shaft of a small longbone, came from context 5183. In Area C, two bone objects were associated with Late Iron Age cremation burial **10909**. A fragmentary and heavily calcined object, probably a toggle or cheekpiece (SF 335.3), was presumably amongst the pyre goods, whilst a pin from the same context (SF 341) is not burned, and thus was not amongst the pyre goods.

Statement of Potential

5.2.23 The worked finds have only limited potential to further inform the dating of the site. They do, however, have some potential to contribute to the interpretation of activities within the successive Bronze Age and Iron Age occupations of the site, and should be considered in conjunction with other contemporary finds from the site. It is particularly important that the bonework from cremation burial **10909** be discussed alongside other finds from the burial casket.

Worked Stone (Appendix A.8)

Summary

5.2.24 A total of 59 worked stone objects were retained including 11 from Middle – Late Bronze Age contexts, 12 from Iron Age contexts and 36 (the majority) from Roman contexts. The Middle – Late Bronze Age examples were either saddle querns (6) or rubbers (4) and therefore associated with food production. A similar pattern emerged in both the Iron Age and Roman periods. The Iron Age worked stone included 4 saddle quern and 5 rotary quern fragments as well as 2 whetstones.

5.2.25 The Roman assemblage includes 28 rotary quern fragments, predominantly in either Old Red Sandstone or Millstone Grit. One of the more interesting aspects of the assemblage is the possibility that up to 8 millstones might be represented. Seven fragments could be from millstones but are difficult to identify absolutely, while one is definitely from a millstone, albeit a small one (SF 118, 2295, fill of pit **2294**). Seven of the possible millstones as well as the definite example are of Millstone Grit, whilst one is possibly of Old Red Sandstone. Five processors were also found. Four are pebbles /cobbles that have been used as rubbers and the fifth is a slab, worn on one side, that could have been used as a rubber or in a floor. One possible whetstone is the only evidence for tool sharpening. For such a large excavation, it is intriguing that other tools, in particular whetstones, spindle whorls and weights are so limited in number and their absence may be as informative as the presence of other things.

Statement of Potential

5.2.26 The assemblage of worked stone has good potential to add to our understanding of activity at Clay Farm. The material is mostly indicative of settlement, in particular of domestic food production, in the form of querns and other, probably domestic tasks, in the form of rubbers. Looking at where the querns were found will help to interpret the function of individual buildings. In addition, the stone types recovered can help place the site in its local and regional context by looking at how similar or different the tools are to other sites. The presence of millstones also has the potential to inform about more centralised grain processing and whether this occurred on site. Understanding precisely which types of stone were used here will contribute to regional and national schemes of research and a growing body of data about the manufacture, distribution, and dating of different quern sources. Assemblages of 20 or more querns are fairly infrequent and thus of particular value. This region also represents the cross-over area between two of the major quern producers in Roman Britain - the South Wales source of Old Red Sandstone and the Midlands source of Millstone Grit. Understanding the interaction of these two materials is imperative to our understanding of quern distribution. This assemblage is also useful for looking at quern production and development because it lacks significant later Roman stratigraphy and so gives a clear representation of Early Roman quern use.

Fired Clay and CBM (Appendix A.9)

Summary

5.2.27 An assemblage of fired clay and CBM (Ceramic Building Material) weighing 80508g was collected from the excavation. It was retrieved from a range of features, including ditches, pits, gullies, postholes, hearths, a kiln and an oven.

5.2.28 Fired clay (once removed from its primary source of use) is not presently closely datable. It can be analysed, however, by the period features from which it was recovered. The features varied in date between the Middle Bronze Age and the Early Roman period, with several pieces coming from post-medieval and modern contexts. The largest assemblage by weight from a single period was Early Roman (38514g). However, 25526g of this consisted of kiln furniture from pottery kiln **2122** in Area E. The kiln material included three partial pedestals, a number of kiln bar fragments and a large assemblage of kiln lining.

Statement of Potential

5.2.29 Detailed analysis of the fired clay and CBM will contribute towards an understanding of the structures present on site and the range of activities taking place. The kiln furniture from Early Roman kiln **2122** is an important assemblage in its own right.

Glass (Appendix A.10)

Summary

5.2.30 The glass assemblage comprises nine vessel glass fragments and a near complete unguent bottle recovered from a cremation burial pit. In addition a single bead and the partial remains of a counter or gaming piece were also identified. Consistent with a Roman date, the assemblage can be separated into two broad groupings, those found during general excavations and associated with settlement activity and those related with cremation burials. The most significant piece was an unguent bottle, SF 333 (fill 10911), the only glass vessel recovered from cremation burial **10909**. It was produced in a strong, translucent purple glass which appears black until held up to the light. Two thirds of the vessel's rim is broken, which appears to have happened in antiquity. It is not clear if this break is due to depositional processes or if it represents the deliberate breaking or 'killing' of the vessel prior to deposition. Popular during the period AD 43-70 in Britain this example pre-dates this period and is almost certainly pre-conquest in date.

Statement of Potential

5.2.31 This is a small glass assemblage of Roman date, the majority of the material consisting of fragmentary vessel sherds, which are not closely datable. This suggests high levels of post-depositional disturbance and is consistent with most of the sherds being residual. The single exception to this is SF 333 (fill 10911), the glass unguent bottle from cremation **10909**, which is significant as it is near complete and forms part of an assemblage of grave goods. It is also tightly dated by way of the ceramics and other grave goods. It may be possible to identify the substance contained in the vessel at the time of deposition by analysing the contents.

Amber bead (Appendix A.11)

Summary

5.2.32 A single amber bead was submitted for assessment. It had been cleaned but was unconserved.

5.2.33 The bead (SF 137) was from ditch fill group 2376 in Area E. This was the upper fill of ditch **1982**, the midden-like fill associated with Middle Bronze Age Settlement 3. SF 137 is a medium-sized biconical amber bead, of Bronze Age date. It appears to be an isolated find, and thus is unlikely to have been deposited as part of a complex necklace.

Statement of Potential

Limited further analysis will contribute to the interpretation and understanding of the development of the site during the Bronze Age.

Waterlogged wood (Appendix A.12)

Summary

5.2.34 A total of 19 discrete items and one bulk collection were recovered from the excavation and recorded off site. Waterlogged wood was recovered from ditches, pits and waterholes dating from the Middle Bronze Age to the post-medieval period. The assemblage consist of twelve examples of roundwood, four pieces of debris, three pieces of timber and one bulk sample of bark. The majority of the material in this assemblage is unworked roundwood or bark and is likely to represent naturally accumulated debris. The exception to this is the Middle Bronze Age material recovered from context (5259), cut **5260** (ditch **5228**), the upper fill of a ditch in the extremely wet part of Area B. The material recovered from this feature, including a worked timber with a broken mortise joint, may simply be debris resulting from woodworking in the vicinity. However, the material's position high in the fill sequence, and the structural timber broken in antiquity both point towards some or all of the material being derived from a structure that has either collapsed or been dismantled, presumably relatively nearby.

Statement of Potential

5.2.35 There is not sufficient material to address the issue of woodland reconstruction via species identification. Decay analysis is not advised as the author of the assessment report is unaware of any ongoing debate regards the nature or stability of the burial environment in the immediate area of the site. None of the oak material has sufficient growth rings to be suitable for dendrochronology. None of the material is of sufficient interest to warrant conservation and retention. Similarly, the woodworking technology is not of sufficient interest to warrant further analysis. The simple splits and trimmed ends are well represented in the literature, as is the broken mortise joint (Taylor 2001).

5.3 Environmental Summaries

Human Skeletal Remains (Appendix B.1)

Summary

5.3.1 The excavation yielded 16 articulated skeletons and disarticulated bone fragments from 16 contexts (pits and ditches), all provisionally assigned to the Bronze Age, Iron Age and Early Roman periods. The articulated skeletons included three Early and Middle Iron Age adult crouched burials in Area A, several Late Iron Age neonates and a double Early Roman inhumation in Area E and an Early Roman burial within a cultivation bed

in Area F. There were a number of instances of partial skulls placed into ditches and pits; particularly in the Middle Bronze Age, but also in later periods. The monument in Area F produced disarticulated remains of several individuals including bones which showed evidence of having been burnt or cut.

5.3.2 Burnt remains include one box cremation, two urned cremations and one unurned cremation, and have provisionally been dated to the Middle and Late Iron Age.

Statement of Potential

5.3.3 Collectively, the human remains from Clay Farm (16 articulated skeletons, four cremation deposits and a quantity of bone fragments from 16 different contexts) are highly significant in that they comprise a good example of a multi-period funerary assemblage. They therefore have the potential to contribute to current understanding of funerary practices, demography, physical attributes and health of individuals spanning the Bronze Age to Roman periods from a single landscape.

5.3.4 The cremation deposits contained moderate to frequent diagnostic elements and therefore there is potential to retrieve information relating to demography, palaeopathology and funerary rite.

5.3.5 Of the 16 articulated skeletons, four neonates (1995, 3174, 3298 and 3594) from Area E require no further analysis because their full potential has been realised at this assessment stage (i.e. all possible information that may be obtained has been recorded). The remaining 12 skeletons all have potential for further analysis, but to varying degrees. Nine out of the twelve had indicators surviving that will allow their sex to be estimated. This is also true of age estimation, which will be possible for 11 of the 12 skeletons. For four of these it will only be possible to say they are adults, rather than assign them to a specific age range. In addition, with the exception of one skeleton (6036), only one or two age indicators (some of which are incomplete) are available. Only three skeletons have complete bones surviving for stature estimation, or four if the measurements taken *in situ* for Skeleton 10896 are included. Considering that most of the skeletons were incomplete, eroded and very fragmentary, the potential for palaeopathological observations are surprisingly high. A broad range of pathological conditions have already been noted in passing, including an amputated arm, osteoarthritis, non-specific inflammation, degenerative disc disease, cribra orbitalia and spondylolisis with possible spondylolisthesis.

5.3.6 Human bone fragments were assessed from 15 separate contexts from Areas A, B, C and E. The overall condition of these was poor. The osteological potential of all of these fragments has been realised at this assessment phase. Two are neonates and the remainder are adults, three probable or possible males and 10 of unknown sex. Pathological lesions were observed on fragments from at least five contexts and include bone inflammation and, if provisional diagnosis proves to be correct, the earliest example of Paget's disease ever found in Britain. In addition, probable or possible ancient modifications, including cut marks, chop marks and polishing were observed on fragments from at least eight contexts.

5.3.7 Bone fragments from the upper fills of ring ditch **115** in Area F, including bone spread (246) and seven isolated fragments or groups of fragments (653, 654, 658, 661, 662, 663 and 799) were in a poor condition overall. The absence of anatomical landmarks means that observations regarding age and sex will be very limited. However, preservation should be sufficient for examining the bones in greater detail to determine the MNI present. In addition, ancient modifications (burning cut marks and peri-mortem fracturing) are preserved on some surfaces and are important for exploring the

depositional history of the remains. For example, the anatomically meaningful location of the cut mark on a clavicle from fill 246 suggests that it may have been made to de-flesh the bone, possibly as part of a mortuary processing ritual.

Faunal Remains (Appendix B.2)

Summary

5.3.8 A total of 385kg of hand collected bone were recovered from the excavation. This constituted 11,548 fragments, with 8748 identifiable to species or classified as "Large/Medium Mammal" (75% of the total sample, see below). Material from environmental samples is not included in this assessment. Preservation is largely good, with gnawing being observed on many elements. By far the largest assemblage of identifiable remains by period were recovered from Middle - Late Bronze Age contexts, with 1563 fragments identifiable to species. The remainder of the sample is concentrated in the Early Iron Age to Early Romano-British periods, with the majority being recovered from Late Iron Age/Early Roman contexts. The assemblage is dominated by the domestic mammals, along with smaller numbers of wild fauna including Red/Roe deer, polecat and bird. Of particular interest is the large numbers of dog remains in relation to domestic species in the Middle Bronze Age sample. In terms of ageable elements large numbers of epiphyses were recovered from the main domesticates from all phases as a proportion of sample size. Few ageable pig mandibles were recovered from all phases. Sexable elements are largely confined to the cattle and deer samples due to the presence of horncores and antler fragments.

Statement of Potential

5.3.9 This a large and significant assemblage with considerable potential to add to current knowledge of animal husbandry in the surrounding area. Of particular interest is the large Middle-Late Bronze Age assemblage. This is by far the largest assemblage of this period excavated in Cambridgeshire to date. Whilst numerous contemporary assemblages exist (especially further to the north around the fen edge), many are of a small nature or too fragmentary to be of use as comparative sites. Other Middle Bronze Age assemblages include Pode Hole Quarry (Daniel 2009), Eye Quarry (Patten 2004), Langtoft (Hutton 2008a, 2008b) and Bradley Fen (Gibson & Knight 2006). Of these Bradley Fen is the most suitable comparative site in terms of sample size, although at the time of writing the material has been assessed only. Indeed similar sites are scarce further afield, with the nearest Middle Bronze Age assemblage of comparable size being recovered from Heathrow Terminal 5 (Knight & Grimm 2010).

5.3.10 Although smaller in size compared to the Middle Bronze Age assemblage the Iron Age to Early Roman samples are still significant and warrant further analysis.

Environmental Remains (Appendix B.3)

Summary

5.3.11 A total of 829 samples were taken during the excavations from features ranging in date from the Neolithic to the Late Roman period. These include bulk samples (average size of 20L) taken in order to assess the quality of preservation of plant remains and their archaeobotanical potential and monolith samples for pollen assessment.

5.3.12 Initially 10 litres of each sample was processed for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. Sixteen samples contain significant quantities and diversities of plant remains preserved by waterlogging. A rapid scan provided an assessment of the quantity and diversity of plant and insect remains. The majority of the environmental samples produced flots of low volume and frequently of low archaeobotanical potential. Approximately 15% of the samples produced plant remains suitable for further archaeobotanical study.

5.3.13 The largest group of samples came from Middle Bronze Age features, mainly deep ditches. Samples produced charred plant remains including charred cereal grains (emmer wheat and barley) and occasional chaff elements. In the majority of the ditch samples that contain plant remains they were preserved by both charring and waterlogging, the waterlogged component is comprised of abundant elderberry seeds only.

5.3.14 The most productive samples from Early Iron Age features came from pits and postholes in Area A, including moderate amounts of charcoal and uncharred elderberry seeds from structure **5882**. Six out of seven four-post structures yielded occasional charred grains. The ditches of the Middle Iron Age settlement in Area C contained limited waterlogged plant remains including spike rush and duck weed along with small amounts of charcoal, charred grain, chaff and crop weed seeds. Samples were taken from Late Iron Age features predominantly in Areas B and E. Those in Area B contained cereals and chaff and also charred seeds of wetland plants including rushes, sedges and spike rush, suggesting use of local wetland resources for thatching and fuel. Samples from possible structures in Area E also produced small quantities of scattered grain. Structure **1633** also produced a small amount of crop processing waste which, along with the fired clay recovered from this feature may be significant as it could indicate the presence of a corn-drier or a hearth/oven in which crop processing waste was used as fuel. Pit **3544** contained crop processing waste, as does pit **3651** along with charred seeds of wetland plants such as spike-rush and water plantain.

5.3.15 The Early Roman period environmental evidence is characterised by rich assemblages of crop processing waste. In Area F there is evidence of a corn drier and numerous shallow ditches into which charred crop processing waste has become incorporated. The sunken part of structure **12913** in Area D contained crop processing waste in the form of charred cereal grains, abundant chaff elements and crop weed seeds. Several ditches and pits in Area E also contained crop processing waste.

Statement of Potential

5.3.16 The initial assessment of plant remains from Clay Farm has indicated that there is excellent potential for further archaeobotanical study. The two types of preservation encountered, namely carbonisation and waterlogging, provide a comprehensive representation of plant remains with potential for interpretive analysis with the aim to answer regional, local and and site specific research objectives. The waterlogged assemblage in particular has the potential to characterise the local environment and its changes over time. The charred plant assemblage has the potential to provide information on diet, cereal crops, cultivation techniques and economy especially through analysis of the abundant crop processing waste recovered from Early Roman and, to a lesser extent, Iron Age features. Of particular interest is the recovery of substantial quantities of uncharred elderberry seeds from the Middle Bronze Age.

These seeds have the potential for investigation into the differential preservation that ensured their survival and for dating other deposits.

5.3.17 Further study of the selected environmental samples from Clay Farm will tie in with recent discoveries from other sites in the region. The Middle Bronze Age is of particular interest in the Anglian region due to the shifts and changes in settlement patterns in response to rising levels of groundwater. Waterlogged remains at Clay Farm were recovered from a number of locations within the Middle Bronze Age field system, particularly in Area B and over several hectares. Comparisons could be made with the plant remains recovered from the MBA field system and wooden platform at Fengate (Pryor 1992), excavations at Thorney, Peterborough (Huckerby, in Pickstone and Mortimer 2011) and current analysis of the Bradley Fen field systems and the Must Farm post-alignments.

Pollen (Appendix B.4)

Summary

5.3.18 Seven monolith samples collected from two pits, three ditches, a waterhole and a well were cleaned, and 27 sub-samples taken for the assessment of pollen and non-pollen palynomoprhs. All samples were taken from Bronze Age features. With the exception of two sub-samples from sample 532 (well **5657**, Area B), most of the samples proved productive for pollen, fungal spores and microscopic charcoal. Preservation of pollen was good to mixed.

Statement of Potential

5.3.19 The results of the pollen assessment show that six contexts definitely have the potential for full analysis and that a further 2 are slightly less rich in pollen but may potentially yield sufficient pollen at analysis. These came from ditch **5988** in Area A, and ditches **5260** and **4460** and pit **5547**, all from Area B. The samples from these features, which were assessed as having the potential for further analysis, are distributed spatially across the two areas.

6 Updated Research Aims and Objectives

6.1.1 The research aims and objectives for the project are partly based on those in '*Research and Archaeology Revisited: a revised framework for the East of England*' (Medlycott 2011), the relevant sections from which are noted in italics below, and are followed by a brief discussion as to how the results of the Clay Farm excavations can add to the debate on the specific research themes and objectives.

Bronze Age

6.1.2 'The classic period sub-divisions are largely based on material culture - the appearance of artefact and pottery types. These are not necessarily uniform across the region. What is true of Essex in 1200BC might not correlate with Lincolnshire fens in 1200BC. Radiocarbon dates are needed based on rigorously selected samples to help to refine chronologies. Ceramic studies would be enhanced by better cross-referencing between typological methods of dating and scientific methods.'

The Middle Bronze Age artefact assemblages at Clay Farm (the ceramics, struck flint, worked bone, metalwork etc.) are intrinsically well dated but also have the potential for intensive radiocarbon dating. At assessment, differences have been recorded between the assemblages in separate parts of the site: the ceramic assemblage from Settlement 1 (Area B) includes unusual quantities of fineware pottery and a substantial assemblage of contemporary struck flint whereas Settlements 2 and 3 (Area E) contain more 'standard' Deverel-Rimbury pottery assemblages and substantially less contemporary flint. There are also potential differences in the make up of the animal bone assemblages between these two areas. These differences could represent contemporaneous but separate activities, or types of settlement, within one population; separate groups within a contemporary setting with different cultural or class affinities and/or activities; or the differences may relate more to time, with one area significantly earlier than the other. The large ceramic assemblage at Clay Farm will be compared to others within the region, in particular those from Stansted in Essex (Cooke, Brown and Phillpotts 2008), Thorney in North Cambridgeshire (Pickstone and Mortimer 2011), the Langtoft sites of Whitfield, Glebe and Freemans in South Lincs. (Hutton 2008a, 2008b & 2008c) and that from West Deeping (Murrell forthcoming). Radiocarbon dates have already been obtained for elements within some of these assemblages, and further dates will be sought on all assemblages. Thin section analysis will also be undertaken on the Clay Farm, Stansted and Thorney Deverel-Rimbury assemblages to enable comparisons to be made between the assemblages.

6.1.3 '*There appears to be a marked divide in the findings of research between the northern and southern parts of the region. This may reflect a Bronze Age cultural or political divide and work needs to be undertaken on artefacts, monuments and burial rites to determine the extent, nature and reasons for this and to identify any such boundaries. A better understanding of why second millennium cal. BC field systems may have developed in some parts of the region, but not others, is needed. The regionalisation of settlement patterns needs further study.'*

The Deverel-Rimbury assemblage from Clay Farm appears near-identical to assemblages recovered from the northern parts of the county and into south Lincolnshire (Langtoft, West Deeping, Thorney etc.). Comparisons will be sought between these assemblages and those within Essex through fabric and stylistic analysis (see 6.1.2 above). The settlement sites will be compared 'as a whole' with

those in Lincolnshire and in Essex to highlight any potential similarities and/or differences between them. The inception, layout and development of the Clay Farm field and enclosure system (and the dating of the same) will also be compared with others within the region, and with those of other regions. Extensive field systems have been recorded for many years on the gravel terraces along the southern Ouse valley in Cambridgeshire; while these have often been associated with burial sites, both earlier barrows and barrow cemeteries (e.g at Over - Evans & Vander Linden 2008) and contemporary small- to medium-sized cremation cemeteries (e.g. at Barleycroft), they have contained a remarkable lack of settlement activity. In sharp contrast, Clay Farm has field systems/enclosures with associated settlements but with no contemporary burial sites. It is possible that this dichotomy is explained by topographical or perhaps geological factors. The locations, and specifically the comparative contour heights of the field systems, burial and settlement sites within the region will be compared.

6.1.4 '*Examination of the inter-relationships between settlements, together with variation and changes in settlement types, offers considerable potential to explore the social changes taking place, as well as the inter-relationship between settlements and monuments. This, coupled with more extensive palaeoenvironmental evidence would enable past landscapes and economies to be recreated. The apparent scarcity of Middle Bronze Age settlement evidence needs examination.*'

Significantly, Clay Farm not only exhibits comparatively 'common' settlement foci in the Middle Bronze Age, it also shows potential variation between these areas of settlement. This could represent a relatively simple change in settlement patterning and composition over time or a more complex variation in contemporary settlement composition. The palaeoenvironmental evidence from Middle Bronze Age features at Clay Farm is extensive, comprising charred and waterlogged plant remains, pollen, snail and insect remains. These will be compared with succeeding phases (specifically the Early, Middle and Late Iron Age assemblages), and with contemporary assemblages from contemporary regional sites. The apparent scarcity of Middle Bronze Age settlement in locations other than Clay Farm will be examined (see 6.1.3 above). In terms of exploring the inter-relationship between settlements and monuments, the wider view will be taken of examining the inter-relationship of contemporary and earlier burial/dispersion of human remains (see 6.1.5 below). The known barrows within the area will also be located and their topographical positions studied.

6.1.5 '*Patterns of burial practice need further examination. This includes the relationship between settlement sites and burial, and the development and use of monuments, including burial mounds as key elements in determining and understanding the landscape. Later Bronze Age burial practices are now known to be variable, however we do not know why this is the case.*'

Perhaps too much emphasis has been placed on the role of barrows in relationship to Middle and Late Bronze Age settlement and burial patterns. Earlier Bronze Age barrows can form foci or nodal points within Middle Bronze Age field systems, but field systems were still created where there were no barrows, and there is no obvious correlation between barrows and settlement, and only occasional links between barrows and Middle and later Bronze Age burials. There is a dearth of contemporary Middle Bronze Age 'burial' at Clay Farm: there were no cremation burials and no intact, dated

inhumation burials. There were, however, several instances of human skulls, fragments of skulls and femurs found in Middle Bronze Age ditches, and occasionally in pits. This practice has more commonly been thought of as 'Iron Age', but at Clay Farm, and therefore presumably at other contemporary sites, it was clearly a practice that was taking place on a wide scale far earlier. What was the significance of the practice and what does the presence of isolated skulls mean for the rest of the bodies? The general view has been that cremation burial, either urned or unurned, in small groups or larger cemeteries, was the main burial practice within the Middle Bronze Age. The evidence from Clay Farm throws doubt on this: parts of six to eight individuals were recovered from little more than a 10% excavation sample, implying that the remains of perhaps 50 to 100 individuals may have been present within the immediate landscape. This would appear to imply that 'dispersal' of human remains was the norm, with cremation perhaps reserved for the few. Cremation cemeteries, although far more frequently recorded than settlement sites, still only account for very small numbers of the Middle Bronze Age dead.

6.1.6 '*In view of the region's position in relation to continental Europe, a priority must be to examine Bronze Age communication networks across Britain and Western Europe, particularly in a maritime context.*'

A few items recovered from Clay Farm could suggest Bronze Age trade and communication across Britain and Europe. These include the metalwork items, the amber bead, some of the flintwork and potentially the fineware ceramics. Communication networks will be examined during the analytical phase, with a variety of potential routes available, both land and water-based. The Cam and Ouse valleys are obvious access and trade routes to the sea, but others will be considered. The head of the Stour lies approximately 25km to the east of Clay Farm, from where it flows east and south to the North Sea at Harwich. This is potentially a more direct route into Europe from this part of the region. Communication by track and road will be examined, with many 'Roman' roads simply being an updating of earlier routeways.

6.1.7 *'Typological identification of later Bronze Age pottery, linked to close radiocarbon dating is badly needed, particularly for northern East Anglia where 'fine' wares are rare. It is increasingly notable that the occurrence and abundance of 'fine wares' versus 'coarse wares' varies markedly from site to site and across the region.'*

Middle Bronze Age finewares were present in quite large quantities at Clay Farm, and significantly, they only appeared to be present in one of the three settlement assemblages (Settlement 1, Area B). To have the finewares both present and 'absent' on the same excavation provides a unique opportunity to examine these assemblages with regards to possible differences in the make-up of the settlements, be they culture-, class-, time- or activity-related (see 6.1.2 above). Further radiocarbon dates will be obtained on all the assemblages, however, in light of the results obtained thus far, they may not necessarily be relied upon to provide particularly fine dating.

6.1.8 '*The study of the significance of hoarding and other depositional practices within a social and economic context is needed'.*

While there was no evidence for hoarding within the Clay Farm assemblage, the two bronze items recovered within Settlement 1 (the socketed spearhead and the possible

chape) were potentially deliberately 'deposited' items - both were found in a particularly 'wet' location. However, both were also found within a dense scatter or dump of occupation debris and could simply represent part of the settlement waste, or lost items. These dumps, or occupation spreads, are rare in the Middle Bronze Age, though less so in the later Bronze Age and Early Iron Age where midden or accumulation sites have more frequently been recorded. The deposits at Clay Farm will be reviewed in the light of this later evidence. The instances of human skulls and femurs, seemingly 'discarded' within Middle Bronze Age features (see 6.1.5 above) must be viewed as a very particular depositional practice. The skulls in particular must either have been brought to those locations and placed within the features, or have been suspended above them until sufficiently de-fleshed - none of the skulls exhibit evidence of having attracted the attention of scavenging animals. Apart from the deposition of human remains there are also several examples of the deposition of animals; a sheep in a well (with part of a pine marten) and a disarticulated dog in the terminal of a ditch (a little way beneath part of a human skull). Quern stones were found in a number of locations, some of which could also be considered as possibly deliberate, 'ritual' deposition.

6.1.9 '*Study of the development, frequency and significance of flintworking throughout the Bronze Age, together with the identification of particular trends and characteristics that may help in dating and relationships with other artefact types.'*

The flint assemblages from the settlement areas, particularly that associated with Settlement 1 in Area B, constitute the largest stratified Middle Bronze Age domestic assemblage in the region. At assessment it seems likely that there are differences in the make-up of the worked flint assemblages between the separate settlement sites - as there are between the ceramic and possibly the animal bone assemblages. This could either suggest that different activities were taking place within the separate occupation areas, or that the expected make-up of a domestic or craft/industrial flint assemblage may have changed over time within the Middle Bronze Age itself. Tool types were well represented within these assemblages including scrapers, coarse cutting tools and, surprisingly, a variety of contemporary arrowheads. Clay Farm could prove to be the 'type site' for the period, and a flint assemblage this large, and this well-dated both by other artefactual evidence and by carbon dating, could provide a touchstone for comparing and dating unassociated and fieldwalked assemblages across the region.

6.1.10 '*More work could be done on evaluation techniques and identifying the signatures of Bronze Age sites in non-gravel locations. There is a development-led heavy bias towards quarried landscapes – i.e. comparison of field system evidence between the heavily quarried western fen edge and eastern fen edge is difficult. Land characterisation studies may be helpful in this context.'*

A major problem, particularly on small excavations and evaluations, can be the tendency to misinterpret Middle Bronze Age ditches; they are all too frequently simply recorded as un-dated. On large-scale quarry or reservoir excavations, where an open-strip is undertaken, the layout of the, often sparse, ditch systems is clear - however, only a few of the ditches may have been visible in a trench evaluation of the area. During the trench evaluation at Clay Farm, many of the Middle Bronze Age ditches were located, but almost all were recorded as undated, or were ascribed later dates.

The results from Clay Farm have the potential to contribute to relevant characterisation studies.

Iron Age

6.1.11 '*Dating and chronology is still a central concern. The chronology of Early Iron Age pottery is vaguely known; there is still a need to finalise the dating of the appearance of Middle Iron Age pottery. As Middle Iron Age pottery can continue in parts of the region well into the 1st century BC and even up to the Roman Conquest in others, radiocarbon dating is needed. Features with datable metalwork are of great importance, and need to be clearly correlated with pottery and other material.*'

Large, well stratified and well preserved assemblages of Early, Middle and Late Iron Age pottery have been recovered from Clay Farm (over 50kgs in total), offering considerable potential to refine Iron Age chronologies. Radiocarbon dates will be obtained to date relevant parts of all these assemblages, particularly within the Early and Middle Iron Age. Similarly, the small assemblage of Early and Middle Iron Age metalwork, and associated worked bone, will be tightly dated, both by association and carbon dating.

6.1.12 '*The Bronze Age – Iron Age transition appears to be a period of marked change. There is an abandonment of many MBA field systems with possible population/settlement contraction. The scale, rate and nature of these changes are poorly understood. Opportunities should be sought to test the hypotheses put forward in Yates (2007). EIA settlement patterns may include open agglomerated settlements in some areas, perhaps on hill tops or higher on hill sides than in the LBA and MIA. There is clear evidence in some parts of the region for complex 'off-site' activities including isolated pits and waterholes, pit alignments, deposits in barrow ditches, isolated four posters etc. Understanding more about these settlement patterns and use of the landscape is a key question.*'

Evidence for the continued Late Bronze Age occupation of the Clay Farm field and enclosure system is extremely scarce, indeed scarce enough to suggest that the area had indeed been abandoned by *c*. 1250-1200 BC. This could suggest either a contraction in the population or in the areas under occupation, or a wholesale shift of settlement. However, a few sherds of Late Bronze Age pottery were recovered, in one area numbering around 100 sherds, alongside a contemporary flint assemblage. It is likely that the area as a whole was still being used in some way and it is hoped that further analysis of the ceramic and flint assemblages, alongside radiocarbon dating, will add to this debate. The Early Iron Age settlement site in Area A was in many respects an 'open agglomerated' one, as the majority of Early Iron Age settlement sites were; it just happened to be set within an earlier Middle Bronze Age enclosure system, giving the appearance of being enclosed. While there has been no cleaning, recutting or remodelling of the earlier enclosure ditches, their upper levels are in parts dense with Early Iron Age occupation debris, much in the way of those around the Middle Bronze Age settlements. The settlement site was situated higher up the valley side than either of the Middle Bronze Age settlement areas, or indeed parts of the Middle Iron Age settlement. The potential rise in the water table at Clay Farm toward the end of the Middle Bronze Age may be related to both the abandonment of this area and to the lack of direct settlement in the succeeding centuries, with perhaps a gradual drying out and recolonisation from the Middle Iron Age onwards. There are occurrences of 'off site' activities that may have been associated with the main Early Iron Age settlement area

in two or three locations, some with potentially interesting 'deposited' assemblages. These 'off site' pits stand in contrast to the settlement site itself, where very few pits were found.

6.1.13 '*It is increasingly evident that Iron Age East Anglia was not a unity and the differences between broadly the north and south are of crucial importance to our understanding of the region. The identification of tribal borders and politics through the material and physical evidence would still benefit from further study.*'

The assemblages at Clay Farm (throughout the Iron Age) are of sufficient size (and datable) to add to any discussions on regional and sub-regional differences in material cultures.

6.1.14 '*Finds studies, including artefact production, distribution and associations*:

Iron Age coins form one of the most important classes of evidence for the later Iron Age for the region. The chronology of some of the coinage has been revised recently, and there is now definite evidence for the minting of Gallo Belgic coins in Britain. Work from other regions show the need for a thorough critical examination of the coinage that breaks away from the rigid traditional 'historical' framework.'

The small Iron Age coin assemblage from Clay Farm will contribute to Iron Age coin studies in the region.

6.1.15 '*Further work needs to be done on developing regional pottery sequences and establishing a chronology for pottery assemblages. In particular Early Iron Age pottery chronologies are poorly understood. This is because of a lack of C14 dates and associations with datable metalwork, but also because Early Iron Age pottery may not fit straightforward chronological sequences. Large closed assemblages of Early Iron Age pot are always in need of dating.*'

There are large, well stratified (and closed) assemblages of Early, Middle and Late Iron Age pottery from the excavations at Clay Farm, particularly within the Early period. Radiocarbon dates have been obtained to initially date some of these assemblages for assessment, and further dates will be sought to tighten this dating, particularly for the Early and Middle Iron Age. Similarly, the small assemblage of Early and Middle Iron Age metalwork will be dated by radiocarbon dating and by association.

6.1.16 '*There has been considerable work on the social analysis of pottery assemblages looking at the adoption of new technology (the potter's wheel), food ways, production and deposition. These provide models for other work, but require considerable attention to quantification etc.*'

The Iron Age pottery assemblage covers the whole of the period from c. 700 BC to the Conquest, is well-stratified and will be well dated. Full and thorough cataloguing, analysis, recording and research of this assemblage, and study in relation to other contemporary finds and features, will contribute to this discussion.

6.1.17 '*Iron Age/Roman transition – on the sites that cover this phase, does the evidence suggest a seamless transition or a change in use of the land or farmstead, or continued*

occupation of the site but a change in building-types or agricultural practice? How far is there assimilation of Late Iron Age culture into Roman or does acculturation occur? To what extent do indigenous building styles persist? Is there continued use of field systems (with modest adaptation) as late as the early 2nd century? The nature of pre-Roman conquest contact/interaction with the continent needs examination – for example the Kelvedon Warrior burial contains foreign metalwork (EF coins, chariot yoke), etc.'

At Clay Farm the Iron Age to Roman transition appears almost seamless. The main settlement zone in Area E, while seeing a shift slightly to the north in the Early Roman period, is essentially the same size and in the same location as its Iron Age predecessor. The two potential house enclosures within the area (dating to the earlier and later 1st century AD) are the same size, the later version rectangular, as opposed to the earlier sub-oval. There is very strong evidence for pre-Conquest interaction and trade with the Romanised continent in the high status cremation burials within Area C: the grave goods, at least the ceramics and metalwork, all being imported. Significantly, these two pre-Conquest cremation pits were subsequently enclosed in what is currently interpreted as a 'cemetery garden' in the Early Roman period. This feature, while perhaps not unique, is extremely rare, and comparisons will be sought both within Britain and the wider Roman empire.

6.1.18 '*Settlement types, distribution, density and dynamics for the period need further study:-*

Zonation of use/internal spaces, interaction with hinterland, location with ref to topography and geology, resources, communication routes, etc.'

In Area E in particular, where a wider area of the Late Iron Age/Roman occupation was exposed, there was evidence for the zonation of domestic and light industrial activities. The sub-oval Iron Age house enclosure lay to the west, with features containing vitrified clay, fired clay and crop processing waste to the east. The same pattern was evident in the succeeding Romano-British period within this area (and with prevailing westerly winds, is often going to be the case). How these sites interacted with their hinterland will be examined by further study of the wider landscape through the evaluations of Clay and Glebe Farms to the west, of the Addenbrookes land to the east, and through the excavations at other sites in the area. Similarly, the main communication routes will be examined in relation to the known Romano-British landscape and to the landscapes and potential routeways that preceded it (see 6.1.6 above).

6.1.19 '*The nature of the agrarian economy needs further study. What are the relative proportions of cereals and livestock and is there a changing dynamic throughout the period?*'

Further analysis on the large, well preserved and well stratified, faunal and environmental assemblages recovered from Clay Farm will contribute greatly to this discussion.

6.1.20 '*The evidence for social organisation requires further study – how far is the religious/ritual element to life (temples and structured deposits?) evidence for the presence of an elite and how did this elite change/perpetuate its control/presence? Further research is needed to establish whether cremation burial and pyre goods are an indication of social hierarchies.'*

There was clearly an elite present within one of the two Late Iron Age settlement areas at Clay Farm, evidenced by the high status cremation burials and the quality and quantity of the imported grave goods that they contained. That this elite continued to be in place after the Conquest is evidenced by the continuing reverence accorded these graves and their incorporation into what is currently identified as a 'cemetery garden'.

6.1.21 '*The chronology, distribution and range of types of Iron Age burial evidence needs further study.'*

Clay Farm will contribute to this discussion through its series of semi-crouched burials (potentially both Early and Middle Iron Age), single extended burial, and its Middle and Later Iron Iron Age cremation burials. These will be radiocarbon dated and put into context within their settlements/landscapes. There were two further instances of human skull fragments recovered from Early Iron Age pits within Area A, showing a possible continuity of practice from the Middle Bronze Age.

6.1.22 '*Are we getting any closer to understanding if cremation is only for elites? Where are the remains of everyone else – is excarnation and the curation of ancestor's bones indicated? The phenomenon of ad hoc burials and human 'spare parts' in IA boundary features needs further investigation.*'

This has been addressed above within the Middle Bronze Age research objectives (see 6.1.5), but the questions posed there are clearly still as relevant to the Early, Middle and Late Iron Age. At Clay Farm, there were not as many instances of human remains being recovered from boundary ditches and pits in the Iron Age as were seen in the Bronze Age, although it does occur (see 6.1.21 above).

6.1.23 '*Increasingly enclosed landscapes appear to be an important feature of many parts of MIA/LIA southern Britain. The rate of this change differs from area to area, in some areas it appears to be a gradual process, in others enclosed landscapes appear relatively suddenly. As for the EIA, off-site archaeology, transhumance patterns and use of marginal parts of the landscape are clearly important and need further study.*'

There is 'off site archaeology' in the Early Iron Age comprising a number of pits (Areas C, E and F). The two small pits in Area C are not far from the contemporary settlement in Area A. The large pit excavated during the evaluation in Area E, which contained a large assemblage of Early Iron Age pottery, and the small Early Iron Age pit in Area F both seemed to be isolated. Does this indicate there is Early Iron Age settlement near by? The main Middle Iron Age settlement in Area C is enclosed. Radiocarbon analysis will provide dates for when this settlement was established. All the Late Iron Age areas are enclosed but in a clearly different way to the Middle Iron Age.

Roman

6.1.24 '*Romanisation in the region – understanding both the continuity of Iron Age into Roman settlement and the 2nd century 'Romanisation', identifying continuity as well as new settlement structure and land use which develops across the region at this time and explanations for this at site, landscape and political levels. Some regions show evidence of re-organisation several decades after the Roman Conquest.'*

The Late Iron Age settlement in Area E, comprising small fields which had developed organically, showed continuity into the Early Roman period before it was abandoned in the 2nd century. Conversely, in Area D, the Early Roman settlement has a more 'planned' rectilinear layout and the pottery suggests it continued in use into the Late Roman period. There was also no Late Iron Age activity, suggesting the Late Iron Age settlement was elsewhere and that the Roman activity in Area D was a result of 2nd century 'Romanisation'. The evidence for continuity, or lack or continuity, will be examined in more detail, using the settlement activity in Areas D and E

6.1.25 '*The evidence for change in ritual practices, including the introduction of Christianity needs reassessing in the light of recent excavations. How many religious sites (temples/shrines/etc) are known from the region? Synthesis is needed of Roman cemeteries and burial practice.'*

The two pre-conquest cremations in Area C were enclosed in the later 1st century, in what has been interpreted as a 'cemetery garden'. This feature may not be unique, but is certainly unusual, and further documentary work will be required in support of this theory. Comparisons will be sought both within Britain and from abroad. The 'garden' will also be compared to other potentially similar features within the region, variously interpreted as shrines or temples (Fison's Way, Thetford being an obvious example). The Late Roman double ditched 'monument' in Area F is equally unusual. A theory for the enclosure's function still needs to be formulated, as does an explanation for the disarticulated and fragmentary human skeletal remains in the ditch. The remains may have been exhumed from burials within a known cemetery, from which selected bones were then deposited in the ditch. If this was the case, the bracelets must also have been deposited. Alternatively, the bones may have been the remains of excarnations which have found their way into the ditch. Interpretations such as these need to be explored in more detail as does the question of why three fragments of the bone were burnt.

7 Methods Statements for Analysis

7.1 Stratigraphic Analysis

7.1.1 Context, finds and environmental data will be analysed using an MS Access database. The specialist information will be integrated to aid dating and complete more detailed phasing of the site.

7.2 Illustration

7.2.1 All site plans and selected sections will be digitised using AutoCAD and report and publication figures will be created in Adobe Illustrator. Finds recommended for illustration will be drawn by hand, or photographed as appropriate.

7.3 Documentary Research

7.3.1 Primary and published sources will be consulted using the Cambridgeshire Historic Environment Record, aerial photographs and comparable sites locally and nationally.

7.4 Artefactual Analysis

Earlier prehistoric pottery

7.4.1 Beyond drawing the obviously diagnostic Early Neolithic (Mildenhall pot from context 6418 (pit **6417**, Area A) and Early Bronze Age potsherds/reconstructed vessels (Beaker in pit **6467**, fill 6468, Area A) little else is required for the earliest pottery. The main characteristics of the key Deverel-Rimbury assemblage need to be illustrated. Particular focus should be made of the Area B and Area E assemblages and their different compositions. Ideally, both assemblages should be drawn in full with all vessels being represented. Potentially this could involve illustrating the partial profiles of 90+ vessels. The shared fabrics between different assemblages could be analysed for micro-differences and thin sectioning of the three principal fabrics (Fabric 1, Fabric 2 and Fabric 8) from each of the main areas would help address this research question (were the pots made from the same clay source?). Targeted Radiocarbon dating of representative contexts (including charred residue from salient sherds) could help establish whether the two assemblages were approximately contemporary. Refitting analysis between sherds of the same context and sherds belonging to different contexts should be carried out with a view to establishing depositional histories and possible links between discrete contexts. At the same time fragmentation analysis might enhance our understanding of the taphonomy of the assemblages as well as the immediacy or otherwise of deposition. Post-breakage histories for large Deverel-Rimbury assemblages from a settlement context have never been attempted.

Later prehistoric pottery

7.4.2 The single form assigned as Late Bronze Age should be illustrated. For the Early Iron Age it is essential that the remaining pottery from pit **5898** is fully quantified and a second radiocarbon date for the pottery from, preferably from a seed or carbonised reside from one of the pots. Sixty form assigned vessels and other diagnostic sherds should be illustrated. Most will relate to deposits from pit **5898** and ditch **5826**. Very little is known about the function of different types of Early Iron Age pot. It would therefore we worthwhile submitting a series of sherds maximum of 20 sherds) for lipid analysis, to ascertain what different sizes or types of pot were used for. A sherd from each fabric group (13 in total) should be thin-sectioned to ascertain the likely source of

clays and tempering ingredients. A range of sherds from different fineware vessels should also be thin-sectioned to look at variability across a vessel class (7 sherds).

7.4.3 For the Middle Iron Age a single radiocarbon date should be obtained for the assemblage from oven **11175**. This yielded the largest group of Middle Iron Age pottery, and contained a 'late La Tène-style' jar in an unusual flint-tempered fabric. A radiocarbon date should also be obtained for the semi-complete pot in grave **6485**. Fifteen form assigned vessels should be illustrated (vessels 6, 7, 11, 19, 20, 23, 45, 46, 64, 65, 81, 169, 182, 183, 252), together the with 'late La Tène-style' decorated sherds from contexts 1174 and 10984.

7.4.4 At least two radiocarbon dates should be obtained for the stratified Middle and Late Iron Age assemblage from ditch **10812** - at least one date for each period assigned assemblage. This will help to established when wheel-made pottery, combing and grog tempering were adopted. Seven of the form assigned vessels should be illustrated (vessels 2, 4, 44, 47, 85, 108, 114), together with a cordoned sherd from context 11468, and any other diagnostic sherds from radiocarbon dated contexts.

Roman pottery

7.4.5 The assessment catalogue will be reviewed and where material has been identified as important to the interpretation of the site it will be looked at in more detail. The sherds will be counted and weighed to the nearest whole gram. Evidence for use, decoration and abrasion will also be noted. Where ever possible the local fabrics and forms will be recorded using published regional examples to minimize republication of existing data. For imported fabric types the National fabric series (Tomber and Dore 1996) will be referenced.

7.4.6 Where detailed fabric descriptions will be beneficial to understanding the source of the clay and methods of manufacture, samples suitable for thin section analysis will be taken. It is recommended that five pottery samples from each of the ten main visually identified fabrics will be selected for thin section analysis.

7.4.7 Relevant sherds will be selected for illustration; priority will be given to material that has not been published elsewhere.

7.4.8 When all the preliminary analysis of the pottery fabrics and forms have been completed further analysis of the pottery within the context of the site will take place. The pottery will be analysed by phase, by feature group and its local, regional and national significance established.

7.4.9 An archive report will be written presenting the results of this work, which will be a useful interpretative tool for the Project Officer and will also be suitable for publication in an edited format. The publication report will be edited any queries or changes undertaken by the author. The illustrations will also be checked at this time.

Lithics

7.4.10 No comprehensive cataloguing of the material has yet been attempted and this should be regarded as a priority, both for the purposes of archiving and to provide a tool for approaching the material's further analysis. The earlier material, dating potentially from the Upper Palaeolithic and certainly from the Mesolithic through to the Early Bronze Age, needs to be isolated, described and its significance in terms of wider patterns of landscape occupation discussed.

7.4.11 The assemblages directly relating to the two later prehistoric periods of flint use at the site, the Middle Bronze Age and the Iron Age, should be examined and recorded in detail.

7.4.12 The significance of the flintwork merits it being published in some detail, alongside suitable illustrations. The publication text should include an account of earlier (pre-Middle Bronze Age) flint use at the site, a detailed description of the later prehistoric assemblages and the technological strategies employed to make them, a description of the range of products that may have been manufactured and the uses to which they may have been put, a consideration of spatial and chronological variations within the typological and technological composition of the material, an account of raw material variability and the implications that this may have had for the movement of peoples and resources within the wider landscape, a discussion of relationships between the 'domestic' aspect of the assemblages and the likely symbolic associations and a consideration of how the later prehistoric assemblages compare and contrast to other contemporary lithic assemblages from the region.

7.4.13 In order to realise these aims, further work is required. This should include cataloguing the entire assemblage in full, to both isolate earlier flintwork and identify significant sub-assemblages from within the later prehistoric material; full raw material, metrical, attribute and technological analyses of all significant sub-assemblages present across the site; a detailed mapping of the assemblages' spatial and chronological distribution refitting exercises in order to elucidate pre-depositional history and discard patterns of the significant sub-assemblages; research and compilation of contemporary assemblages from the region.

Metalwork

7.4.14 In addition to the conservation, archival catalogue entries should be completed, an illustrated report prepared for inclusion into the publication, and some contribution be made to the incorporation of comment on the relevant classes of finds into the main stratigraphic text.

Worked Bone

7.4.15 Archival catalogue entries should be completed, and a brief illustrated report prepared for inclusion into the publication.

Worked stone

7.4.16 The assemblage has been briefly recorded and some detail will need to be studied more carefully during the full analysis stage. Possible millstones will need to be very carefully recorded, especially in terms of dimensions and use wear. The use wear on the rubbers will also need closer scrutiny. In order to fulfil the potential of the assemblage, further work will start with identifying the less distinctive stone types more closely. Millstone Grit, Old Red Sandstone and local sandstones are sometimes very hard to distinguish from one another and this is true of a number of specimens from Clay Farm. Thin section work would help with this study and it is recommended that five items be thin sectioned.

Fired clay and CBM

7.4.17 The fired clay and CBM needs to be fully catalogued and fabrics assigned. The kiln furniture from Early Roman kiln **2122** needs to be fully recorded and compared to other examples such as the ones found at the Hutchison Site (Evans *et al.* 2008).

7.4.18 Following analysis and full recording, the report will describe all the stone objects and discuss the types of stone used, where they have come from and how this compares to other sites locally. It will then discuss what the querns (and millstones) and other objects tell us about activity at Clay Farm and status / trade links. Fifteen items have been selected for illustration.

Glass

7.4.19 Further work is recommended for the unguent vessel SF 333 from cremation pit 10909. This includes exploration of parallel examples as it would add to the published record in this region. Analysis of the contents by Dana Goodburn-Brown has the potential to identify any residues which may indicate the substance contained in the vessel at the time of deposition. The unguent bottle, along with melon bead SF 398 (fill 11993), should be illustrated, subject to publication format. All remaining glass in the assemblage is in a stable state of preservation and no further work is recommended.

Waterlogged wood

7.4.20 It is suggested that, for the sake of completeness, structural timber W07 is drawn at an appropriate scale and photographed. Otherwise, no further analysis is advised.

7.5 Ecofactual Analysis

Human skeletal remains

7.5.1 During further analysis, sex of the adults will be estimated, where possible, by employing sexually dimorphic features of the skull and pelvis. Juvenile ages will be estimated by employing the measurements of diaphyses and by observations relating to the eruption and development of the teeth. Adult ages will be estimated by employing, where possible, multiple indicators, including the auricular surface (Lovejoy *et al.* 1985; Buckberry and Chamberlain 2002), pubic symphysis (Brooks and Suchey 1990) and dental attrition. Metrical analysis will involve a standard set of measurements. In addition, all pathological lesions will be described, photographed and, where required, radiographed. Differential diagnoses will be explored by reference to standard texts. Detailed analysis of probable or possible ancient modifications, including cut marks, will include detailed visual inspection of all bones by slowly rotating them relative to the light source.

7.5.2 Calculation of the MNI for the ring ditch in Area F will be undertaken by identifying fragments, where possible, to anatomical zone in conjunction with observations relating to the repetition of elements and size differences. A re-fitting exercise and analysis of the spatial distribution of the bones will also be employed. Recording fragments to anatomical zone will not only facilitate the calculation of the MNI, but it will also make the assemblage directly comparable with the butchered animal bone found within the same context, so that their relationship to each other, and hence depositional history, can be explored.

7.5.3 Cremation deposits will be washed and sieved to sort them more fully into groups comprising fragments that are >10mm, 10-4mm and 4-2mm in size. In addition to the information already obtained, this would include, for each deposit, the identification of skeletal elements (where possible) to explore whether there has been a selection process favouring certain skeletal parts over others. The cremation processes employed would also be explored. The minimum number of individuals represented

would also be confirmed based on the repetition of elements, combined with observations relating to age and size differences. Ages and sexes would be estimated (where possible) and pathology described and diagnosed, as described above. The full analysis would also involve detailed examination of the depositional context, and any associated artefacts and burnt material.

7.5.4 The findings of all of the above analyses, osteological and funerary data combined, will be contextualised by comparisons with contemporary examples that exist locally, regionally and nationally in both the grey and published literature.

Faunal Remains

7.5.5 The assemblage will require full recording and analysis. All bones will be fully recorded using a specially written MS Access database. At least 25% of a given element must be present for it to be counted. Each element will be identified to species where possible using comparative collections and reference manuals.

Environmental remains

7.5.6 The extensive sampling programme at Clay Farm has demonstrated that many of the features contain plant remains preserved by carbonisation and waterlogging. The initial assessment of these samples has highlighted those with the potential for further archaeobotanical study. Further analysis of selected samples will involve identification of plant species and charcoal, and recommendations for analysis will be made at this stage.

Pollen

7.5.7 Full pollen analysis is recommended on those features and contexts highlighted as having potential. It is recommended that pollen analysis is concentrated on the upper two fills from ditch **4460** and ditch **5988**, on the two fills from ditch **5260** and all four fills recorded in pit **5547**. Additional sub-samples will be taken and processed, and, initially, pollen will be counted from samples taken at 0.04m intervals in the contexts highlighted as having potential. Ideally, further sub-samples will be taken and counted at closer intervals were significant changes are recorded.

8 Report Writing, Archiving and Publication

8.1 Report Writing

Tasks associated with report writing are to be decided following the production of the Post Excavation Assessment.

8.2 Storage and Curation

8.2.1 Excavated material and records will be deposited with, and curated by, Cambridgeshire County Council in appropriate county stores under the Site Code CAM CFT 10 and the county HER code ECB 3686. A digital archive will be deposited with OA Library/ADS. CCC requires transfer of ownership prior to deposition. During analysis and report preparation, OA East will hold all material and reserves the right to send material for specialist analysis.

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

9 Resources and Programming

9.1 Project Team Structure

Name	Initials	Project Role	Establishment
Richard Mortimer	RM	Project Manager	OA East
Tom Phillips	TP	Project Officer	OA East
Barry Bishop	BB	Lithics	Freelance
Matt Brudenell	MB	Later prehistoric pottery	Freelance
Denise Druce	DD	Pollen	OA North
Chris Faine	CF	Faunal remains	OA East
Rachel Fosberry	RF	Environmental supervisor	OA East
Gillian Greer	GG	Illustrator	OA East
Chris Howard-Davies	CHD	Metalwork and worked bone	OA North
Elizabeth Huckerby	EH	Pollen	OA North
Mark Knight	MK	Earlier prehistoric pottery	Freelance
Louise Loe	LL	Human skeletal remains	OA South
Alice Lyons	AL	Roman pottery and fired clay/CBM	OA East
Elizabeth Popescu	EP	Post excavation manager and editor	OA East
Mairead Rutherford	MR	Pollen	OA North
Ruth Shaffrey	RS	Worked stone	OA South

Table 28: Project Team

9.2 Stages, Products and Tasks

9.2.1 Stages, Products and Tasks relating to stratigraphic analysis are to be decided following the production of the Post Excavation Assessment, and following discussions with CAPCA and URS Scott Wilson. They will be detailed in a separate Post-Excavation Analysis and Publication document. Tasks relating to specialist analysis are listed below with the approximate number of days required.

Artefact/Ecofact	Initials	Task	No of days
Earlier prehistoric pottery	MK	• Illustration catalogue • Thin sectioning (20 sherds to select) • Refitting analysis • Fragmentation analysis	15
Later prehistoric pottery	MB	• Completion of catalogue • Illustration catalogue (approx 90 to select) • Thin sectioning (20 sherds to select) • Lipid analysis (20 sherds to select) • Full grey report • Publication text	12
Roman pottery	AL	• Review data, record selected groups in more detail • Select sherds for thin section analysis (up to 50) • Select pottery for illustration • Analyse the pottery by fabric and form • Analyse the pottery within context of the site. • Analyse the local, regional and national significance • Write a full archive report that is suitable for publication in an edited form.	30
Lithics	BB	• Full catalogue • Full raw material, metrical, attribute and technological analyses • refitting exercises • research and compilation of contemporary assemblages from the region	20
Metalwork	?	• Copper alloy analysis • Ironwork analysis • Lead analysis • Silver analysis	14.5
Worked bone	?	• Worked bone analysis	3.25
Worked stone	RS	• Final recording and thin section analysis • Report • Illustrations	15
Fired clay and CBM	AL	• Catalogue and report	15
Glass	SW	• Analysis of contents of unguent bottle • Look for parallels for unguent bottle	3
HSR	LL	• Sorting cremations • Analysis of 4 cremations • Analysis of 11 articulated skeletons • Analysis of bone fragments • Full report with comparisons	20
Faunal remains	CF	• Full recording and analysis	c. 25
Enviro. samples		• Analysis of selected samples	c. 70
Pollen	EH/DD	• Pollen subsampling • Pollen Preparation • Pollen analysis • Pollen diagrams and report	60
Illustration	GG	• Illustrate selected artefacts and ecofacts	c. 50

Appendix A. Finds Reports

A.1 Earlier prehistoric pottery

By Mark Knight

Introduction and methodology

A.1.1 A total of 1930 sherds (11540g) of earlier prehistoric pottery were recovered from the excavations with a mean sherd weight of 6.0g. The material dates from the Early Neolithic through to the Middle Bronze Age, although over 80% of the assemblage is of Middle Bronze Age origin (Table 29).

Period	Date Range	Number	Weight (g)	% No/Wgt	MNV
Early Neolithic	*c.* 3800-3500 BC	127	710	6.6/6.1	6
Early Bronze Age	*c.* 2200-1500 BC	163	1197	8.4/10.4	13
Middle Bronze Age	*c.* 1500-1100 BC	1640	9633	85.0/83.5	94
Total:		*1930*	*11540g*		*113*

Table 29: Assemblage breakdown by period plus estimated minimum number of vessels (MNV)

A.1.2 This report presents the results of a full assessment of the earlier prehistoric pottery and includes an analysis of the condition, composition and distribution of the main components by period. Emphasis has been placed on describing the scale and depositional patterning of the large Middle Bronze Age collection with particular reference to its non-funerary or apparent 'domestic' character. Comparative assemblages, including local and regional examples have been utilised to help understand the significant elements of the overall assemblage. Differences in fabric and form have been recorded for all of the sherds.

A.1.3 The overall condition of the material varied between contexts, but generally was good to very good and included large fresh pieces as well as un-abraded small to medium-sized fragments that occasionally retained carbonised residues. Abraded, weathered and burnt pieces were also identified. A single occurrence of a possible 'whole' vessel (refitting sherds of a comb-impressed Beaker) was recorded, whilst the remainder of the assemblage comprised mainly small fragmentary collections belonging to mixed vessels. Feature sherds were common, 141 rims, 58 base fragments and 188 decorated pieces, although much of the material consisted of plain, relatively straight sided body sherds indicative of an assemblage made-up predominantly of small to medium-sized bucket-shaped vessels or urns with limited decoration.

A.1.4 The assemblage can be sub-divided by area, Areas A, B, C and E (Table 30). Of these, Areas B and E produced the largest number of sherds, both by number (43.0 and 43.8% respectively) and by weight (46.0 and 40.3%). Beyond these areas, only Area A generated pottery of significant quantity to warrant detailed analysis at this stage. Areas B and E generated similar assemblages both in terms of scale and type and together represent a rare opportunity to compare and contrast comparative collections from the same site.

Area	Number	Weight (g)
A	217	1460
B	831	5307
C	36	114
D	0	0
E	845	4655
F	1	4
Total:	*1930*	*11540g*

Table 30: Assemblage size by area

Fabrics

A.1.5 Sixteen different fabrics were identified of which eight were diagnostically key and can be separated into early (Fabrics 5, 6, 11, 13 and 15) and late (Fabrics 1, 2 and 8) groups. The early group incorporated a diagnostic Early Neolithic or Mildenhall type fabric (Fabric 15) as well as Early Bronze Age or Beaker and Collared Urn types (Fabrics 5, 6, 11 and 13). The late group belonged exclusively to Middle Bronze Age or Deverel-Rimbury wares.

Fabric Series

Fabric 1: Medium hard with abundant small (white) crushed SHELL MBA

Fabric 2: Very hard with common crushed burnt FLINT/quartz SAND MBA

Fabric 3: Hard with frequent small black inclusions (?) and occasional small GROG MBA

Fabric 4: Medium hard with frequent to abundant finely crushed burnt FLINT MBA

Fabric 5: Hard (compact) with common SAND and occasional GROG EBA/MBA

Fabric 6: Medium hard (soapy) with common small to medium GROG EBA

Fabric 7: Medium with frequent GROG and common medium burnt FLINT MBA?

Fabric 8: Medium hard with common small GROG and common to frequent very small SHELL MBA

Fabric 9: Very hard with abundant small crushed SHELL and small crushed burnt FLINT MBA

Fabric 10: Hard to medium hard with common medium-large burnt FLINT and common SAND

Fabric 11: Medium (soapy) with frequent small, medium and large GROG EBA

Fabric 12: Soft to medium with occasional small to very small SHELL and possible GROG MBA

Fabric 13: Hard with common angular GROG (black) and frequent SAND EBA

Fabric 14: Extremely hard with superabundant medium-sized burnt FLINT

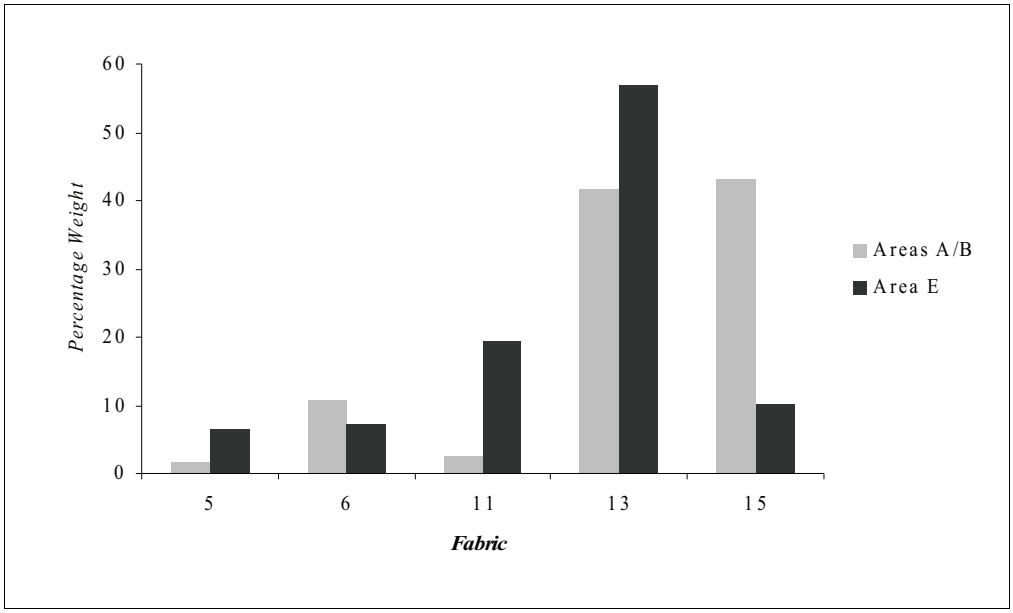
Fabric 15: Hard with common poorly sorted small and medium burnt FLINT and varying amounts of SAND ENeo

Fabric 16: Medium soft with frequent small rounded VOIDS

	1	**2**	**3**	**4**	5	6	**7**	**8**	**9**	**10**	11	**12**	13	**14**	15	**16**
A						■		■					■		■	
B	■	■	■	■	■		■	■		■	■	■			■	■
C	■				■						■	■			■	
E	■	■	■	■	■	■	■	■	■	■	■		■	■	■	
F								■								

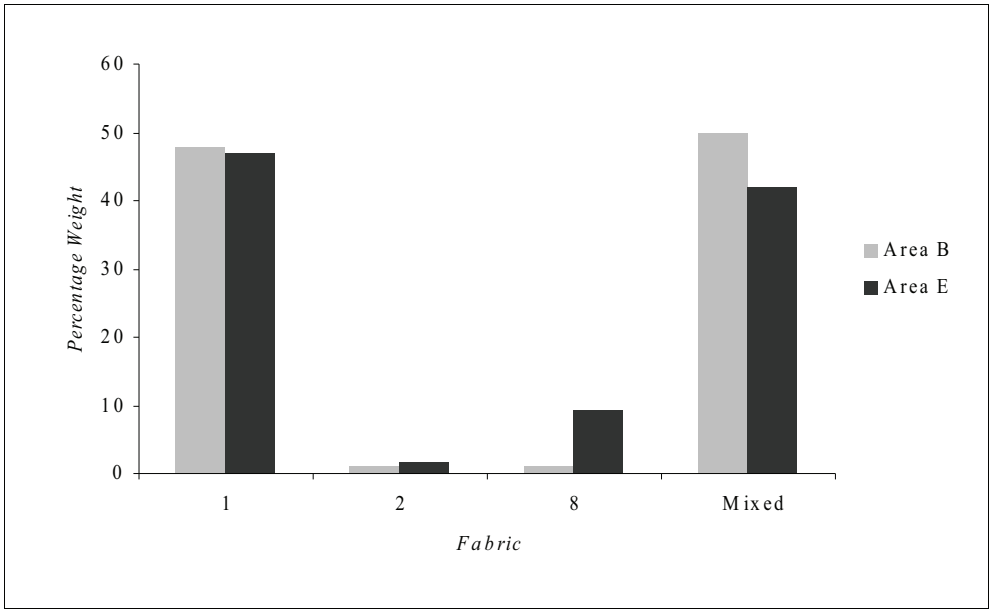
Table 31: Distribution of fabric types (1-16) by area (late group MBA fabrics in bold)

A.1.6 The early group comprised mostly flint or grog-rich fabrics and contrasted with the late group because of the absence of shell. The early group fabrics occurred in low numbers across all areas except Area F and predominantly within Areas A, B and E. Two Area A features in particular, **6417** (Fabric 15) and **6467** (Fabric 13), generated large assemblages but otherwise the scale and distribution of early group fabrics was low and, at best, background.



Graph 1: Early group fabric distribution by area

A.1.7 Shell was the predominant opening material for the late group of fabrics and occurred in greater or lesser amounts within the two principal types (Fabric 1 and Fabric 8). Both of these were 'soft' fabrics and typical for Deverel-Rimbury ceramics. Fabric 1a represented a 'lost' shell variant of Fabric 1. Fabric 2 was, by comparison, very hard and compact, and extremely well made. Its surfaces were burnished and its opening materials consisted of crushed flint or quartz but no shell. At first the contrast in hardness along with the absence of shell made the Fabric 2 pieces stand out as potentially intrusive or late. Importantly however, Fabric 2 sherds consistently occurred alongside Fabric 1 and Fabric 8 sherds.



Graph 2: Late group fabric distribution by area

A.1.8 The distribution of the main MBA fabrics demonstrated two important patterns. Firstly, Fabric 1 pottery was found in roughly equal quantities between Areas B and E and represented the dominant category. Similarly, although low in numbers, Fabric 2 was found in approximately equal quantities. Secondly, the distinctive grog and shell mix of Fabric 8 had a much more restricted distribution in that it was almost absent from Area B but common in Area E.

Early Neolithic and Early Bronze Age Pottery

A.1.9 Mildenhall - Context 6418 (pit **6417**, Area A) produced a closed assemblage of Early Neolithic pottery (102 sherds, 638g), characterised by mainly plain fragments of small and medium-sized hemispherical bowls with open or neutral profiles and heavy rims. The context included pieces of 'coarse' simple or S-shaped outlines with externally thickened rims, alongside 'fine' thin-walled carinated bowls decorated with punctate motifs (horizontal rows of small V-shaped stabs). Evidence of burnishing survived on both internal and external surfaces. A minimum of four vessels were present and the assemblage included small abraded pieces as well as larger fresh sherds. Other Mildenhall sherds also came from Middle Bronze Age ditch **925** (fill 1756, Area E), Neolithic pit **5788** (fill 5789, Area B) and from Area C, a single small sherd in Late Iron Age grave **10322** (fill 10325), possible tree throw **10737** (fill 10736) and Middle Iron Age pit **11760** (fill 11790).

A.1.10 Beaker – Fragments of a near complete fine, comb-zoned Beaker (98 sherds, 636g) came from pit **6467** (fill 6468, Area A). The majority of the profile was still present and some of the sherd breaks appeared fresh as if the vessel had been deposited as a 'whole' vessel. The decoration had been made with a squared toothed comb. Beaker fragments were also identified in Area E, in Late Iron Age waterhole **364** (fill 410), Middle Bronze Age pit/hollow **1635** (fill 1638) and Middle Bronze Age ditch **925** (fill 1756).

A.1.11 Collared Urn/EBA - Distinctive grog tempered sherds with a soapy texture and occasionally accompanied by features such as collars or exaggerated shoulder/neck zones, and/or impressed twisted cord decoration were found in Middle Bronze Age ditch **925** (fill 1483) and Early Bronze Age pit **2210** (fill 2207) in Area E. Early Bronze Age urn

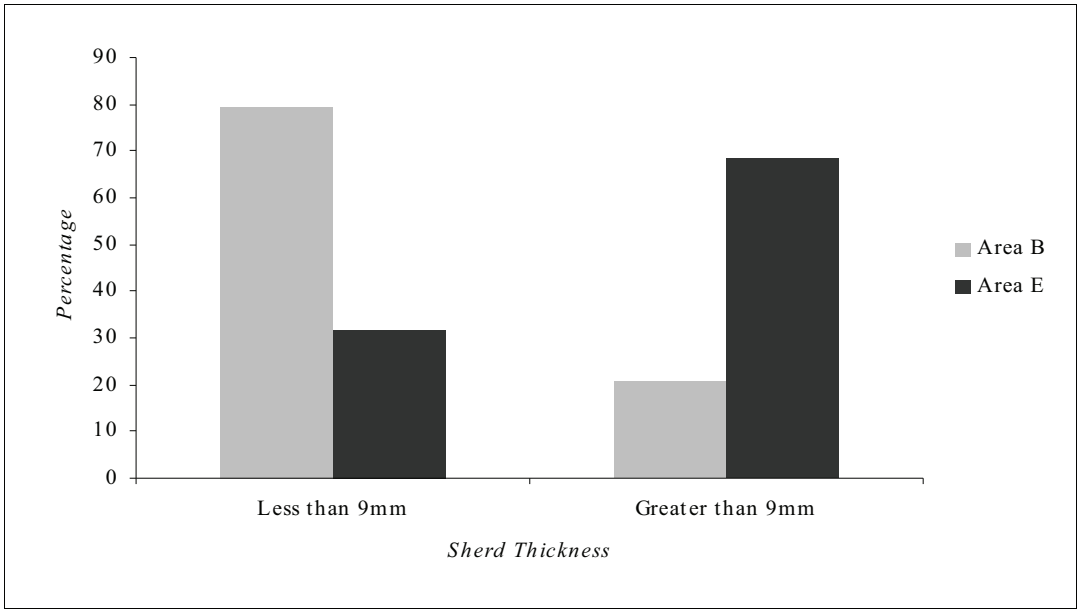
fragments included 2 sherds (18g) from layer 2516, also in Area E. Most of the profile of an early type plain Collared Urn (tapered rim, collar diameter narrower than the shoulder) was present in pit **6355** (fill 6356) in Area A.

Middle Bronze Age - Deverel-Rimbury

A.1.12 The Deverel-Rimbury assemblage can be separated by form and decoration into two, possibly three groups or distinct assemblages. Familiar traits, such as small to medium-sized straight or barrel sided profiles with simple flattened rims, along with horizontal cordon decoration, were present throughout the collection. Equally, the prevailing shelly fabric (Fabric 1) represents a standard Deverel-Rimbury fabric for this region. Parts of unusual, small fineware burnished cups or jars with incised decoration were also identified amongst the more familiar pieces. Importantly, subtle differences in form, including wall thicknesses, as well as marked differences in decorative techniques corresponded with different parts or areas of the site. As will be shown, particular attributes of the Area B assemblage were appreciably different from those associated with Area E.

Fragmentation & wall thicknesses

A.1.13 The mean sherd weight of the Deverel-Rimbury pottery from Area B equalled 6.4g whereas the MSW of Area E equalled 5.2g. This was despite the fact that the sherds from Area E were from demonstrably thicker walled vessels and probably of larger size. The majority of the Area B fragments belonged to vessels with walls less than 9mm in thickness whilst the opposite was true for Area E (see Chart 3). The overall impression was of contrasting degrees of fragmentation, with the Area B sherds being deposited relatively soon after breakage when compared to the Area E material which was much more fragmentary or dispersed.

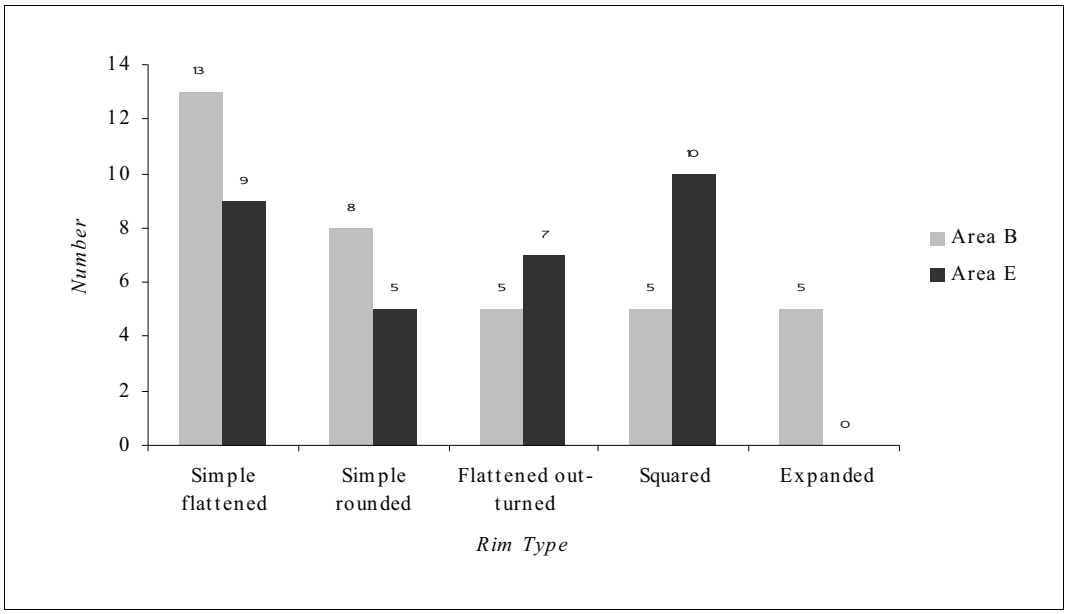


Graph 3: Differences in Deverel-Rimbury average sherd thickness between Areas B and Area E

Rim Types

A.1.14 As if to emphasise the difference in heaviness or size of the vessels being represented by the Deverel-Rimbury sherds recovered from the two areas, there were also subtle

differences in the composition or range of rim types. Area B rims were on the whole simple and comparatively delicate, whilst the Area E rims also included heavy or stout examples (squared and flattened out-turned). The contrast was subtle but seemed to show a direct correspondence with the wall thickness pattern.

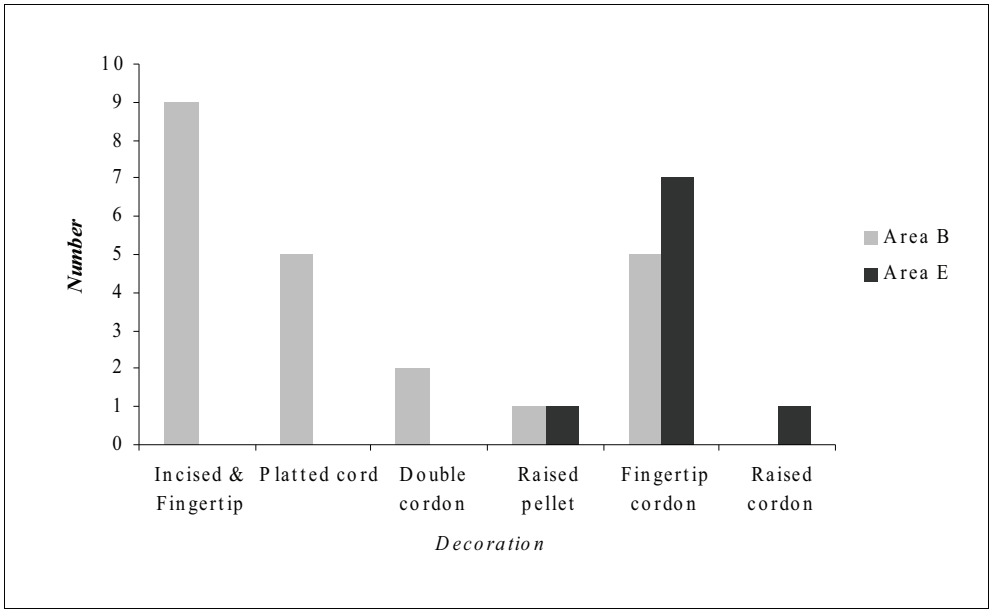


Graph 4: Differences in Deverel-Rimbury rim type between Area B and Area E

Decoration

Area B

A.1.15 Decoration on the 'coarser' small and medium sized urns included single sharply incised lines (vertical, diagonal and/or horizontal) that divided the vessel surface into small blocks which in turn were occasionally filled with singular impressed fingertip decoration or raised pellets. Horizontal cordons made of single or double lines of closely space fingertip impressions adorned other vessels whilst at least two vessels had multiple cordons accomplished with impressed platted cord. A single rim was decorated with an incised cable design decoration. Post-firing drilled perforations or repair holes were common. An incised zigzag motif banded the waist of a small burnished fineware (Fabric 2) whilst the majority of the burnished sherds were plain.



Graph 5: Distribution of decoration between Areas B and Area E

Area E

A.1.16 Incised decoration was almost completely absent from the Area E Deverel-Rimbury pottery and on the whole the types of embellishment were standard for these wares. An odd incised herring-bone motif on a straight sided or upright vessel with a squared rim stood out as unusual. An applied, raised horizontal cordon impressed with large fingertip impressions was recorded, as were several vessels with straightforward impressed fingertip cordons. Random, singular fingertip impressions were also identified. The burnished fineware element included a vertical cordon of raised diagonal pellets. Again drilled perforations indicated acts of repair.

Discussion and potential – Middle Bronze Age Ceramics in the Cambridgeshire Region

A.1.17 The Deverel-Rimbury pottery represents the most important component of the Clay Farm earlier prehistoric pottery assemblage. The scale and domestic character of the material alone make it stand out but equally significant is the context of the assemblage. The 2nd millennium BC fieldsystem sites of Cambridgeshire have to date produced comparatively little Deverel-Rimbury pottery outside of cemetery contexts. Up until recently, domestic Middle Bronze Age ceramics have been conspicuous by their absence, especially when contrasted with the increasingly impressive domestic assemblages of Beaker and Collared Urn being generated by similar landscapes (see Evan & Vander Linden 2008, Evans *et al*. 2009).

Site	*Weight*
Briggs Farm, Thorney	4234g
Tanholt Farm, Eye	5265g
West Deeping	5273g
Glebe Farm, Baston	8251g
Clay Farm	**9633g**
Whitfield, Baston	13896g

Table 32: Key Deverel-Rimbury Assemblages in East Anglia

A.1.18 The comparative dearth of Deverel-Rimbury pottery in southern Cambridgeshire was in stark contrast to the ever increasing Deverel-Rimbury assemblages being recorded to the north. Excavations in southernmost Lincolnshire at places such as Langtoft and West Deeping have produced assemblages that stand comparison to the great Grimes Graves collection. For instance, the combined Langtoft sites of Whitfield, Glebe and Freemans (Hutton 2008a, 2008b & 2008c) have produced over 3100 sherds of Deverel-Rimbury pottery whilst the, so far limited, excavations at West Deeping have indicated a similar potential (Murrell forthcoming). Even more recently, enclosure ditches overlying a MBA fieldsystem at Briggs Farm, Thorney (Pickstone & Mortimer 2010), generated an equally impressive range of Deverel-Rimbury pottery and it would appear that as the catchment or scale of development projects (quarry in particular) get bigger the 'missing' MBA ceramic repertoire materialises. The pottery from the south Lincolnshire and northern Cambridgeshire sites was derived from either watering hole or field system related contexts but in particular discrete 'enclosures' that appeared to hang-off of the greater field system layout. What seems certain, however, is that the deposition of Deverel-Rimbury pottery was never primary to the inception or earliest elements of the fieldsystems themselves. As yet none of these sites, with the exception of Brigg's Farm, have produced unambiguous evidence of contemporary post-built structures and it seems once again that Middle Bronze Age domestic architecture was of a kind that leaves little or no archaeological trace.

A.1.19 Different attributes of the Clay Farm Deverel-Rimbury pottery seem to suggest that it is made up of more than one assemblage. At least two discrete groups (Area B & Area E) can be identified and these were separated by a distance of approximately 800m. Even within the Area E assemblage there would appear to be a core assemblage situated amongst disparate fragments belonging to other episodes of deposition (although further work needs to be carried out to confirm this attribute). Of the two key assemblages it is Area B that stands out as unusual in that it comprised mainly thin-walled, almost delicate forms (an attribute not normally ascribed to Deverel-Rimbury Wares) with decoration techniques that appear to be peculiar to this context. Other similarly 'delicate' Deverel-Rimbury forms have been identified at Briggs Farm, Thorney where thin-walled (4-11mm) and small to medium diameter 'jars' (12-24cm) were recorded. Closer to home, a trench-based evaluation of a chalk ridge above the village of Barrington, Cambridgeshire generated a small number of equally thin and diminutive vessels with the same shell-rich fabric and straight-sided profiles (Dickens, Knight & Appleby 2006). This pottery was found in association with a large, and seemingly isolated rectangular enclosure ditch and a nearby discrete cluster of pits. The enclosure and one of the pits produced radiocarbon dates of 1490-1310 and 1450-1300 Cal BC respectively. Another small assemblage characterised by abundant crushed shell as the principal opening material and found in association with a large L-shaped enclosure was the Laboratory for Molecular Biology Site, Cambridge. Here articulated bone dated the base of the enclosure to 1500-1380 Cal BC whilst the pottery came from about halfway up the profile (Collins 2009 & Collins pers comm.).

A.1.20 It is possible that within the catchment or aperture of the Clay Farm excavations and through a perspective created by the composition and context of Deverel-Rimbury pottery that we are observing two discrete occupations. The question we must ask: do these assemblages simply demonstrate two spatially discrete occupations or is there a temporal dimension as well? Equally, is it also possible that all of the material was generated by the same community, but at different times, one after the other, and that the assemblages reflect movement within or across an enclosed landscape. In many ways the Clay Farm Middle Bronze Age pottery is unique in that it affords an opportunity

to interpret the morphology and depositional history of two similar Deverel-Rimbury assemblages of different composition but within the same landscape context.

Recommendations

Neolithic and Early Bronze Age

A.1.21 Beyond drawing the obviously diagnostic Early Neolithic (Mildenhall pot from context 6418 (pit **6417**, Area A) and Early Bronze Age potsherds/reconstructed vessels (Beaker in pit **6467**, fill 6468, Area A) little else is required.

Middle Bronze Age - Deverel-Rimbury Assemblage

A.1.22 The main characteristics of the key Deverel-Rimbury assemblages need to be illustrated. Particular focus should be made of the Area B and Area E assemblages and their different compositions. Ideally, both assemblages should be drawn in full with all vessels being represented. In many ways this would help change the perception that the Grimes Graves Deverel-Rimbury assemblage is still the only significant domestic or non-funerary collection in Eastern England. Potentially this could involve illustrating the partial profiles of 90+ vessels (Area B- 54; Area C- 3 and Area E- 37).

A.1.23 The shared fabrics between different assemblages could be analysed for micro-differences and thin sectioning of the three principal fabrics (Fabric 1, Fabric 2 and Fabric 8) from each of the main areas would help address this research question (were the pots made from the same clay source?).

A.1.24 Thin tar-like residues were present on numerous sherds and although these residues could be utilised for radiocarbon dating they might also offer some type of chemical trace regarding the use of the vessels.

A.1.25 Targeted radiocarbon dating of representative contexts (including charred residue from salient sherds) could help establish whether the two assemblages were approximately contemporary.

A.1.26 Refitting analysis between sherds of the same context and sherds belonging to different contexts should be carried out with a view to establishing depositional histories and possible links between discrete contexts (between Areas B & C for example, or between the main enclosure contexts of Area E and adjacent settlement features). At the same time fragmentation analysis might enhance our understanding of the taphonomy of the assemblages as well as the immediacy or otherwise of deposition. Post-breakage histories for large Deverel-Rimbury assemblages from a settlement context have never been attempted.

A.1.27 The analysis stage will take approximately 15 days.

A.2 Later Prehistoric Pottery

By Matt Brudenell

Introduction

A.2.1 A total of 4287 sherds (61880g) of later prehistoric pottery were recovered from the excavations at Clay Farm, with a mean sherd weight (MSW) of 14.4g. The material dates from the Late Bronze Age though to the Late Iron Age, though the bulk of the assemblage is of Early and Middle Iron Age origin (Table 33).

Period	Date range	No./wt. (g) sherds	MNV
Late Bronze Age and Late Bronze Age/Early Iron Age	c. 1100-800/600 BC	157/950	8
Early Iron Age	c. 800-350 BC	2815/45121	337
Middle Iron Age	c. 350/330-50 BC	978/11850	92
Late Iron Age	c. 50 BC-AD 50	337/3959	36
TOTAL	**-**	**4287/61880**	**473**

Table 33: Period assemblages discussed in the report. MNV = minimum number of vessels calculated as the total number of different rims and bases identified

A.2.2 This report provides a characterisation of the pottery by period. It offers an assessment of the condition, composition and distribution of each period assemblage, highlighting some of the key feature groups. It also considers their local and regional significance, and lays out recommendations for further work. Full quantification by fabric, form and surface treatment is given for all period assemblages, except the Early Iron Age. Although most of this pottery has been recorded, a large and important assemblage from pit **5898** (1559 sherds, 28992g) is still undergoing detailed analysis. However, all the pottery has been inspected, and an overview is offered.

Methodology

A.2.3 Barring material from pit **5898** (discussed above), all the pottery has been fully recorded following the recommendations laid out by the Prehistoric Ceramic Research Group (2009). 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 gram) and assigned to a fabric group (sherds broken in excavation were refitted and counted as single entities). 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. 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. The Late Bronze Age and Early Iron Age vessels were classified using a form series devised by the author, and the class scheme created by John Barrett (1980). The Middle Iron Age-type forms were codified using the series developed by JD Hill (Hill and Horne 2003, 174; Hill and Braddock 2006, 155-156), whilst the Late Iron Age wheel-made 'belgic' vessels were classified using Isobel Thompson's (1982) catalogue. All pottery was subject to sherd size analysis. Sherds less than 4cm in diameter were classified as 'small'; sherds measuring 4-8cm were classified as 'medium', and sherds over 8cm in diameter will be classified as 'large'. A programme of refitting was also conducted, and sherd joins were noted within and between contexts. The quantified data is presented on an Excel data sheet held in the site archive.

The Clay Farm fabrics

A.2.4 Without the application of thin section analysis, the sources of the potting clays and tempering ingredients remain uncertain. However, the raw materials required for the production of the site's pottery were all potentially available within the local landscape. Alluvial deposits flanking the Cam Valley, c. 2km to the west, may have offered suitable potting clays, whilst tempering agents such as flint, chalk grits and sand could been extracted from the site's own subsoils. The shelly wares may also be local too, though some potentially derived from fossiliferous Jurassic clays (Ampthill and Kimmeridge Clay) whose nearest outcrops are c. 11km to the northwest near Oakington. These may have been exploited by local potters, perhaps during seasonal forays into the fen-region. Alternatively, vessels may have been acquired from this area through exchange networks.

A.2.5 Chalk fabrics:

CHQ1: Sparse to moderate medium or coarse chalk (mainly 1-3mm) with sparse to common quartz sand. The clay matrix may contain calcareous flecks and/or rare coarse flint (mainly 2-3mm)

CHQ2: Rare to sparse calcareous flecks (mainly <1mm) and sparse to moderate quartz sand

A.2.6 Flint fabrics:

F1: Moderate to common medium and coarse burnt flint (mainly 2-4mm). The clay matrix may contain rare to sparse sand

F2: Sparse to common medium burnt flint (mainly 1-2mm). Clay matrix as F1

F: Generic category for sherds with burnt flint inclusions too small to assign to a numbered fabric group

A.2.7 Flint and grog fabrics:

FG: Sparse to moderate medium to coarse burnt flint (mainly 1-3mm) and sparse medium to coarse grog (mainly 1-3mm). The clay matrix may contain rare to sparse sand

A.2.8 Flint and chalk fabrics

FCH1: Moderate to common coarse burnt flint (mainly 2-4mm) and sparse to moderate fine or medium chalk inclusions (up to 2mm in size).

A.2.9 Flint and sand fabrics:

FQ1: Moderate to common coarse burnt flint (mainly 2-4mm) in a dense sandy clay matrix

FQ2: Moderate to common medium burnt flint (mainly 1-2mm) in a dense sandy clay matrix

FQ3: Moderate to common finely crushed burnt flint (mainly 0.25-1mm) in a dense sand clay matrix. The fabric may contain rare pieces of burnt flint up to 2mm in size

FQ4: Rare or sparse coarse burnt flint (mainly 2-4mm) in a dense sandy clay matrix

FQ5: Rare or sparse medium burnt flint (mainly 1-2mm) in a dense sandy clay matrix. Sherds may occasionally contain rare rounded quartz gains (up to 1.5mm), or rare voids

FQ6: Rare or sparse finely crushed burnt flint (mainly 0.25-1mm) in a dense sandy clay matrix. The fabric may contain rare pieces of burnt flint up to 2mm in size. Occasional sherds contain sparse calcareous flecks

FQ: Generic category for sherds with burnt flint inclusions too small to assign to a numbered fabric group

A.2.10 Shell and flint fabrics:

SF1: Moderate to abundant coarse shell (mainly 2-4mm) and sparse to moderate coarse burnt flint (mainly 2-4mm). Clay matrix is occasionally sandy.

SF2: Sparse to common medium shell (mainly 1-2mm) and rare to moderate coarse burnt flint (mainly 2-4mm)

A.2.11 Grog fabrics:

G1: Sparse to common medium to coarse grog (mainly 1-3mm). The clay matrix contains rare to moderate quartz sand. Grog may contain calcareous inclusions

G2: Sparse to common medium grog (mainly 1-2.mm). The clay matrix contains rare to moderate quartz sand. Occasional sherds contain mica flecks

G3: Moderate to common fine grog (<1.mm).). The clay matrix contains rare to moderate quartz sand. Occasional sherds contain mica flecks

G: Generic category for sherds with grog inclusions too small to assign to a numbered fabric group

A.2.12 Grog and shell fabrics:

GS1: Sparse to moderate medium to coarse grog (mainly 1-3mm), rare to sparse shell flecks (mainly <1mm) and rare coarse flint (mainly 2-3mm). The clay matrix may contain rare to sparse quartz sand

GS2: Moderate fine grog (mainly <1mm), sparse shell flecks (mainly <1mm) and sparse quartz sand

A.2.13 Vegetable matter and sand fabrics:

VEQ1: Moderate to common linear voids from burnt out vegetable matter and moderate to common quartz sands. Voids are visible throughout the clay matrix

VEQ2: Moderate to common linear voids from burnt out vegetable matter and rare to sparse quartz sands. Voids are visible throughout the clay matrix

A.2.14 Quartz sand fabrics:

Q1: Moderate to common quartz sand with rare coarse flint and/or calcareous grits (1-3mm)

Q2: Moderate to common fine quartz sand with sparse mica. Clay matrix may contain rare quartz gains up to 1mm

Q3: Moderate to common quartz sand with rare linear voids from burnt-out vegetable matter

Q4: Sparse to common quartz sand:

Q5: Moderate to common angular quartz sand, abrasive to touch. Clay matrix may contain rare quartz gains up to 1mm, and very rare flint (1-2mm). A distinctive fabric

Q: Generic category for sherds with quartz sand inclusions too small to assign to a numbered fabric group

A.2.15 Quartzite fabrics:

QI1: Moderate medium to coarse quartzite (1-3mm) and sparse to moderate medium or coarse flint (mainly 1-4mm).

A.2.16 Shell fabrics:

S1: Moderate to common medium to very coarse shell (mainly 1-4mm)

S2: Moderate to common medium shell (1-2mm)

S3: Moderate to common fine shell and/or shell flecks (mainly <1mm)

S: Generic category for sherds with shell inclusions too small to assign to a numbered fabric group

A.2.17 Shell and sand fabrics:

SQ1: Moderate to common coarse to very coarse shell (mainly 2-5m) and moderate to common quartz sand

SQ2: Sparse medium to coarse shell (1-3mm) and moderate to common quartz sand

SQ3: Sparse to common medium shell (1-2mm) and moderate to common quartz sand

SQ4: Sparse to moderate shell flecks (mainly <1mm) and moderate to common quartz sand

A.2.18 Shell and quartzite fabrics:

SQI1: Moderate to very coarse shell (mainly 2-5m) and sparse to moderate medium to coarse quartzite (mainly 2-3mm)

A.2.19 Shell and limestone fabrics:

SL1: Moderate to common medium shell (Mainly 1-2mm) and sparse coarse limestone (mainly 2-4mm)

A.2.20 Limestone fabrics:

L1: Moderate to common medium limestone (mainly 1-2mm) and rare coarse flint (1-3mm)

The Late Bronze Age and Late Bronze/Early Iron Age pottery

A.2.21 Recovered from a total of 54 contexts, the assemblage of Late Bronze Age and Late Bronze Age/Early Iron Age pottery included 157 sherds (950g), with a low MSW of 6.1g. This represents 4% of all the later prehistoric pottery by sherd count or 2% by weight. The material was in a stable condition, but most sherds were small (79%) and displayed weathered and abraded edges.

A.2.22 The pottery was recovered from Areas A, B, C and E, and with the exception of eight sherds (69g), all derived from ditches (2 sherds from a grave (36g); 3 sherds from natural features (4g, possibly Neolithic); 2 sherds from pits (2g; residual) and 1 sherd from a waterhole (27g; residual)). In total, 30 sherds (162g) were identified as residual, including three of the eight rims and bases in the assemblage. Most of the non-residual pottery derived from the secondary or tertiary silts of Middle Bronze Age field system ditches; few yielding more than two sherds apiece. The only noteworthy feature assemblage derived from fill group 1054, the tertiary silts of ditch **1057** in Area E. This contained 85 sherds of Late Bronze Age pottery weighing 481g. The group included the partial profile of a convex-walled jar with pre-firing perforations along the neck, as well as two other rim sherds and a vessel base. The ditch also received later pottery including two probable Early Iron Age sherds (20g) and two rilled sherds from Late Iron Age wheel-made vessel (12g).

Assemblage characteristics

A.2.23 The assemblage was dominated by sherds in flint gritted fabrics, notably F1 (Table 34). By weight, 75% of the pottery was tempered with flint, with 16% containing flint and sand, and 5% a mix of flint and grog. These fabrics and their frequencies are typical of Late Bronze Age assemblages in southern Cambridgeshire and neighbouring counties.

A.2.24 The rims and bases of just eight vessels were identified in the assemblage (4 different rims, four different bases), and of these only one could be assigned to form: a convex-walled Class I coarseware jar with a slightly in-turned perforated neck (Form B, 1 sherd, 26g). The base sherds had either flat or pinched-out foots, whilst the rims had flattened or rounded lips. Five body sherds retained traces of carbonised residue (72g).

Fabric	Group	No./(wt.) sherds	% of fabric (by wt.)	No./wt. sherds burnished	% of fabric burnished (by wt.)	MNV	MNV burnished
F	Flint	25/27	2.8	-	-	-	-
F1	Flint	95/651	68.5	-	-	6	-
F2	Flint	6/30	3.2	-	-	-	-
FG1	Flint and grog	5/43	4.5	-	-	-	-
FQ	Flint and sand	1/2	0.2	-	-	-	-
FQ1	Flint and sand	12/125	13.2	-	-	2	-
FQ2	Flint and sand	4/17	1.8	-	-	-	-
FQ3	Flint and sand	1/4	0.4	-	-	-	-
FQ6	Flint and sand	1/6	0.6	-	-	-	-
G1	Grog	2/6	0.6	-	-	-	-
Q	Sand	2/8	0.8	-	-	-	-
Q4	Sand	1/4	0.4	-	-	-	-
QI1	Quartzite	1/26	2.7	-	-	-	-
S	Shell	1/1	0.1	-	-	-	-
TOTAL	**-**	**157/950**	**99.8**	**0.0**	**0.0**	**8**	**0**

Table 34: Quantified Late Bronze Age and Late Bronze Age/Early Iron Age pottery. MNV = minimum number of vessels, calculated as the total number of different rims and bases (4 rims, 4 bases)

Discussion

A.2.25 Considering a) the scarcity of diagnostic sherds, b) the general condition of the material, and c) the small size of most feature assemblages, it seems inappropriate to attempt to date this group of pottery too closely. Most of the material appears to be of Late Bronze Age origin (c. 1100-800 BC), as suggested by the character of the fabrics and the handful of feature sherds recovered (especially those from tertiary ditch fill 1054) - parallels evident with the Late Bronze Age assemblage from the Addenbrooke's Hutchison Site (Brudenell 2008a). However, some of the plain body sherds could easily date a few centuries later; notably those from Area A where Early Iron Age settlement is well attested.

A.2.26 In general, the pottery is suggestive of dispersed activity, rather than settlement *per se*. In fact it is possible that sherds became scattered across this landscape as a consequence of Late Bronze Age manuring practices involving refuse from local surrounding settlements (such as the Hutchison Site).

Recommendations

A.2.27 Illustration: The single form assigned should be illustrated (vessel 261)

The Early Iron Age pottery

A.2.28 A substantial assemblage of Early Iron Age pottery was recovered, totalling 2815 sherds weighing 45121g. This represents 66% of the overall later prehistoric assemblage by sherd count or 73% by weight. The pottery was recovered from 107 contexts, and displayed a high MSW of 16.4g. In general the material was in excellent condition, with relatively few thoroughly abraded pieces or sherds suffering from the effects of leaching or panning.

Assemblage characteristics

A.2.29 The Early Iron Age pottery is characterised by a range of jars, bowls and cups, which can be further sub-divided into coarsewares and finewares based on the nature of their

fabrics and method of surface treatment. Although a wide range of fabrics are identifiable in the assemblage, sherds tempered with flint and sand clearly dominate, following by those with shell. The grade and density of the flint inclusions varies along a spectrum of coarse to fine and sparse to common, linked largely to the quality of ware and vessel size. Most of the pots appear to be un-burnished coarseware jars, tempered with coarsely crushed, poorly sorted flint or shell. However, there is a fineware component consisting of burnished bowls, cups, and one or two large jars. These tend to have sandy fabrics or finely crushed flint inclusions.

A.2.30 The assemblage includes a large number of partially intact vessel profiles (150+), including fragments of at least three near-complete pots. The principal jar forms include vessels with marked or angular shoulders and concave necks (Form H); angular tripartite jars with everted necks (Form I); slack or round shouldered jars with upright rims (Forms F and G), and bipartite vessels with in-turned necks (Form E). These occur in a variety of sizes, though most have rim diameters ranging from 14-28cm. Bowls are less prolific, but their forms included angular bipartite vessels, often topped with a beaded rim (Form M); tripartite bowls with short everted rims (Forms M); round-bodied bowls with flared necks (Form K), and broadly hemispherical bowls (Form J).

A.2.31 Decoration is prolific, particularly on the coarsewares. Rim-tops, rim-exteriors, shoulders and necks are commonly ornamented with rows of fingertip impressions, tool marks, slashes, and/or cordons. Jars frequently have multiple zones of decoration (normally applied to the rim and shoulder) with one or two examples even displaying finger-tipping around the lower body and base. The finewares are generally plain by contrast, though a number are ornamented with grooved horizontal lines, furrows or geometric motifs; commonly chevron patterns boarded by horizontal lines. These appear to be restricted to the shoulder and neck of finewares.

Distribution, deposition and key feature groups

A.2.32 Although groups of Early Iron Age pottery were recovered from six excavations areas (A-F), by weight, only 2% of the material derived from contexts outside of Area A. This group comprised 147 sherds (812g) derived from 17 contexts. Of these, 17 sherds were residual (94g); 15 were surface finds (72g), and a further 55 (299g) were recovered from the capping fills of Middle Bronze Age field system ditches – much like the Late Bronze Age pottery. The rest of the material derived from three pits: two in Area C (pits **10780** and **10787**); one in Area F (pit **593**). Both pits in Area C contained substantial parts of individual vessels. Pit **10787** yielded refitting sherds of a handled angular tripartite jar (Form I, 22 sherds, 175g), whilst pit **10780** contained the complete profile of a hemispherical cup (Form R) with omphalos base (22 sherds, 83g); the latter paralleled by a vessel from Wandlebury (Webley 2004, 43, fig. 3, no. 14). In Area F, 16 sherds (89g) were recovered from pit **593**. Most belonged to a weakly shouldered jar (Form G) decorated with a row of fingertip impression along the girth.

A.2.33 However, the bulk of the assemblage was recovered from Area A, where there were clear traces of a settlement focus. In total, 90 contexts yielded 2668 sherds (44309g) in this zone - only seven fragments coming from surface finds (17g) and a further five sherds (42g) residual in Middle Iron Age features. The non-residual assemblage derived from 87 contexts relating to nine ditches, nine pits, a series of postholes, a hearth, and a grave. Only eight of these features yielded more than 250g of pottery (Table 35), with by far the largest assemblages deriving from pit **5898** and ditch **5826**. Jointly, these two features contain 75% of all the Early Iron Age sherds, and account for just under half of the pottery in the later prehistoric assemblage. Their fills appears to represent

sequential dumps of ceramic-rich midden-type material containing mixed fragments of more than one hundred different vessels. Typologically the assemblages are indistinguishable, and there is no indication that their character or composition varies stratigraphically. In both instances, refits throughout the sequence of fills suggest material was interred in relatively quick succession; the deposits most likely being drawn from the same surface source.

Deposit size	Feature	No./weight of sherds	Comment
Medium (251-500g)	Pit **6414**	21/456g	Refitting fragments of an angular decorated fineware jar. Parallels with vessels from the Pre-War Gravel Pits, Fengate (Hawkes and Fell 1945, 200, Fig. 2, D2, E1 & E2)
	Grave **6395**	19/251g	Mainly body sherds – few diagnostic pieces
	Posthole **6126**	37/362g	Refitting fragments of plain shouldered coarseware jar
Large (501-1000g)	Ditch **5815**	39/637g	Fragments of numerous different pots, many decorated
	Ditch **5995**	78/690g	Fragments of numerous different pots, many decorated
Very large (1000g+)	Ditch **5826**	661/10271g	Substantial regionally important assemblage
	Pit **6162**	125/1348g	Fragments of numerous different pots, including burnt refitting sherds from a large round bodied bowl
	Pit **5898**	1559/28992g	Substantial regionally important assemblage
TOTAL	**-**	**2539/43007g**	**90% of total EIA assemblage by sherd count/94% by weight**

Table 35: Early Iron Age features with more than 250g of pottery in Area A

Discussion

A.2.34 The Early Iron Age assemblage from Clay Farm features a wide range of profusely decorated coarsewares jars, and a variety of largely plain but angular fineware bowls. Assemblages with these characteristics are generally thought to have a currency between c. 800-600/500 BC, and may be termed Earliest Iron Age. Typologically they belong to the 'Decorated ware' phase of the Post-Deverel Rimbury ceramic tradition (Barrett 1980), best exemplified in East Anglia (still) by the large published pottery assemblage from West Harling, Norfolk (Clark and Fell 1533).

A.2.35 To date, few groups of pottery with these characteristics have been recovered from southern Cambridgeshire. Though the region boasts a number of later Early Iron Age assemblages dated between c. 600/500-350/300 BC (e.g. Trumpington Park & Ride (Brudenell forthcoming a), War Ditches (Brudenell 2010) and Glebe Farm Site A (Brudenell 2007)), there have been few finds of Earliest Iron Age material. Small feature-assemblages have been excavated at Trumpington Park & Ride (Brudenell forthcoming a), Glebe Farm (Brudenell 2011), Hills Road (Collins 1948) and Triplow (Brudenell 2008b), but none offer a picture of the broader character or content of repertoires in this period. Comparative pottery groups are similarly scarce in other parts of the county. The only published parallels are with material from the Pre-War Gravel Pits, Fengate (Hawkes and Fell 1945); the Tower Works Site, Fengate (Brudenell with Hill 2009), and Lingwood Farm, Cottenham (Hill 1998). However, the Clay Farm assemblage is much larger than these published examples, and provides the opportunity to refine our understanding of ceramic chronologies in this period. In fact a single radiocarbon determination has already been obtained for pit **5898**, dating the assemblage 740-390 cal. BC at 95.4% probability (SUERC-35986, 2410 ± 30 BP). This is in broad accordance with the typological dating, although the 68.2% determination is slightly later at 520-400 BC. It would therefore be worthwhile obtaining a second date for this assemblage to check the reliability of the results, and hopefully refine the dating bracket.

A.2.36 In short, the Early Iron Age assemblage is of both local and regional significance, and will help to establish a more secure characterisation of ceramic traditions in this period.

It is a large assemblage in excellent condition, and offers the opportunity to investigate ceramic use and depositional practice.

Recommendations

A.2.37 Recording: It is essential that the remaining pottery from pit **5898** is fully quantified following the guidelines set out by the Prehistoric Ceramics Research Group (2009).

A.2.38 Dating: A second radiocarbon date should be obtained for the pottery from pit **5898**; preferably from a seed or carbonised reside from one of the pots. This will hopefully tighten the current dating bracket.

A.2.39 Illustrations: 60 form assigned vessels and other diagnostic should be illustrated. Most will relate to deposits from pit **5898** and ditch **5826**. Maximum of 60 illustrations.

A.2.40 Lipid analysis: Very little is known about the function of different types of Early Iron Age pot. It would therefore we worthwhile submitting a series of sherds for lipid analysis, to ascertain what different sizes or types of pot were used for. This will allow for a much more detailed discussion of vessel function and culinary practice. Maximum of 20 sherds to be submitted.

A.2.41 Thin section analysis: A sherd from each fabric group (13 in total) should be thin-sectioned to ascertain the likely source of clays and tempering ingredients. A range of sherds from different fineware vessels should also be thin-sectioned to look at variability across a vessel class (7 sherds). This will enable a more detailed discussion of ceramic production and exchange. Maximum of 20 sherds to be submitted.

The Middle Iron Age pottery

A.2.42 The pottery assigned to the Middle Iron Age comprised 978 sherds, weighing 11850g. This represents 23% of the overall later prehistoric assemblage by sherd count or 19% by weight. The pottery was recovered from 109 contexts, and displayed a MSW of 12.1g (68% small sherds; 28% medium; 4% large). In general the material was in good condition with few thoroughly abraded pieces, or sherds suffering from the effects of leaching or panning.

Assemblage characteristics

A.2.43 The Middle Iron Age assemblage was predominately composed of sherds in dense sandy fabrics. Although eight basic fabric groups were distinguished (Table 36), by weight 82% of the pottery had quartz sand as the principle inclusion, with a further 7% containing a mix of sand and chopped vegetable matter. Both wares are typical of Middle Iron Age assemblages in southern and eastern Cambridgeshire, as too are the site's vessel forms. These comprised a range of ovoid and slightly globular jars and bowls, mostly displaying weakly pronounced shoulders and short necks terminating in either rounded, flat-topped or externally thickened rims. In total, a third of the vessels (30) in the assemblage could be assigned to form, including 97 sherds, weighing 2422g (Table 37).

Fabric	Group	No./(wt.) sherds	% of fabric (by wt.)	No./wt. sherds burnished	% of fabric burnished (by wt.)	MNV	MNV burnished
CHQ1	Chalk	11/83	0.7	-	-	1	-
CHQ2	Chalk	18/95	0.8	-	-	2	-
FQ1	Flint and sand	7/282	2.4	7/282	100.0	1	1
FQ5	Flint and sand	1/16	0.1	-	-	-	-
G1	Grog	1/24	0.2	-	-	-	-
GS2	Grog and shell	2/344	2.9	2/344	100.0	1	1
Q	Sand	38/44	0.4	-	-	1	-
Q1	Sand	97/1465	12.4	4/154	10.5	15	2
Q2	Sand	23/171	1.4	17/74	43.3	2	2
Q3	Sand	113/1935	16.3	17/501	25.9	13	6
Q4	Sand	483/5403	45.6	35/414	7.7	44	4
Q5	Sand	81/681	5.7	-	-	7	-
S	Shell	3/4	<0.1	-	-	-	-
S1	Shell	36/237	2.0	-	-	1	-
S2	Shell	6/7	0.1	-	-	-	-
S3	Shell	9/49	0.4	-	-	-	-
SQ1	Shell and sand	1/26	0.2	-	-	-	-
SQ2	Shell and sand	1/49	0.4	-	-	-	-
SQ4	Shell and sand	9/65	0.5	-	-	-	-
VEQ1	Veg. and sand	29/821	6.9	-	-	4	-
VEQ2	Veg. and sand	9/49	0.4	4/27	55.1	-	-
TOTAL	**-**	**978/11850**	**99.8**	**86/1796**	**15.2**	**92**	**16**

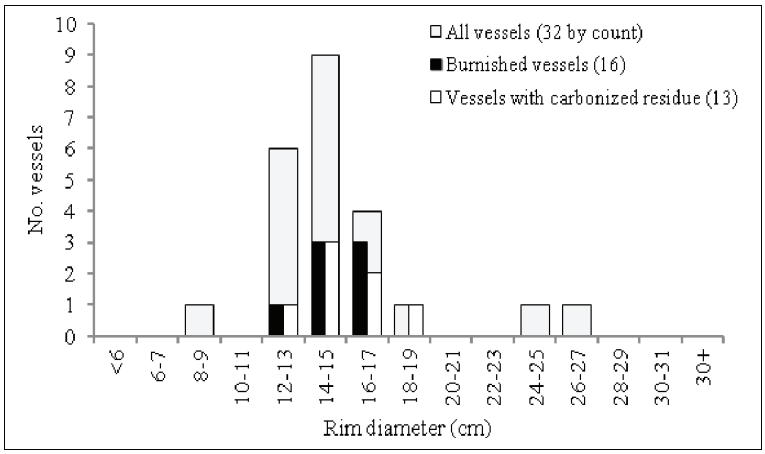
Table 36: Quantified Middle Iron Age. MNV = minimum number of vessels calculated as the total number of different rims and bases identified (61 rims, 30 base, 1 compete vessel profile)

Form	Description	MNV	MNV burnished	No./wt. (g) sherds	Rim diameter range (cm)
A	Slack shouldered jars with a short upright neck	14	1	25/358	12-16cm
B	Jars with a pronounced rounded shouldered and short off-set upright neck. Constricted mouth.	3	1	53/1178	14-17cm
D	Slack shouldered jars with outwardly flared neck	2	-	3/69	9-14cm
E	Jars with a high rounded shoulder and upright neck	1	1	1/26	15cm
F/G	Bowls or globular jars with an S-shaped profile	3	2	4/217	15-26cm
K	Globular bowls and ovoid jars with no neck	5	1	9/512	15-24cm
L	Globular bowls and squat jars with no distinct neck zone, but a clearly defined rim	2	-	2/62	14cm
TOTAL		**30**	**6**	**97/2422**	**9-26cm**

Table 37: Quantification of Middle Iron Age vessel forms. The lettered form series relate to that developed by JD Hill which is widely employed in northern East Anglia. The descriptions are a simplified version of those fully published by Hill and Horne (2003, 174) and Hill and Braddock (2006, 155-156). MNV = minimum number of vessels.

A.2.44 Shouldered jars of Form A, B, D and E dominated the group; notably the slack shouldered jars of Form A which made up nearly half of all the classified vessels. These small-sized pots tended to have ovoid or ellipsoid-shaped bodies and were found in a range of fabrics (principally Q4). Globular and ovoid vessels of Forms K and L were the second most common. The Form K varieties had no distinct neck-zone, and were mainly composed of squat jars and convex-walled tubs. By contrast, the Form L vessels were more bowl-like in shape, displaying rounded profiles with distinct but stunted rims. Finally, the assemblage included three vessels with S-shaped profiles. These Form F/G pots included bowls and globular jars, similar to some of the more rounded vessels of Form L, only with hollowed out-turned necks.

A.2.45 Most form-assigned vessels had small mouth-diameters, with only two measuring over 18cm. Overall, the rim diameter of 23 vessels could be established in the assemblage (21 of which belonged to form-assigned vessels), with a clear peak in the representation of pots with diameters between 12-17cm (Graph 6) - a pattern very similar to that recorded at Haddenham V (Hill and Braddock 2006, 171, Fig. 5.72).



Graph 6. Middle Iron Age rim sizes and the relationship burnishing and carbonized residues. Residues were recorded on 74 sherds (1660g) in the assemblage (50 sherds (1061g) with carbonized residues; 24 sherds (599g) with limescale)

A.2.46 A total of 86 sherds (1796g) were burnished or carefully smoothed, representing 9% of the assemblage by sherd count or 15% by weight. This figure is relatively low for Middle Iron Age pottery groups, possibly reflecting an emphasis on (small) cooking vessels. Pots mainly in sandy fabrics were burnished, notably Q2 and Q3.

A.2.47 Decoration was present on 44 sherds (1505g), representing a maximum of 30 vessels. Around half (21 sherds, 729g) were scored body sherds, probably related to the East Midlands Scored Ware tradition (Elsdon 1992); particularly three sherds in shell fabrics (81g). The assemblage also included seven different decorated rims (13 sherds, 379g). These were either slashed (1 vessel), tool impressed (2 vessels), or bore fingertip/nail impressions (4 vessels) on the rim-top or exterior rim-edge. Four were associated with Form A and K jars with rim diameters of 12-14cm. Aside from an unusual cordoned sherd from ditch **10361** (22g), all the remaining decorated pieces carried 'late La Tène-style' grooved geometric and/or curvilinear lines (9 sherds, 375g, a maximum of 3 vessels). The most complete example of a motif was found on the body and base of a large lightly burnished pot from oven **11175** (7 sherds, 282g). This displayed grooved elongated ovals boarded by horizontal lines. Unusually, the vessel was in a flint and sand tempered fabric, but was found alongside 'classic' Middle Iron Age-type wares. This pot is unlikely to be of local origin, and may have been made in South Essex where flint-tempering continued into the Middle Iron Age. The other late La Tène-style sherds were in the typical sandy fabrics. Both were recovered from ditch **10812**.

Distribution and deposition

A.2.48 Middle Iron Age pottery was recovered from five excavations areas (A-E). By weight, 76% derived from Area C; 13% from Area A; 10% from Area B, and 1 % collectively from Areas D and E. The pottery from Areas D and E comprised 24 sherds (122g) including residual material from Roman features (2 sherds, 51g), intrusive ceramics caught in the tops of silted Middle Bronze Age field system ditches (2 sherds, 31g), and

a scatter of small abraded sherds in pits (20 sherds, 40g). These deposits are of no great significance, but hint at a background of Middle Iron Age activity in this area.

A.2.49 Five features in Area A yielded pottery totalling 125 sherds weighing 1571g. Two sherds (16g) were derived from the top of another Middle Bronze Age field system ditch, but the rest of the pottery was recovered from a series of three pits (**6276**: 19 sherds, 361g; **6308**: 15 sherds, 177g; and **6351**: 41 sherd, 246g) and a single grave (**6485**: 75 sherd, 739g). The pit deposits each contained a mix of sherd material, clearly originating from a number of different vessels. Pit **6351** yielded mainly sandy wares, but contained a T-shaped rim possibly dating from the Early-Middle Iron Age transition (c. 400-300 BC). The largest deposit, however, derived from grave **6485**. It comprised refitting fragments of a substantially complete Form B pot, missing only parts of the low wall and half the base. Standing at 15cm tall, the pot had a flat base (diameter 7cm), steeped shoulder and short upright neck ending in a flatten rim, rounded along parts of the exterior lip (14cm in diameter). This is an important example of pot being used as a grave good in the Middle Iron Age, and is paralleled locally by a burial at Wicken (Gilmour 2009).

A.2.50 In Area B, 218 sherds (1142g) were recovered from 2 pits (**4172**: 173, 919g; **4201**: 9 sherds, 35g), a ditch (**4125**: 14 sherds, 54g), a roundhouse gully (**4793**: 10 sherds, 105g) and the tertiary fills of Middle Bronze Age field boundary ditches (12 sherds in total, 29g). The only noteworthy assemblages derived from pit **4172**. This contained fragments of least 12 different vessels, including the partial profile of five slack-shouldered Form A jars and a single Form B vessel.

A.2.51 The Area C assemblage was the largest recovered, totalling 611 sherds weighing 9015g. The pottery was excavated from a range of features including 22 pits (156 sherds, 2545g); 21ditches (350 sherds, 5288g); two possible postholes (2 sherds, 47g); two ring ditches (16 sherds, 155g); a kiln (68 sherds, 890g), and a spread (1 sherd, 2g). There were also 18 sherds (88g) residual within Roman ditches and a pit. Few of these feature-groups warrant special mention. Most contains small or medium-sized pottery deposits weighing less than 500g. These are typically composed of a few sherds from a variety of different vessels in varying states of fragmentation. The only assemblage standing out within this group came from pit **11303** (2 sherds, 344g). This contained a large fragment of a Form B jar, which appears to have been consciously selected for deposition. Larger key-assemblages (>500g) were recovered from four ditches (**10031**: 99 sherds, 1224g; **10455**: 70 sherds, 1549g; **10608**: 33 sherds, 830g; **10812**: 61, 659g), a pit (**10933**: 29 sherds, 709g) and a kiln (**11175**: 68 sherds, 890g). The ditch and pit assemblages comprised a mix of ceramic material, including fragments from a minimum of 27 different pots. In terms of condition, the only notable vessel amongst them was an ovoid Form K jar decorated with fingernail impressions on the rim top. Around half the upper body and rim of this pot was recovered from context 10030 in ditch **10031**. The assemblage from the kiln **11175** consisted of another dump of mixed material, including the base and lower body of an aforementioned 'late La Tène-style' jar.

Discussion

A.2.52 The Middle Iron Age pottery from Clay Farm constitutes a typical plain ware assemblage from southern Cambridgeshire, dominated by a range of slack-shouldered jars, globular bowls, and a series of tub-shaped vessels; most made in dense sandy fabrics. In the immediate landscape similar groups of pottery are well attested, with assemblages recovered from Trumpington Park & Ride (Brudenell forthcoming a), Glebe Farm (Brudenell 2011) and the New Addenbrooke's Hospital site (Cra'ster 1969). Elsewhere in Southern Cambridgeshire, the material also finds parallel with

assemblages from Duxford (Percival forthcoming), Greenhouse Farm (Hill and Braddock forthcoming) and Harston Mill (Peter Thompson pers. comm.). All of these groups date to the period after c. 350/300 BC, and whilst some pre-date the introduction of wheel-made forms onto settlement sites from c. 50 BC, elements of this conservative handmade pottery tradition generally persisted until at the least the Roman Conquest in this region.

Recommendations

A.2.53 Dating: A single radiocarbon date should be obtained for the assemblage from kiln **11175**. This yielded a large collection of Middle Iron Age pottery, and contained a 'late La Tène-style' jar in an unusual flint-tempered fabric. A radiocarbon date should also be obtained for the semi-complete pot in grave **6485**.

A.2.54 Illustrations: 15 form assigned vessel should be illustrated (vessels 6, 7, 11, 19, 20, 23, 45, 46, 64, 65, 81, 169, 182, 183, 252), together with the 'late La Tène-style' decorated sherds from context 1174 and 10984, and any other any other diagnostic sherds from radiocarbon dated contexts. Maximum of 20 illustrations.

The Late Iron Age pottery

A.2.55 The pottery assigned to the Late Iron Age comprised 337 sherds, weighing 3959g. This represents 8% of the overall later prehistoric assemblage by sherd count or 6% by weight. The pottery was recovered from 64 contexts, and displayed a MSW of 11.7g. The condition of the material was very similar to that in the preceding period, with sherd-size frequencies near identical (66% small; 30% medium; 4% large).

Assemblage characteristics

A.2.56 The Late Iron Age assemblage was essentially characterised by sherds with either grog or sand as the principle inclusion (Table 38). Combined, grog tempered fabrics accounted for 51% of the pottery by weight, whilst sandy wares constituted 41% (the remaining 8% being shared amongst minor fabric groups with chalk (1%), flint and grog (<1%), limestone (3%), shell and limestone (1%), vegetable matter and sand (1%), shell (<1%), and sand and shell (2%)); frequencies closely paralleled in the Late Iron Age assemblage at Trumpington Park & Ride (Brudenell forthcoming a). Both wares were used in the production of handmade and wheel-made ceramics, though the distinction between these was not always clear - particularly with smaller sherds, combed sherds, or vessels in soft grog tempered fabrics. Overall, just 14 sherds weighing 187g were wheel-made, representing between 4-6% of the assemblage, depending on preferred methods of calculation - 5.6% by MNV; 4.2% by sherd count; 4.7% by weight. These low figures are a consequence of the majority of the wheel-made pottery being termed 'Latest Iron Age' and therefore discussed in the following Romano-British pottery assessment (Appendix A.3). Certainly at neighbouring sites such as Trumpington Park & Ride and the Addenbrooke's Hutchison Site, wheel-made frequencies average between c. 30-60% in this period (Brudenell forthcoming a; Webley and Anderson 2008, 65).

Fabric	Fabric group	No./wt. (g) sherds	% of fabric	No./wt. (g) wheel-made	% fabric wheel-made (by wt.)	No./wt. (g) burnished	% fabric burnished (by wt.)	MNV	wheel-madeMNV	MNV burnished
CHQ1	Chalk	1/38	1.0	-	-	-	-	-	-	-
FG1	Flint and grog	1/7	0.2	-	-	-	-	-	-	-
G	Grog	4/4	0.1	-	-	-	-	-	-	-
G1	Grog	142/1632	41.2	1/24	1.5	8/71	4.4	9	-	1
G2	Grog	12/204	5.2	1/7	3.4	-	-	2	-	-
G3	Grog	14/165	4.2	5/108	65.5	5/108	65.5	-	-	-
L1	Limestone	3/116	2.9	-	-	-	-	1	-	-
Q	Sand	3/3	0.1	-	-	-	-	-	-	-
Q1	Sand	31/573	14.5	-	-	1/18	3.1	5	-	-
Q2	Sand	6/30	0.8	-	-	5/23	76.7	1	-	-
Q3	Sand	7/63	1.6	-	-	-	-	2	-	-
Q4	Sand	95/895	22.6	7/48	5.4	9/153	17.1	13	2	4
Q5	Sand	4/42	1.1	-	-	-	-	1	-	-
S3	Shell	3/3	0.1	-	-	-	-	-	-	-
SL1	Shall and limestone	1/47	1.2	-	-	-	-	-	-	-
SQ2	Shell and sand	2/38	1.0	-	-	-	-	-	-	-
SQ4	Shell and sand	4/47	1.2	-	-	1/21	44.7	-	-	-
VEQ1	Veg. and sand	2/41	1.0	-	-	-	-	2	-	-
VEQ2	Veg. and sand	2/11	0.3	-	-	1/4	36.4	-	-	-
TOTAL	**-**	**337/3959**	**100.3**	**14/187**	**4.7**	**30/398**	**10.1**	**36**	**2**	**5**

Table 38: Quantified Late Iron Age pottery. MNV = minimum number of vessels calculated as the total number of different rims and bases identified (20 rims, 15 bases and 1 possible lid). The category of 'wheel-made' pottery includes material thought to be wheel-thrown or wheel-finished

Form	Description	MNV	MNV burnished	No./wt. (g) sherds	Rim diameter range (cm)
A	Slack shouldered jars with a short upright neck	3	1	6/152	14cm
B	Jars with a pronounced rounded shouldered and short off-set upright neck. Constricted mouth.	2	-	2/83	18cm
E	Jars with a high rounded shoulder and upright neck	1	1	3/76	16cm
F/G	Bowls or globular jars with an S-shaped profile	1	1	1/9	-
K	Ovoid jars with no neck	2	-	5/143	12-18cm
TH-B2-1	Everted rimmed jars with rippled shoulders	1	1	7//55	16cm
TOTAL	**-**	**10**	**4**	**24/518**	**12-18cm**

Table 39: Quantification of Late Iron Age vessel forms. The lettered form series relate to that developed by JD Hill which is widely employed in northern East Anglia. The descriptions are a simplified version of those fully published by Hill and Horne (2003, 174) and Hill and Braddock (2006, 155-156). The alphanumeric form series refers to Isobel Thompson's (1982) catalogue of Late Iron Age grog tempered pottery. MNV = minimum number of vessels

A.2.57 The forms of only ten vessels could be established in the assemblage (Table 39), including 24 sherds weighing 518g (6% of the assemblage by sherd count, 13% by weight). All were handmade jars: nine vessels in the Middle Iron Age-type tradition and one in the 'Belgic' tradition. The Middle Iron Age-type jars were plainwares in sandy fabrics. They included a series of shouldered vessels (Form A, B and E), two ovoid bodied jars with no distinct neck (Form K), and an S-profiled jar with an everted rounded rim (Form F/G). None would be out of place in the Middle Iron Age assemblage; though they were all found alongside diagnostic Late Iron Age sherds (mainly grog tempered pottery and combed body sherds). The single 'Belgic'-related vessel was in fabric G, and displayed cordoning immediately above the shoulder/neck.

A.2.58 In terms of surface treatment, a total of 30 sherds (398g) were burnished or carefully smoothed, representing 9% of the assemblage by sherd count or 10% by weight. Only grog fabric G3 was regularly treated. Decoration was identified on 89 sherds (1137g, from a maximum of 40 vessels) and consisted of combing, rilling or scoring to the body and shoulder of vessels; the application of grooved horizontal lines to the body, and the moulding of cordons on the neck (Table 40). Combing was by far the most common form of treatment, and was principally associated with grog tempered fabrics.

Decoration	Vessel zone	Technology	No./wt. (g) sherds	No. vessels	Fabrics represented
Combed	Body or shoulder	HM	66/746	26	G1-3, Q4, SQ2
Cordoned	Neck	WM and HM	8/133	4	G1
Cordoned and grooved	Shoulder	WM	5/108	1	G3
Rilled	Body	WM	2/12	1	Q4
Scored	Body	HM	7/129	7	G1, Q3-5
Grooved	Shoulder	HM	1/9	1	G1
TOTAL	**-**	**-**	**89/1137**	**40**	**-**

Table 40. Quantification of decoration on Late Iron Age sherds. HM = handmade, WM = wheel-made

A.2.59 Direct evidence of vessel use was scarce in the assemblage although 24 sherds (544g) had carbonized residues adhering to their surfaces. These were identified on handmade and wheel-made pots, and burnished and un-burnished vessels.

Distribution and deposition

A.2.60 Although Late Iron Age pottery was recovered from five excavation areas (A-E), only 1% (by weight) of material derived from Areas A and D collectively: a single intrusive wheel-made sherd (2g) from Area A (pit **6276**), and seven probably residual sherds (57g) from two Roman ditches (**12417** and **12602**) in Area D. Of the remaining pottery, 13% of the pottery was recovered from Area B; 16% from Area E, and 69% from Area C.

A.2.61 From Area B the assemblage comprised 48 sherds (519g) from seven contexts: 21 sherds (175g) from three ditches (**4157**, **4120**, **4560**), and 27 sherds (344g) from pit **5407**. Material was recovered from a more varied range of features in Area E (24 contexts), but assemblage sizes were equally as small. In total, the group included 101 sherds weighing 634g. However, excluding surface finds (22 sherds, 112g), intrusive pottery (3 sherds, 6g) and material which is probably residual (19 sherds, 63g) from Early Roman ditches, and 1 sherd (13g) from a post-medieval ditch, the total falls to just 56 sherds (440g) from 16 contexts: 37 sherds (168g) from pits; eight sherds from the tops of silted Middle Bronze Age field system ditches (50g); six sherds from ditches (216g); 4 sherds from ring-gullies/ring-ditches (4g), and one sherd from a posthole (2g).

All the assemblages were small and scrappy, and included just three vessel rims and one base between them.

A.2.62 As in the preceding period, the largest group of pottery derived from Area C, totalling 180 sherds weighing 2747g (material from 30 contexts). The settlement in this area contains an unbroken sequence of ceramic development spanning the Middle and Late Iron Age. This is clearly demonstrated by ditches **10031** and **10812** where Late Iron Age pottery is stratified immediately above deposits containing only Middle Iron Age-type wares. These contexts yielded 45 sherds (501g) of Late Iron Age pottery in total, with a further 120 sherds (2052g) coming from the area's other ditches (17 sherds, 224g). These were mainly residual in Early Roman ditches apart from one possibly intrusive sherd in a Middle Iron Age ditch (27g). The remaining 15 sherds in the assemblage (194g) derived from pit **11469** (13 sherds, 137g) and pit **11590** (2 sherds, 23g). The former contained the partial profile of handmade cordoned jar (Form TH-B2-1) with rim diameter of 16cm.

Discussion

A.2.63 The Late Iron Age assemblage from Clay Farm dates between c. 50 BC-AD 50, and consists of sherds in a range of grog and sand tempered fabrics. The wheel-made component is small, but there are a number of combed and cordoned sherds within the group. In many respects it is these pieces which date this assemblage, since the bulk of the handmade sherds and vessels are essentially Middle Iron Age in type. However, given the small-size of this assemblage, these patterns should be treated with caution.

A.2.64 Most of the pottery was recovered from Area C, where some ditches contained a sequence of ceramic deposits spanning the Middle and Late Iron Age. Although none of these assemblages are particularly large or especially important in themselves, it is rare to find stratified sequences of material for this period in southern Cambridgeshire. These deposits therefore offer the opportunity to date and better understand the chronology of ceramic change. In particular, radiocarbon dates would give a better idea of when wheel-made technologies were adopted within domestic potting practices in the Late Iron Age of southern Cambridge. Likewise, dates would help to secure an understanding of when combing and grog tempering became prominent.

Recommendations

A.2.65 Dating: At least two radiocarbon dates should be obtained for the stratified Middle and Late Iron Age assemblage from ditch **10812** - at least one date for each period assigned assemblage. This will help to established when wheel-made pottery, combing and grog tempering were adopted.

A.2.66 Illustration: Seven of the form assigned vessel shoulder be illustrated (vessels 2, 4, 44, 47, 85, 108, 114), together with a cordoned sherd from context 11468, and any other diagnostic sherds from radiocarbon dated contexts. Maximum of 12 illustrations.

Summary of potential

A.2.67 The excavations at Clay Farm have yielded a large assemblage of later prehistoric pottery. It comprises of ceramics dating from the Late Bronze Age through to the Roman conquest, and includes a regionally significant group of Early Iron Age material. The size of the assemblage allows for a detailed discussion of the practices surrounding the use and deposition of ceramic at the site. As there are deposits of pottery dating from

various stages of the Iron Age, there is also the scope to investigate the nature of ceramic change from c. 800 BC through to c. AD 50 in this setting. More significantly, since there is a legacy of fieldwork in the Clay Farm environs, and the Cam Valley generally, the patterns gleaned from the study of this material can be set within a broader landscape context.

Recommendations for further work

A.2.68 1. Completion of pottery catalogue:

Task: 1559 sherds to record and quantify from Pit **5898**.

Duration: 3.5 days

A.2.69 2. Production of illustration catalogue:

Task: located material for illustration (maximum 93 sherds/vessels), and write full catalogue

Duration: 2 days

A.2.70 3. Production of full grey report:

Task: a) prepare a fully quantified description of the Early Iron Age assemblage, b) assimilate and discuss any new radiocarbon dates and results from thin-section and lipid analysis

Duration: 4 days

A.2.71 4. Production of publication text:

Task: Edit down full grey report and provide a more fulsome discussion relevant to themes of the publication

A.2.72 Duration: 2-3 days

A.3 The Latest Iron Age and Roman Pottery

By Alice Lyons

Introduction

A.3.1 A total of 15153 sherds, weighing 174.283kg of Latest Iron Age, Early Roman and Romano-British pottery were recovered during the excavation. Each chronological group represents approximately one third of the assemblage, although the Early Romano-British material is slightly more prolific (Table 41).

Period	Ceramic Tradition	Date Range	Sherd Count	Sherd Weight (g)	EVE	ASW	Sherd Weight (%)
6	Latest Iron Age	Late 1st century BC-AD mid 1st century	5120	52424	25.71	10.24	30.08
7	Early Romano-British	Mid 1st to mid 2nd century AD	5830	65050	55.31	11.16	37.32
8	Romano-British	Mid 2nd to 4th century AD	4203	56809	41.80	13.52	32.60
Total			**15153**	**174283**	**122.82**	**11.50**	**100.00**

Table 41: The Latest Iron Age and Romano-British pottery assemblage, listed in chronological order

A.3.2 The pottery is significantly abraded with an average sherd weight (ASW) of 11.5g. These sherds have an EVE (Estimated Vessel Equivalent) of 122.82 complete pots (a measurement based on surviving rim diameters). However, this is severely under representative as the minimum vessel count is 2874.

A.3.3 The majority of the assemblage has been retrieved from ditches (Table 42), with a significant amount also found in pits.

Feature Type	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Ditch	9049	100879	57.88
Pit	3160	33236	19.07
Pottery	45	10168	5.83
Unassigned	494	6415	3.68
Tree bole	710	5927	3.40
Water hole	469	5019	2.88
Cremation	238	3288	1.89
Sunken Building	219	2188	1.26
Post hole	197	2030	1.16
Other	572	5133	2.95
Total	**15153**	**174283**	**100.00**

Table 42: The different features at Clay Farm that contain pottery, listed in descending order of weight

Methodology

A.3.4 The assemblage was assessed in accordance with the guidelines laid down by the Study Group for Roman Pottery (Webster 1976; Darling 1994; Willis 2004). The total assemblage was studied and a preliminary catalogue was prepared.

A.3.5 The sherds were examined using a magnifying lamp (x10 magnification) and were divided into fabric groups (or families) defined on the basis of inclusion types present. The fabric codes are descriptive and abbreviated by the main letters of the title (Sandy grey ware = SGW). Vessel form was recorded. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted.

A.3.6 The pottery is assessed separately by areas of settlement or activity, or in some cases by discrete features or groups of features with good ceramic assemblages (as identified by the Project Officer).

Pottery by Group

Latest Iron Age house enclosure, Area E (1843)

A.3.7 This very conservative group of primarily Latest Iron Age pottery (Table 43) consists of 423 sherds, weighing 3.775kg (1.60 EVE). This material represents 2.17% (by weight) of the entire site assemblage.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	395	3577	94.75
Early Roman	28	198	5.25
Romano-British	0	0	0.00
Total	**423**	**3775**	**100.00**

*Table 43: House enclosure **1843**. The pottery by Ceramic Era, listed in chronological order*

A.3.8 All of this pottery has been recovered from the Late Iron Age house enclosure in Area E. The pottery in this group is severely abraded with an ASW of only c. 9g.

Fabric family	Abbreviation	Sherd Count	Sherd Weight (g)	EVE %	Sherd Weight (g)
Sandy reduced ware	SRW	384	3267	1.52	86.54
Sandy grey ware (proto)	SGW(PROTO)	31	307	0.08	8.14
Sandy Coarse ware	SCW	8	201	0.00	5.32
Total		**423**	**3775**	**1.60**	**100.00**

*Table 44: House enclosure **1843**. The pottery by fabric family, list in descending order of weight*

A.3.9 The vast majority of this pottery are Sandy reduced ware fabrics; most of which (61% by weight) have been made on a fast potters' wheel. A few carinated wide mouthed bowls have been identified but the majority of the pots produced in this fabric are jar/bowl utilitarian forms, many of which have been used over an open flame leaving a soot residue on their external surfaces.

A.3.10 The pre-industrialized Sandy grey wares are found mostly in jar/bowl forms, although storage jars are also common. One sherd has been re-shaped into a spindle whorl (a weight used while hand-spinning yarn). The few Sandy coarse ware sherds are also found in a limited range of jar and storage jar forms.

A.3.11 It is likely that this pottery has been used in a domestic context, although not one that involved the Roman way of life, and may well have been directly associated with a dwelling inside the enclosure – although the abraded nature of the sherds suggest they

may have been middened or deposited elsewhere before eventually being deposited in the enclosure ditch.

All other Latest Iron Age features Areas E and F

A.3.12 A total of 1698 sherds, weighing 17.729kg (9.26 EVE) of primarily Latest Iron Age, but also Early Roman and a very small amount of Romano-British pottery, were recovered within this feature group.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	1501	16108	90.86
Early Roman	190	1601	9.03
Romano-British	7	20	0.11
Total	**1698**	**17729**	**100.00**

Table 45: All other Latest Iron Age features Areas E and F. The pottery by Ceramic Era, listed in chronological order

A.3.13 The majority of pottery was retrieved from pits (41.75% by weight), but was also commonly found in ditches (35.52%) as well as in a waterhole (11.64%) and other features including domestic structures and a grave. This pottery is significantly abraded with an ASW of c. 10g.

A.3.14 Ten broad fabric families were recognised within this group assemblage (Table 46), although many finer divisions could be made.

Fabric Family	Abbreviation	Sherd Count	Weight (g)	EVE %	Weight (%)
Sandy reduced ware	SRW	1151	11356	5.28	64.05
Sandy grey ware (proto)	SGW(PROTO)	461	5433	3.46	30.64
Sandy coarse ware	SCW	15	358	0.00	2.02
Sandy oxidised ware	SOW	23	284	0.14	1.60
Grey Ware	GW	9	95	0.06	0.54
Shell tempered ware	STW	18	78	0.12	0.44
Sandy grey ware	SGW	14	73	0.06	0.41
Red Ware	RED WARE	4	49	0.09	0.28
Oxidised ware (fine)	OW(FINE)	2	2	0.05	0.01
Samian	SAM	1	1	0.00	0.01
Total		**1698**	**17729**	**9.26**	**100.00**

Table 46: All other Latest Iron Age features Areas E and F. The pottery by fabric family, list in descending order of weight

Latest IA and Roman features in Area B

A.3.15 A total of 1260 sherds, weighing 12.500kg (7.33EVE) of Latest Iron Age, Early Roman and Romano-British pottery were recovered as part of this group (Table 47). This material represents 7.17% (by weight) of the total site assemblage.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	1101	10920	87.36
Early Roman	141	1415	11.32
Romano-British	18	165	1.32
Total	**1260**	**12500**	**100.00**

Table 47: Latest Iron Age and Roman features in Area B. The pottery by Ceramic Era, listed in chronological order

A.3.16 The majority of this material was recovered from ditches (80% by weight), although pottery was also found in pits (7%) and a waterhole (5%), as well as roundhouses, occupation build-up and a grave.

A.3.17 The pottery is significantly abraded and has an ASW of c. 10g. Nine broad fabric families were identified (Table 48), although within this division many finer divisions can be made.

Fabric Family	Abbreviation	Sherd Count	Weight (g)	EVE (%)	Weight (%)
Sandy reduced ware	SRW	833	7665	3.89	61.32
Sandy grey ware (proto)	SGW(PROTO)	188	2375	1.70	19.00
Grey ware	GW	182	1803	86	14.42
Sandy grey ware	SGW	18	193	0.47	1.54
Sandy oxidised ware	SOW	12	167	0.04	1.34
Shell tempered ware	STW	15	147	0.37	1.17
Sandy Coarse ware	SCW	6	127	0.00	1.02
Red Ware	RED WARE	5	17	0.00	0.14
Oxidised ware	OW	1	6	0.00	0.05
Total		**1260**	**12500**	**7.33**	**100.00**

Table 48: Latest Iron Age and Roman features in Area B. The pottery by fabric family, list in descending order of weight

A.3.18 By far the most common fabric family (61.32% by weight) is the dark (brown/black) Sandy Reduced Ware fabrics. Differing recipes of clay tempered (or mixed) with sand, grog (crushed pottery) and/or flint form the main components of this fabric family, used to produce utilitarian jar/bowl, storage jar forms – also a small number of finer butt beakers (Thompson 1982, G5, 507-528). The majority of these wares are unsourced, but locally produced. Where the manufacturing process can be determined it can be seen that these wares are produced using both handmade (30.45%) or wheelmade (26.73%) technologies.

A.3.19 Pre-industrialized Sandy grey ware fabrics are the second most common fabric family (19.00% by weight) found. Similar to the Sandy reduced wares differing mixes of clay were employed with sand, also sand and grog, used in similar quantities, lesser amount of flint was also used. These fabrics were used to produce utilitarian jar/bowl vessels, many with cordoned necks (Thompson 1982 D1, 299-321) and storage jar forms. Many of these vessels were still handmade (22%), but many more were produced on a slow wheel (44%), with only 22% made on a fast potters' wheel.

A.3.20 The only other fabric found in significant quantities in this group are the Grey ware group, which have been produced using significantly less sand than the sandy grey ware category discussed above, which results in the fabrics having a soft soapy texture. Grog is the most common artificial temper in this fabric family, although a small amount of flint was also used. The range of forms found is quite limited to jar/bowl forms, although storage jars are also very common. The majority of this group (67%) was made by hand, although this may relate to the fact that large storage jars were commonly still made by hand even after the process of industrialization had occurred.

A.3.21 Other small amounts of Romano-British wares were recovered, although it is worthy of note that no indicators of the Roman way of life (such as samian, amphora or mortaria) were found. This is, therefore, a largely Late Iron Age group of utilitarian reduced wares, with some Early Roman and small amounts of Romano-British material.

Latest Iron Age and Roman features in Areas C and D

A.3.22 A total of 4355 sherds, weighing 61.937kg (41.85 EVE) of Latest Iron Age, Early Roman and Romano-British pottery were recovered as part of this group (Table 49). This material represents 35.54% (by weight) of the total site assemblage.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	721	10224	16.51
Early Roman	1196	16099	25.99
Romano-British	2438	35614	57.50
Total	**4355**	**61937**	**100.00**

Table 49: Latest Iron Age and Roman features in Areas C and D. The pottery by Ceramic Era, listed in chronological order

A.3.23 The majority of this material was recovered from ditches (69% by weight), although pottery was also found in pits (16%), as well as an Early Roman sunken building, roundhouses and various natural and man made occupation layers.

A.3.24 The pottery is not significantly abraded and has an ASW of c. 14g. Eighteen broad fabric families were identified (Table 50), although within this division many finer divisions can be made.

Fabric Family	Abbreviation	Sherd Count	Sherd Weight (g)	EVE (%)	Weight (%)
Sandy grey ware	SGW	1516	22442	11.59	36.22
Sandy oxidised ware	SOW	618	11233	8.01	18.14
Sandy grey ware (proto)	SGW(PROTO)	917	10214	8.88	16.49
Sandy reduced ware	SRW	799	8260	6.45	13.34
Grey ware	GW	224	4632	1.62	7.48
Sandy coarse ware	SCW	40	1526	0.14	2.46
Samian	SAM	75	1008	1.99	1.63
Shell tempered ware	STW	39	877	0.83	1.42
Nene Valley colour coat	NVCC	37	783	1.67	1.26
Sandy red ware	SREDW	62	630	0.30	1.02
Oxfordshire red ware	OXRCC	15	221	0.27	0.36
Reduced ware	RW	1	33	0.10	0.05
White ware	WW	2	22	0.00	0.04
Colchester colour coat	COLCC	3	18	0.00	0.03
Hadham grey ware	HAD GW	1	15	0.00	0.02
Nene Valley grey ware	NVGW	1	10	0.00	0.02
Colour coat	CC	4	9	0.00	0.01
Hadham red ware	HAD RW	1	4	0.00	0.01
Total		**4355**	**61937**	**4185**	**100.00**

Table 50: Latest Iron Age and Roman features in Areas C and D. The pottery by fabric family, list in descending order of weight

A.3.25 Sandy grey wares dominate this group (36% by weight), although the levels of sand added as a temper vary largely. Naturally present within the clay are silver mica and clay relicts but as well as sand angular flint has commonly been mixed in. Over 95% of this material was made on a fast potters' wheel, i.e. made in a fast semi-industrial process. Wide mouthed cordoned jars, globular medium mouthed jars (with common soot residues), straight-sided dishes with triangular rims and rolled rim storage jars are all common forms. A large percentage of the storage jars have distinctive large everted

rims diagnostic of the Horningsea pottery production centre (Evans 1991; Evans and Macaulay forthcoming).

A.3.26 The Sandy oxidised ware component is a large fabric group containing a wide range of fabrics from fine-to-coarse. The finer fabrics were used to produce flagons (both ring-necked and cupped), carinated bowls, and jars, many of which have been used over an open flame, which has left a sooty residue. Coarse oxidised fabrics have been used to produce specialized Romano-British forms, which included domestically produced bead and flange mortaria (Tyers 1996, 116-135) and amphora (ibid, 85-105) storage jars. Most of the amphora were made in Roman Spain and France and are of the globular olive oil type (DR20) but wine amphora are also present (DR1-2, 1b and Gauloise G3). Excluding the amphora the majority of this pottery (92%) was domestically produced on a fast potters' wheel.

A.3.27 Although this is largely a Romano-British assemblage Early Roman Sandy grey ware (proto) wares are also present, but as most of these wares are wheelmade (92% by weight) they were produced during the early to mid 2nd century. Jar/bowl forms were common – many of which bear external soot and internal lime scale remains showing that they have been used as cooking pots, steamers or kettles. Other forms are found on a more limited scale and include dishes and storage jars.

A.3.28 Sandy reduced wares are also well represented; most are produced on the wheel (58% by weight), although a significant proportion were handmade (33%). A limited range of vessels was produced – mostly globular jars on which soot residues commonly survive. The other fabric that represents a large part of this group were handmade grey ware storage jars, a conservative form domestically produced over a large part of the Early Roman and Romano-British eras.

A.3.29 Another common coarse ware is the Shell-tempered ware fabric family. These are wheel made vessels manufactured in a limited range of jar/bowl forms with common soot residues and lime-scale adhesions – indicating use as cooking pots. Shell tempered wares were commonly produced in West Cambridgeshire (Lyons in prep (a)), although no specific manufacturing centre has been identified. Some of these wares may have been imported from the Harrold Kilns in Bedfordshire (Tyers 1996, 192-193).

A.3.30 Although less prolific in weight a number of other wares are significant within this group. The samian, glossy red imported Gaulish tablewares (Tyers 1996, 105-114), is a good example of this. Samian was introduced around the Roman conquest and was widely traded into more rural parts of Cambridgeshire from the mid-to-late 1st century to the early-mid 3rd century. This material will benefit from further analysis but the majority of the fabrics appear to be central Gaulish with deep moulded bowls (Dr 37; Tyers 1996, 108), conical cups (Dr33; ibid, 110), and shallow dishes (Dr18/31; ibid, 109) well represented.

A.3.31 Other domestically produced fine wares are also well represented and included Nene Valley colour coated ware beakers (Tyers 1996, 173-175), Oxfordshire Red ware jar/bowls and mortaria (ibid, 175-178) and Hadham red and grey ware jar/bowls (ibid, 168-9); all industries which flourished in the later Roman era.

'Cemetery garden', Area C

A.3.32 A total of 278 sherds, weighing 5.141Kg (5.47 EVE), of Early Roman and Romano-British pottery representing 2.95% (by weight) of the total site assemblage have been assigned to this feature group.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	4	1	0.02
Early Roman	95	1585	30.83
Romano-British	179	3555	69.15
Total	**278**	**5141**	**100.00**

Table 51: 'Cemetery garden', Area C. The pottery by Ceramic Era, listed in chronological order

A.3.33 The majority of this pottery (98.48% by weight) was recovered from the 'cemetery garden' enclosure ditch and smaller ditches within. Some material was also recovered from a post hole and a very few sherds were recovered from a natural deposit. Within this enclosure a pre-conquest cremation (**10909**) accompanied by thirteen ceramic vessels was excavated; this is discussed separately below. This is in addition to another, similarly furnished cremation burial, found during the evaluation only a few metres to the east (Evans *et al.* 2006)

A.3.34 The pottery is not significantly abraded and has a relatively large ASW of c. 18g. Seven broad fabric families were identified (Table 52), although within this division many finer divisions can be made.

Fabric Family	Abbreviation	Sherd Count	Sherd Weight (g)	EVE (%)	Sherd Weight (%)
Sandy grey ware	SGW	88	1958	167	38.09
Sandy grey ware (proto)	SGW(PROTO)	85	1122	112	21.82
Sandy oxidised ware	SOW	57	967	128	18.81
Grey Ware	GW	32	948	80	18.44
Sandy reduced ware	SRW	13	99	40	1.92
Nene Valley colour coat	NVCC	1	38	20	0.74
Samian	SAM	2	9		0.18
Total		**278**	**5141**	**547**	**100.00**

Table 52: Memorial garden, Area C. The pottery by fabric family, list in descending order of weight

A.3.35 Mass produced wheelmade Sandy grey ware fabrics are the most common ware found within this feature group. The clay used to produce these pots commonly has silver mica and clay relicts as a natural component, although flint has been added in some examples. The group is dominated by a limited range of globular jars many of which have been utilized as cooking pots. Storage jars, several of Horningsea-type, are also common.

A.3.36 Also found in significant quantities are the pre-industrialized Sandy grey ware (proto) wares. Although these are manufactured using the same clay as the Sandy grey wares (see above) with silver mica and clay relicts as a common natural component of the clay, the majority are also wheel made at this time, the main difference between them is how the pottery has been fired with a much less standardized technique resulting in 'sandwich' wares with varying bands of oxidised or reduced layers. The proto Sandy grey wares are found in jar/bowl forms, cordoned jars are common, with many also used as cooking pots (with soot residues surviving).

The Sandy oxidised ware component is a significant fabric group containing a wide range of fabrics from fine-to-coarse. The finer fabrics were used to produce flagons (ring-necked) some of which are consistent with manufacture at the Verulamium (St Albans) kiln centre (Tyers 1996, 199-201). Other finer fabrics have been used to produce jars many of which have been used over an open flame which has left a sooty residue. Coarse fabrics have been used to produce specialized Romano-British forms which included domestically produced bead and flange mortaria (Tyers 1996, 116-135) and large storage jars probably produced at Horningsea (Evans 1991; Evans and Macaulay forthcoming).

A.3.37 Grey wares are also a common fabric within this group, found in a limited range of wheelmade jar/cooking pot forms. This fabric has been commonly tempered with grog – giving it a distinctive soapy feel.

A.3.38 Pottery recovered from this feature groups included very few Sandy reduced wares, which may reflect that really (brown/black) coarse wares were not used or deposited in the vicinity of the 'cemetery garden'.

A.3.39 Finewares are also scarce within this group. Two scrappy sherds of Early Roman samian red ware were recovered. Also found was a single sherd of a substantial Nene Valley colour coat (Tyers 1996, 173-175) dish. The dish was covered in a sooty residue and may have been used as a cooking pot or as a lid. This sherd dates from the mid-to-late 2nd to early 3rd century AD. It is the latest pottery in this group and may be intrusive within the larger group.

Cremation 10909

A.3.40 The Clay Farm boxed cremation burial had (at least) thirteen accessory vessels, many of which are Gaulish in origin and date between AD 40-50.

A.3.41 *"Thus after the conquest in Britain cremation was the usual burial rite not only where it had been practiced by the native population in the former La Tene III area of south eastern England but also in the newly established forts and towns where Roman culture and influence were pre-eminent.....Beside the cremated remains, many burials were furnished with additional items. Most common were pottery vessels, which can number up to 50 or more, although between one and three were usual. In general the range of vessel forms is limited to flagons or bottles, cups or beakers, and bowls or platters, although more specialized forms such as lamps and tazze are found."* (Philpott 1991, 8).

A.3.42 The identification and quantification (Table 53) of the Clay Farm cremation has revealed a carefully selected group of pots that conform to a specific burial ritual; it would appear that this ritual was identical to that practiced in northern Gaul in the Late Iron Age (Tuffreau-Libre 2000, 52-60) whereby the vessels used in the funerary feast were interred with the cremated remains of the dead. Typically each burial contained, in addition to the cinerary urn or box (if present), a flagon, cup or beaker and dish (Philpott 1991, 35). The Clay Farm cremation contained: a flagon, a jar, three beakers, five cups, two platters and a lid, which may suggest a funerary feast of some size.

A.3.43 Until fairly recently it was thought that the chalklands of southern Cambridgeshire formed the northern limit of Gallo-Belgic influence, however, burials of this type are now known at Bartlow, Duxford (Lyons 2011), Hinxton and at Clay Farm (see also Evans *et al*. 2006, Evans *et al* 2008, 139). The influence of this Gaulish tradition in our region is only now being fully understood and the Clay Farm examples will make a significant contribution to this data set.

Fabric	Sherd Count	Sherd Weight (g)	Rim diameter (mm)	Rim %	Form	Type	Spot date	Comment
SOUTH GAULISH La Graufesenque	1	50	8	100	CUP	Ritterling 8	AD10-30 (TIBERIAN)	SF 348: STAMP SEGLAUCUS, DIE 3a. WORN ON RIM AND BASE
SOUTH GAULISH La Graufesenque	1	127	9	100	CUP (two handled)	Haltern 14	AD10-LATE 30S	SF 353: VERY RARE EXAMPLE. WORN ON RIM AND HANDLES.
SGW(MICA)	100	151	10	58	BEAK	3.13	E/MC1	SF 347: MINIATURE GLOBULAR BEAKER WITH AN EVERTED RIM
SOW	2	40			BEAK	3.13	E/MC1	SF 344: WITH HOF FLAGS
SOW (GAULISH)	64	1344	11.5	100	FLAG	HOFHIEM: UNDERSCORED RIM, DOUBLE HANDLED (STD CREM 9, NO 18)	PRE-FLAVIAN	SF 344:
SRW	9	1			JAR/BOWL		E/MC1	
TERRA NIGRA		3			?BEAK	?3.13	AD 14-79	SAMPLE 970: FROM VESSEL SF 347
TERRA NIGRA	1	87	8	100	CUP	Ritterling 8 (COPY)	AUGUSTAN TO NERONION-EARLY FLAVIAN (AD14-79)	SF 349: STAMP (TO BE ID'D)
TERRA NIGRA	7	117	11	100	LID	?	AD 20-65	SF 346: ABRADED STAMP (TO BE ID'D). NOT A PERFECT FIT – BUT WOULD COVER HOF FLAG SF 344
TERRA NIGRA	1	362	19	100	PLAT	Baldock 5a, 5b, 5c, 5d, SKG 7 (Tyers 1996, 162, no 14)(6.21)	AD 40-70	SF 350: CLEAR STAMP (TO BE ID'D)
TERRA RUBRA		231	13	84	CUP	Baldock 16b, SKG 32, KHL 16, 17, (Tyers 1996, 162, 56c)	AD 20-65	SF 352: CLEAR STAMP (TO BE ID'D)
TERRA RUBRA	52	500	19	84	PEDESTAL CUP	KHL 18, (TYERS 1996 162, no 76A)	AD 10-50	SF 345: ABRADED VESSEL (NO STAMP)
TERRA RUBRA		275	15	100	PLAT	Hofheim 97ab, Baldock 11, skg 15, khl 13 (Tyers 1996 162, 8)	AD 20-65	SF 351: CLEAR STAMP (TO BE ID'D)

*Table 53: The Cremation **10909** accessory vessel catalogue.*

Ditch 12590 in Area D

A.3.44 A total of 1520 sherds, weighing 15.840Kg, (12.21 EVE) of Early Roman, but primarily Romano-British (Table 54), pottery were recovered from ditch **12590** in Area D. This pottery represents 9.09% (by weight) of the entire ceramic assemblage.

A.3.45 The pottery has been significantly abraded with an ASW of only c. 10g.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	0	0	0.00
Early Roman	167	1477	9.32
Romano-British	1353	14363	90.68
Total	**1520**	**15840**	**100.00**

*Table 54: Ditch **12590**. The pottery by Ceramic Era, listed in chronological order*

A.3.46 Within this ditch eight broad fabric families (Table 55) have been identified, the most prolific of which (representing over three-quarters of the assemblage by weight) are the mass produced utilitarian Sandy grey wares.

Fabric Family	Abbreviation	Sherd Count	Sherd Weight (g)	EVE	Sherd Weight (%)
Sandy Grey Ware	SGW	1024	11917	8.84	75.23
Sandy oxidised ware	SOW	144	1445	1.09	9.13
Sandy grey ware (proto)	SGW(PROTO)	150	865	0.89	5.46
Sandy Coarse Ware	SCW	81	816	0.22	5.15
Sandy reduced ware	SRW	84	479	0.50	3.02
Samian	SAM	11	180	0.34	1.14
Colour Coat	CC	24	113	0.19	0.71
Sandy red ware	SREDW	2	25	0.14	0.16
Total		**1520**	**15840**	**1221**	**100.00**

*Table 55: Ditch **12590**. The pottery by fabric family, list in descending order of weight*

A.3.47 The Sandy grey ware fabric group (as previously seen) has silver mica and clay relict particles as natural components of the clay. The fabric was commonly used to make utilitarian globular jars with rolled or everted rims, also beakers and dishes. Many of the jars retain soot residues where they have been placed over a flame during use as a cooking pot. A significant proportion of this grey ware assemblage was also tempered (mixed) with angular flint and was consistent with production at the Horningsea manufacturing centre (Evans 1991; Evans and Macaulay forthcoming); the presence of distinctive large storage jars with everted rims confirms this association.

A.3.48 Sandy grey (proto) wares are also found in a limited range of wide mouthed cordoned jars, and jars that have been used as cooking pots, also storage jars. It is noteworthy that nearly all this material is flint tempered and made on the fast potters' wheel.

A.3.49 The Sandy oxidised ware component is a significant fabric group containing a wide range of fabrics from fine-to-coarse. The finer fabrics were used to produce undiagnostic flagons. Other finer fabrics have been used to produce jar/bowl vessels, many with a bi-fid rim. Coarse fabrics have been used to produce specialized Romano-British forms which included domestically produced bead and flange mortaria (Tyers 1996, 116-135) and globular olive oil amphora imported from Southern Spain (ibid, 87-89).

A.3.50 A small number of finewares were found in this ditch and include several sherds of samian tablewares including a bowl (Dr35) and a conical cup (Dr33). An unsourced colour coated globular beaker was found, also a domestically produced red ware bowl.

Late Roman monument in Area F

A.3.51 This relatively small group of material which constitutes 90 sherds, weighing 1.180kg, (1.04 EVE) representing only 0.68% of the entire site assemblage. Most of the pottery within this group belongs to the latest Iron Age and Early Roman ceramic traditions (Table 56). All of the pottery was recovered from two curvilinear ditches in Area F, associated with a Roman monument.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	18	578	48.98
Early Roman	66	504	42.71
Romano-British	6	98	8.31
Total	**90**	**1180**	**100.00**

Table 56: Late Roman monument, Area F. The pottery by Ceramic Era, listed in chronological order

A.3.52 This pottery is moderately abraded with an average sherd size of c. 13g, although the presence of a large shell tempered bowl has increased the average sherd size – which is not representative of the majority of pottery within this group.

A.3.53 Eight broad fabric families have been identified, although many finer divisions can be made within this.

Fabric Family	Abbreviation	Sherd Count	Sherd weight (g)	EVE (%)	Sherd Weight (%)
Shell tempered ware	STW	41	880	0.38	74.58
Sandy reduced ware	SRW	5	81	0.06	6.86
Nene Valley colour coat	NVCC	3	79	0.40	6.69
Sandy grey ware (proto)	SGW(PROTO)	18	56	0.04	4.75
Red Ware (fine)	RED WARE	13	35	0.00	2.97
Sandy grey ware	SGW	3	19	0.06	1.61
Sandy Coarse ware	SCW	1	18	0.00	1.53
Sandy oxidised ware	SOW	6	12	0.10	1.01
Total		**90**	**1180**	**1.04**	**100.00**

Table 57: Roman monument. The pottery by fabric family, list in descending order of weight

A.3.54 This feature group contains a distinctive group of Late Iron Age and Early Roman Shell tempered pottery that is unusual within the context of this site. The majority of the fabric group comprises a single very large hooked rim bowl (made by hand on a slow wheel), although other jar/bowl sherds were also found. This material is significantly worn and no residues (indicating function) have survived. Sandy reduced wares were also common, but as with the Shell tempered wares, this is largely due to the presence of a single substantial dish.

A.3.55 Pre-industrialized Sandy grey ware sherds also form a significant part of this group and were found in a limited range of jar/bowl forms, some of which have lime-scale deposits on their internal surfaces (indicating use as a kettle or steamer).

A.3.56 Imported fine wares are very rare within this group and it is worthy of note that no samian was recovered; however, domestically produced fine red ware jar/bowl and beaker sherds were well represented.

A.3.57 Two sherds from a Late Roman Nene Valley jar were found, also a Late Roman miniature bead and flange colour coated mortarium (a mixing bowl probably intended

for use on a dining table). This indicates a later Roman component to this feature group assemblage.

A.3.58 It is interesting that this assemblage contains several large bowls and mixing bowls – although separated by a large date range – it will be interesting to explore if this specific form type can be directly linked to the activities associated with the Roman monument.

All other Roman features in Areas E and F

A.3.59 A total of 5123 sherds, weighing 50.583KG (32.38 EVE) of Latest Iron Age, but primarily Early Roman pottery (Table 58), was recovered from this group of features.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	1367	10956	21.66
Early Roman	3717	38882	76.87
Romano-British	39	745	1.47
Total	**5123**	**50583**	**100.00**

Table 58: All other Roman features Areas E and F. The pottery by Ceramic Era, listed in chronological order

A.3.60 The majority of this pottery within this group was recovered from pits (29.82% by weight) and ditches (28.95%), although pottery was also found in a tree throw (11.67%), water hole (4.66%) and several other features including a kiln. The pottery was severely abraded with a small average sherd size of 9.87g.

A.3.61 Unfortunately, although potentially of great importance to understanding pottery manufacture on the site only six sherds of pottery, weighing 77g, were recovered from the kiln and it is not clear if these are kiln products or re- deposited vessel fragments.

A.3.62 Twelve broad fabric families (Table 59) were identified within this group. Pre-industrialized Sandy grey wares were the most abundant fabric group within this set of features. The vast majority were made on the fast potters' wheel (88.76% by weight), with only a small amount (0.35%) definitively made by hand. The basic clay commonly included naturally occurring clay relicts and was frequently mixed with grog or flint. The range of forms includes butt beakers (Thompson 1982, 507, G5-1), cordoned jar/bowl forms (ibid, 139-144, B3-1) often with soot residues adhering, platters (ibid, 449-452, G1-3) and carinated bowls (ibid, 483-486, G2-3).

Fabric Family	Abbreviation	Sherd Count	Sherd Weight (g)	EVE %	Sherd Weight (%)
Sandy grey ware (proto)	SGW(PROTO)	2275	19181	16.00	37.92
Sandy oxidised ware	SOW	742	14690	6.50	29.04
Sandy reduced ware	SRW	1386	10146	5.96	20.06
Sandy coarse ware	SCW	164	2949	0.34	5.83
Sandy grey ware	SGW	228	1901	2.43	3.76
Grey ware (fine)	GW(FINE)	233	590	0.26	1.17
Shell tempered ware	STW	13	345	0.33	0.68
Sandy oxidised ware (proto)	SOW(PROTO)	26	305	0.12	0.60
Grey Ware	GW	10	223	0.14	0.44
Samian	SAM	27	155	0.30	0.31
Nene Valley colour coat	NVCC	4	56	0.00	0.11
Red Ware	RED WARE	15	42	0.00	0.08
Total		**5123**	**50583**	**32.38**	**100.00**

Table 59: All other Roman features Areas E and F. The pottery by fabric family, list in descending order of weight

A.3.63 The Sandy oxidised ware component is a significant fabric group containing a wide range of fabrics from fine-to-coarse. The finer fabrics were used to produce flagons (ring-necked and at least one Hofheim-type) some of which are consistent with manufacture at the Verulamium (St Albans) kiln centre (Tyers 1996, 199-201). Other finer fabrics have been used to produce undiagnostic jar/bowl sherds. Coarse fabrics have been used to produce specialized Romano-British forms which included domestically produced bead and flange mortaria (Tyers 1996, 116-135) and globular olive oil amphora imported from Southern Spain (ibid, 87-89).

A.3.64 Sandy reduced wares also comprised a large part of this assemblage; most are wheel made (65.87% by weight) with a small percentage clearly made by hand (5.3%). Some carinated bowls (Thompson 1982, 483-486, G2-3) were identified, but the largest part of this fabric group is made up of jar/bowl forms that are commonly cordoned (Thompson 1982 139-144, B3-1). Storage jars were also found.

A.3.65 Fine wares are present within this group, the most prolific of which are the Grey fine wares. This fabric is most frequently used to produce Butt beakers (Thompson 1982 521-524, G5-5), although carinated bowls (ibid, 483-486, G2-3) and undiagnostic jar/bowl sherds were also found. It is likely that the majority of these wares were imported from northern Gaul (Tyers 1996 154-155) in the Early Roman era. Some Gaulish material was certainly finding its way to Roman Cambridgeshire as samian table wares were relatively common. These were found in the forms of moulded bowls (Dr 29 and 37), straight-sided cups (Dr33) and shallow dishes (Dr15/17 and Dr18/31). Further analysis is required to identify the full extent of the fabrics, forms and their manufacturing centres.

A.3.66 Domestically produced fine wares include Late Roman Nene Valley colour coated dish and jar fragments (Tyers 1996 173-175) and also small fragments of unsourced red fine wares.

Late Roman features in the north-west of Area D

A.3.67 A total of 166 sherds, weighing 2.307kg (2.42 EVE) of primarily Romano-British pottery (Table 60) were recovered from Late Roman features in the north-west of Area D. This pottery represents only 1.32% of the total site assemblage. The pottery from this group of features is minimally abraded and has an ASW of c. 14g.

Ceramic Era	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Latest Iron Age	4	59	2.56
Early Roman	0	0	0.00
Romano-British	162	2248	97.44
Total	**166**	**2307**	**100.00**

Table 60: Late Roman features, north-west of Area D. The pottery by Ceramic Era, listed in chronological order

A.3.68 Fourteen broad fabric families (Table 61) have been identified within this group of features. The late Roman character of the pottery within these features can be seen in that Sandy grey wares, Nene Valley Colour Coats, Shell tempered wares, Oxfordshire red and white wares and Hadham red wares form the main part of this assemblage. All these wares were prolific in the 3rd, but particularly during the 4th centuries AD in the Cambridgeshire region.

Fabric Family	Abbreviation	Sherd Count	Sherd Weight (g)	EVE %	Weight (%)
Sandy grey ware	SGW	31	643	48	27.87
Nene Valley Colour Coat	NVCC	28	433	56	18.77
Shell tempered ware	STW	19	401	48	17.38
Hadham red ware	HAD RW	21	208	30	9.02
Sandy reduced ware	SRW	22	205	18	8.89
Sandy oxidised ware	SOW	23	164	24	7.11
Oxfordshire red ware with a red colour coat	OXRCC	8	87		3.77
Hadham grey ware	HAD GW	2	52		2.25
Oxfordshire red ware with a white colour coat	OXRWS	2	47	12	2.04
Samian	SAM	3	21	6	0.91
Sandy red ware	SREDW	4	20		0.87
Reduced ware	RW	1	10		0.43
Grey Ware	GW	1	9		0.39
Oxfordshire white ware	OXWW	1	7		0.30
Total		**166**	**2307**	**242**	**100.00**

Table 61: Late Roman features, north-west of Area D. The pottery by fabric family, list in descending order of weight

A.3.69 The wheelmade Sandy grey ware vessels in this group, although the most prolific, are present only in a very limited range of jar/bowl and storage jar forms; although one diagnostically Late Roman flanged dish is present. At this time utilitarian grey wares are being supplemented by Shell tempered ware globular jars, often with rolled undercut rims. Although shell rich clay beds are common in west Cambridgeshire, and some of these jars may have originated from as yet unknown kilns in that area, these vessels are also consistent with being traded from the Harrold kilns in Bedfordshire (Tyers 1996, 192-193).

A.3.70 Finer Sandy oxidised ware vessel fragments were recovered from this group and comprise undiagnostic flagon and jar sherds. One of the jar sherds had a bi-fid rim as has been seen elsewhere on the site.

A.3.71 That this group of features is Late Roman in character would explain why so little Early Roman samian is present in its fills. Only three sherds were retrieved which include a moulded bowl (Dr39) and a conical cup (Dr33).

A.3.72 After samian stopped being imported into this country during the mid 3rd century AD domestic factories filled the gap in the market and began to produce red slipped table wares (Tyers 1996, 71-72). Oxfordshire red wares (Tyers 1996, 175-176) began to reach the east of England in the mid 3rd century and were widely available during the 4th century and maybe even into the early 5th century AD. At Clay Farm all three of their main products are found with Oxfordshire red colour coated dishes with out-turned rims, flanged bowls and a flagon found; also Oxfordshire red ware with a white slip and self-coloured Oxfordshire white ware bead and flange Mortarium fragments.

A.3.73 The kiln production centre at Hadham (Tyers 1996 168-169) in Hertfordshire also thrived in the later Roman era producing red table wares made distinct by their high burnish (or polish). These wares are present in a similar range of vessel forms to the Oxfordshire products as flanged bowls, wide mouthed jars or bowls and mortarium.

A.3.74 During this time of domestic pottery production expansion the Nene Valley Colour Coated industry also underwent a revolution (Perrin 1999, 87-89) and substantial dishes and jars began to be produced while the more delicate fine ware beakers became less fashionable. At Clay Farm several substantial flanged dishes and jars were retrieved from this group of features.

Statement of potential

A.3.75 This is a large, well-recorded, group of Latest Iron Age, Early Roman and Romano-British pottery recovered from an area of rich archaeological remains which indicate an agricultural landscape (Evans et al 2008) with some monumental and memorial aspects. The pottery consists mostly of domestically produced utilitarian coarse wares although some imported and traded specialist wares are also present, in particular thirteen accessory vessels from a single high-status pre-conquest cremation burial.

A.3.76 The preliminary work undertaken during assessment (see above) has shown that there are discrete phased groups of pottery, with varying characteristics, that once fully analysed could further our understanding of how pottery was made, used and deposited at a time of dynamic change in Roman Cambridgeshire. The assemblage also has the potential to be used as a broader interpretative tool and may be used, in conjunction with other classes of finds, to address wider research questions (Going 1997; Brown 2000). The Study Group for Roman pottery (Martin and Wallace 2002) has identified several areas of research that this assemblage could significantly contribute to:

- The relationship between Late Iron Age settlement, economy and society and the patterns established in the Early Roman period. Technological change and more 'domestic' changes can be documented from pottery, to compare with the picture of military and political change from historical sources (Martin and Wallace 2002, 2.1.1).
- Spatial patterning in assemblages. Are there 'assemblage-types' for the tribal areas and/or the region distinctive of a site or part of a site, e.g. military, villa, urban, farmstead, midden/pit, houses etc (Martin and Wallace 2002, 2.1.7).
- Consumption patterns. Pottery study can assist with the interpretation of the social contexts of eating and drinking, feasting, cooking. This can be tied into faunal and macro-botanical evidence on the one hand and spatial patterning on the other (Martin and Wallace 2002, 2.1.8).
- The impact of Romanized tastes. This may be engaged through the study of the distribution of vessels indicating Romanized tastes: amphorae, flagons, mortaria,

Samian and the like, and their potential influence on the local ceramic repertoire (Martin and Wallace 2002, 2.1.9).

- The function of ceramics. More studies have been undertaken in this area by medieval pottery specialists, especially using residue analysis. Work on Romano-British pottery could learn from this, and potentially produce similarly useful results: for example, from residue analysis, examining use-wear, re-use and measures of abrasion/brokenness (Martin and Wallace 2002, 2.1.10).
- The character of archaeological deposits and finds assemblages. These can be examined through standard methodologies to help illuminate the nature of site formation processes (Martin and Wallace 2002, 2.1.11).
- Intra-site organisation. Comparison of pottery types recovered from different components of a site holds much potential for assessing the function and status of different areas (Martin and Wallace 2002, 2.1.12).

Recommendations for future work and associated method statement

A.3.77 Task 1: The assessment catalogue will be reviewed and where material has been identified as important to the interpretation of the site it will be looked at in more detail in accordance with the guidelines laid down by the Study Group for Roman Pottery (Webster 1976; Darling 2004; Willis 2004). These sherds will be examined using a hand lens (x20 magnification) and will be divided into fabric groups defined on the basis of inclusion types present. The sherds will be counted and weighed to the nearest whole gram. Evidence for use, decoration and abrasion will also be noted. Where ever possible the local fabrics and forms will be recorded using published regional examples (Webley with Anderson 2008), to minimize republication of existing data. For imported fabric types the National fabric series (Tomber and Dore 1996) will be referenced.

A.3.78 Task 2: Where detailed fabric descriptions will be beneficial to understanding the source of the clay and methods of manufacture samples suitable for thin section analysis will be taken. It is recommended that five pottery samples from each of the ten main visually identified fabrics will be selected for thin section analysis. From each sample a thin-section slide will be prepared followed the methodology outlined in Gribble and Hall (1992, 32-34) and microscopically examined, allowing the components of the clay body and its inclusions to be identified.

A.3.79 Task 3: Relevant sherds will be selected for illustration; priority will be given to material that has not been published elsewhere.

A.3.80 Tasks 4, 5 and 6: When all the preliminary analysis of the pottery fabrics and forms have been completed further analysis of the pottery within the context of the site will take place. The pottery will be analysed by phase, by feature group and its local, regional or national significance established.

A.3.81 Task 7: An archive report will be written presenting the results of this work, which will be a useful interpretative tool for the Project Officer and will also be suitable for publication in an edited format.

A.3.82 Task 8: The publication report will be edited any queries or changes undertaken by the author. The illustrations will also be checked at this time.

Task	Description	Estimated time
1	Review the data and record selected groups in more detail.	5 days
2	Select sherds for thin section fabric analysis.	0.5 day
3	Select pottery for illustration.	1 day
4	Analyse the pottery by fabric and form (including a report on the thin sections).	4 days
5	Analyse the pottery within the context of the site: a) by phase, recording changes in the fabrics and forms used through time b) by group, observing any patterns in pottery use associated with.	4 days
6	Analyse the local, regional and national significance of the assemblage,	1 day
7	Write a full archive report that is suitable for publication in an edited form.	12 days
8	Respond to queries, check illustrations and edit text	2 days

Table 62: Roman pottery task list

A.4 Lithics

By Barry Bishop

Introduction and methodology

A.4.1 Archaeological investigations at Clay Farm resulted in the recovery of 3481 pieces of struck flint and over 38kg of unworked burnt flint fragments (Table 63).

A.4.2 For the purposes of assessment, this material has been examined by area and further sub-divided into broad 'finds groups', based on provisional stratigraphic associations and chronological phasing. This report quantifies and briefly describes the material according to area and 'finds groups' and assesses its ability to contribute to further understanding of the nature and chronology of the activities identified during the project. It also recommends any further work required to achieve its full research potential. The material was only rapidly scanned and no statistically based technological, typological or metrical analyses have yet been conducted. A more detailed examination may therefore alter or amend any of the interpretations offered here.

Area	No of Struck	Burnt Flint (g)	Struck Flint to Burnt Flint Ratio (BF wt in g / SF no.)
Area A	409	435	1/6
Area B	1,344	24,400	18/15
Area C	319	8,533	26/75
Area D	38	421	10/08
Area E	1,367	4,467	3/27
Area F	4	21	5/25

Table 63: Quantification of Lithic Material by Area (BF: Burnt flint, SF: Struck flint)

General Remarks

A.4.3 The struck flint assemblage from Clay Farm represents one of the largest, if not the largest, from any later prehistoric settlement site in the region. A not-insignificant proportion of this clearly pre-dates the settlements, suggesting occupation at the site spanned the Mesolithic and possibly Upper Palaeolithic through to the Early Bronze Age (the 'earlier' material). However, the bulk of the material, perhaps over 80%, has technological and typological traits consistent with later 2nd and 1st millennium BC flintworking traditions (the 'later prehistoric' material). These traits include short, unstructured reduction sequences, the frequent use of poor knapping-quality pebbles, the production of thick, often short flakes and a paucity of formal tool types with retouched pieces dominated by simple scrapers and irregularly edge-retouched flakes. Working edges were also made on otherwise unmodified pebbles (core tools). A lack of discretion in selecting raw materials is reflected in the high number of disintegrated cores. Perhaps the most interesting individual assemblage is the substantive collection of flintwork deposited into a largely infilled Middle Bronze Age ditch in Area B, but other foci of flint production, use or discard have also been identified.

A.4.4 The raw materials vary in quality considerably. Most commonly used were pebbles and small cobbles of good knapping quality, translucent black flint. Other pebbles of poorer quality, often cherty flint in a variety of colours, were also used. All of these are likely to have been obtained from the gravel terrace deposits at or near the site. A much better quality dense black nodular flint with a thick cortex, evidently extracted from the chalk, is also present in small quantities, principally within the Later Neolithic assemblages.

A.4.5 The presence of substantial quantities of unworked burnt flint suggests its use in craft or cooking activities. The material was widely distributed across the areas investigated but with some notable concentrations evident, which may reflect specific activity zones.

Area descriptions

Area A

A.4.6 Excavations in Area A produced 409 struck flints and just under 0.5kg of unworked burnt flint fragments from a wide variety of features. These include a Neolithic pit and a small group of Early Bronze Age features, numerous Middle Bronze Age features and an Early Iron Age waterhole.

A.4.7 *Early Neolithic pit **6417***: This was the only positively identified Neolithic feature found at the site. It contained 64 struck pieces of Early Neolithic date, most of which comprises knapping debris including complete and shattered cores, trimming flakes and broken flakes. Blades contribute a quarter of the assemblage and retouched implements include a serrated blade and a piercer made on a blade, along with several used flakes. This assemblage clearly represents the complete knapping sequence, although only a small proportion of what had been produced was included in the pit.

A.4.8 *Early Bronze Age features **6349** and **6355***: Feature **6349**, recorded as a natural hollow, produced eight pieces, including a core, a number of blades and a possible burin made on a blade. Most of these pieces are likely to date to the Mesolithic or Early Neolithic and may be regarded as residual. Pit **6355** produced a sizeable assemblage of 33 struck flints. This mostly comprises shattered pebbles along with a few flakes. It is possible that the shattered pieces represent pebbles used as post-packing that disintegrated under the stresses caused by the placement of the post.

A.4.9 *Middle Bronze Age features*: The Middle Bronze Age features in this area provided 26 pieces of struck flint and a small quantity of unworked burnt flint. With the exception of one or two earlier pieces, the struck flint is typical of later 2nd millennium BC industries and likely to be broadly contemporary with the features.

A.4.10 *Early Iron Age Waterhole **5898***: This feature produced 165 struck flints and 205g of unworked burnt flint. The techniques used in producing the struck assemblage were impoverished, even when compared to the Middle Bronze Age assemblages. This assemblage consists of flakes, crudely worked cores and large quantities of irregular knapping debris and shattered pieces. It is in a sharp condition and it is likely to represent at least broadly contemporary, Early Iron Age, attempts at flintworking.

A.4.11 *Remaining features*: The remaining features in Area A produced 113 struck flints and 206g of unworked burnt flint. Preliminary examination of this suggests that most is likely to date to the Middle Bronze Age or Early Iron Age with a few earlier pieces also present. Over half of the struck flint was recovered from ditch **5826**, which appears to have been used as a receptacle for depositing flintworking waste. The remainder of the material was recovered from a number of other contexts in low numbers and may be largely residual.

Area B

A.4.12 This area provided the second largest struck flint assemblage from the excavations, comprising 1,344 pieces, along with the largest collection of burnt flint fragments, amounting to over 24kgs. The lithic material from this Area was divided into three analytical groups; MBA Settlement 1 (the upper fills of **4209**, fill group 4206) which

contained a substantial collection of dumped flintworking debris, the lithic material recovered from all other Middle Bronze Age features, and the lithics from all other contexts.

A.4.13 *Settlement 1, upper fills of ditch **4209** (fill group 4206)*: The upper fill of this Middle Bronze Age ditch produced the largest struck flint assemblage from any single feature from the excavations, comprising 695 pieces of struck flint and 11,645kg of unworked burnt flint fragments.

A.4.14 The lithic material was retrieved from 1m sections along the ditch, with densities of struck flint ranging from between 1 and 77 pieces per section. Analysis of the condition, raw material variation and refitting should enable the depositional history of this assemblage to be elucidated; for example, whether it was knapped *in situ*, dumped in a single event or deposited as a series of discrete episodes over a period of time. The quantity of burnt flint also varies, from none to over 2.5kg per section.

A.4.15 The bulk of this material is typical of later 2nd millennium flintworking industries and is dominated by rather crudely reduced waste pieces, flakes, occasional retouched implements and core tools. All stages in the reduction sequence appear to be present, from 'tested' or minimally worked cores to discarded retouched implements. The raw materials comprise small pebbles that have been reduced, often rather minimally, using randomly aligned striking platforms or the use of the bipolar technique. There are correspondingly high numbers of cortical flakes, small trimming flakes, irregular flakes and mis-hits or pieces that have failed due to thermal flawing and from a lack of control over the flaking mechanics.

A.4.16 Of particular interest are two unusual arrowheads, both from the same 1m section of the ditch (12104). One apparently represents an attempt to make a barbed and tanged arrowhead using an earlier, recorticated flake. The other comprises an elongated tanged arrowhead made by blunting a similarly reused, recorticated blade. Both of these implements were made on ancient struck pieces and, although of comparable form to Early Bronze Age arrowheads, were manufactured using notably different techniques; edge blunting rather than traditional invasive pressure flaking. Arrowheads are not a feature of Middle Bronze Age flintworking traditions and these suggest that attempts were made to copy earlier examples.

A.4.17 *Other Middle Bronze Age contexts*: The flintwork from other Middle Bronze Age contexts in Area B amounted to around 500 struck flints and over 12kg of unworked burnt flint fragments. This was recovered from over 100 separate contexts scattered across the excavated area, with most contexts proving only small quantities of struck flint; the largest single assemblage consisting of 19 pieces. The bulk of the struck flint is typical of later 2nd millennium industries and represents contemporary activity. A few residual pieces are present, which include a number of blades and a Mesolithic blade core. In some cases, earlier pieces have been reused, as evidenced from fresh flaking undertaken on old recorticated surfaces.

A.4.18 Whilst much of the burnt flint probably relates to casual hearth-use and represents 'background' waste, a few contexts have provided much larger quantities that have been intensively and uniformly burnt, suggestive of it being deliberately produced, possibly as part of cooking, craft or ceremonial activities.

A.4.19 *Remaining features*: Material from post-Middle Bronze Age contexts within Area B amounted to 153 struck flints and just under 0.5kg of unworked burnt flint. The struck flint, as a whole, is notably more edge-chipped than in the Middle Bronze Age assemblages and also includes much higher proportions of residual, pre-Middle Bronze

Age, flintwork, this accounting for perhaps a third of this assemblage. This includes a microlith of Mesolithic date, blades and blade cores of Mesolithic or Early Neolithic date, and flakes and tools of Later Neolithic or Early Bronze Age type. The majority of the assemblage, however, is comparable to the assemblages from the Middle Bronze Age assemblages and is likely to predominantly derive from activity during that period. Small quantities of Iron Age flintwork may also be present.

Area C

A.4.20 Area C produced 319 pieces of struck flint and over 8kg of unworked burnt flint fragments.

A.4.21 *Middle Bronze Age features*: Features dated to the Middle Bronze Age in this area produced 100 struck flints and just under 5kg of unworked burnt flint. The struck flint is dominated by pieces with Middle Bronze Age technological characteristics, with evidently earlier pieces contributing less than 10%. It was mostly widely distributed with most contexts only containing a few pieces. Ditch **10337** provides an exception to this; it provided 47 struck pieces from two of its excavated slots, nearly half of the overall assemblage, and clearly represents a flint working/deposition location. Burnt flint was mostly spread thinly across the features but notable concentrations were found in pits **10021** and **10158**, the latter producing over 2kg.

A.4.22 *Other features in Area C*: Other features produced 219 struck flints and just over 3.5kg of unworked burnt flint. The struck flint was present in low densities across a range of feature classes. The only notable concentrations being a group of 36 pieces from ditch **10887** and 15 from ditch **10008**, which may mark the location of a flintworking focus. Ditch **10887** also produced a relatively large quantity of burnt flint, some of which may have been previously worked, with other notable concentrations of burnt flint coming from ditch **12079** and pit **10332**. Most of the struck flint appears to be residual, deriving principally from the Middle Bronze Age occupation.

Area D

A.4.23 This area produced only relatively small quantities of both struck flint and unworked burnt flint.

A.4.24 *Middle Bronze Age features*: Six struck pieces were recovered from features dated to the Middle Bronze Age, of which two were clearly earlier in date. Middle Bronze Age flintwork includes a scraping-type core tool. A total of 226g of unworked burnt flint was also recovered, this being spread across four features with no concentrations evident.

A.4.25 *Other features in Area D*: The remaining features in Area D produced 32 struck flints and 195g of unworked burnt flint. Again, the struck flint was distributed across a variety of features with none containing any significant concentrations. A few pieces are clearly residual, including a prismatic blade, but the bulk of the assemblage is of later prehistoric date, including a number of complete and shattered cores. The only probable retouched piece of this date consists of an irregularly produced scraper made on a thick flake.

Area E

A.4.26 This area produced the largest struck flint assemblage from the site, comprising 1,367 pieces. Conversely, less than 5kg of burnt flint was collected.

A.4.27 *Middle Bronze Age Settlement 2*: Features within this settlement area produced 79 struck pieces, of which 61 came from ditch **995** and a further ten from pit **472**. The

assemblages from these features are clearly mixed in terms of condition, raw materials and technology, and include a large, heavily mineral stained blade, a long end-scraper and three arrowheads from ditch **995**. One of these, a barbed and tanged type from fill 994, is invasively thinned and competently manufactured, being a good example of Early Bronze Age types. The other two, both from fill 1440, are similar to each other, being much smaller and had been formed through edge blunting. They are much more reminiscent of the two crudely produced examples from settlement 1 (ditch 4206) in Area B and it is entirely possible that they too are Middle Bronze Age copies of earlier types, perhaps even the 'real' one from fill 994. Whatever the origin of these arrowheads, it is clear that much of the struck flint from this area is residual, spanning the Mesolithic through to the Earlier Bronze Age. The bulk of this is most typical of Later Neolithic industries; despite the lack of features of this date, this presumably reflects a disturbed flint-tool using locale.

A.4.28 *Middle Bronze Age Settlement 3*: This location produced 156 struck flints and 85g of unworked burnt flint, all of which came from ditch fill group 2376. As with the material from the Settlement 2, the bulk of this assemblage appears residual and includes a number of blades, a blade core, an ovate knife and a number of Neolithic-type scrapers. A number of struck pieces with Middle Bronze Age characteristics were recovered from fill 2669 and this could reflect a dump of contemporary flintworking waste. This ditch also produced 85g of unworked burnt flint.

A.4.29 *Other Middle Bronze Age features*: The remaining Middle Bronze Age features in Area E produced 656 struck flints and just over 2.5kg of unworked burnt flint. As with the other assemblages from this area, a high proportion of this is clearly residual. This includes a chisel type arrowhead, several scrapers, serrates and a bifacially worked tool, all being characteristic of Later Neolithic industries. There are also many flakes of a similar date, some of which have been made using a distinctive dense black chalk flint with a very thick cortex, similar to that mined at Grime's Graves. Wherever its precise origin, it was clearly imported into the area. Although a sizeable proportion of this material is clearly residual, a slender majority of it is more characteristic of Middle Bronze Age industries, with some features producing significant concentrations, including potentially refittable pieces. The bulk of this was recovered from a number of ditches (**925**, **1054**, **1057** and **1982**), which together contributed over 80% of all flintwork from these features.

A.4.30 *Remaining contexts in Area E*: A further 476 struck flints and just over 1.5kg of unworked burnt flint fragments were recovered from the remaining features in Area E. A relatively high proportion, perhaps as much as 50%, of these are early, and these include a Mesolithic microlith, numerous blades and a slender leaf-shaped arrowhead of Early Neolithic date. The bulk of this earlier material is, however, most characteristic of Later Neolithic industries and these include a high number of competently produced scrapers. Later prehistoric flintwork is also present, mostly spread across the area in small numbers, with the largest quantities being recovered from waterhole **364** and post-medieval ditch **2824**, both of which include shattered pebbles and small trimming flakes indicative of close-by knapping. A further crudely made, although somewhat larger, arrowhead was also recovered, from ditch **1255**. This has a prominent tang but no barbs and, again, was made by edge blunting a narrow flake. Other contexts containing relatively large assemblages of struck flint include pit **3330**, ditch **705** and ditch fill group 729, but these assemblages were clearly chronologically mixed with many earlier pieces present.

Area F

A.4.31 This area produced only four struck pieces and 21g of unworked burnt flint. The struck flint included two blades and a recorticated waste flake, all of which are likely to be early, the remaining piece being a small and undated trimming flake.

Significance

A.4.32 The lithic assemblage from Clay Farm is clearly of mixed date and was manufactured from at least the Mesolithic and possibly the Upper Palaeolithic, through to the Iron Age.

A.4.33 Of interest are a number of mineral stained blades that are larger than the majority, and which could be Late Glacial or early Post-glacial in date, being reminiscent of similar pieces recovered from the Hinxton Genome Complex and from the excavations at Spicers in Sawston. Mesolithic and Early Neolithic struck flints include microliths and arrowheads but mostly comprise blades. This appears to be spread fairly evenly across the site but there appears to be a concentration of Later Neolithic material that centres on Area E. This latter material includes a wide variety of implement types, particularly scrapers, and is suggestive of 'domestic' style habitation. Some of the raw materials used during the Later Neolithic occupation appear to have been imported to the site from sources of good quality flint in the chalk.

A.4.34 The presence and not-inconsiderable quantity of this pre-Middle Bronze Age flintwork testifies to the importance of this location and the longevity of occupation in the area, despite the only identified sub-surface features being an Early Neolithic pit and a small group of Early Bronze Age features.

A.4.35 The bulk of the struck flint assemblage, however, can be dated to the later 2nd or 1st millennium BC and represents a remarkably large assemblage for a settlement site of these periods.

A.4.36 The bulk of this probably represents flintworking during the Middle Bronze Age, although this also continued into the Iron Age. The Middle Bronze Age assemblages appear to be concentrated within ditches where, in some cases they appear to represent deliberate dumps of refuse, the most notable of these being the large quantities dumped into the partly silted up ditch (Settlement 1, fill group 4206) in Area B. Although it is quite possible this represents the removal of sharp debris from around the settlement areas, in many cases the deposition of cultural material within settlements has been shown to have a ritual or symbolic dimension. Of particular interest are five arrowheads found in Areas B and E. These are clearly copies of earlier types and in some cases were made using flakes that had been first struck long before they were converted into arrowheads. Although arrowheads are occasionally found in Middle Bronze Age contexts, most of these can be easily accommodated as residual or stemming from the use of earlier pieces as talismanic objects. The examples here are the only securely attested Middle Bronze Age examples known from the area.

Potential

A.4.37 The assemblage is clearly of great regional and possibly national significance and has the potential to address a number of important research themes.

A.4.38 The pre-Middle Bronze Age flintwork can contribute to studies of landscape occupation, working practices and questions concerning continuity, both in terms of land use and technological change. It can add to, and enhance understandings of, the growing body of late Glacial to Early Bronze Age sites previously investigated along this stretch of the Cam Valley.

A.4.39 The Middle Bronze Age and Iron Age assemblages are impressive in size and closely contextualized. Although some advances have been made, the definition of the specific typological and technological changes in struck flint industries through the late 2nd and the 1st millennia BC is still poorly documented. Furthermore, the nature and significance of struck flint production and use have been little explored and there has been even less emphasis placed on understanding the social consequences of flintworking during these periods. Detailed analysis of the Clay Farm assemblages will permit a much greater understanding of raw material selection, reduction processes and the social significance and roles of flintworking during these periods, Further contextual work to separate and more-closely define chronological differences in the later prehistoric industries will allow an appreciation of technological changes from the later 2nd through to the 1st millennia BC, developments that are poorly understood at the present. The distribution of the material can also contribute to an understanding of the spatial organisation of flintworking within the settlement and enclosures, and explore specific depositional practices during these periods. The apparent emulation of earlier arrowheads types and widespread reuse of earlier flintwork gives an added chronological dimension to this material and can provide an avenue into understanding later prehistoric perceptions of the past and on flintworking as a traditional occupation.

Method statement

A.4.40 This report is based on a 'rapid scan' examination and quantification of the lithic material recovered during the excavations at the site. So far no comprehensive cataloguing of the material has been attempted and this should be regarded as a priority, both for the purposes of archiving and to provide a tool for approaching the material's further analysis.

A.4.41 The earlier material, dating potentially from the Upper Palaeolithic and certainly from the Mesolithic through to the Early Bronze Age, needs to be isolated, described and its significance in terms of wider patterns of landscape occupation discussed.

A.4.42 The assemblages directly relating to the two later prehistoric periods of flint use at the site, the Middle Bronze Age and the Iron Age, should be examined and recorded in detail, as outlined below.

A.4.43 The significance of the flintwork merits it being published in some detail, alongside suitable illustrations. The publication text should include:

- an account of earlier (pre-Middle Bronze Age) flint use at the site
- a detailed description of the later prehistoric assemblages and the technological strategies employed to make them, including metrical, typological and technological analyses, in order to allow them to be understood both in their own right and to enable comparisons with other contemporary assemblages from the region
- a description of the range of products that may have been manufactured and the uses to which they may have been put
- a consideration of spatial and chronological variations within the typological and technological composition of the material, to explore how flint production, use and discard was structured across the site, and how this may have changed over time
- an account of raw material variability and the implications that this may have had for the movement of peoples and resources within the wider landscape

- a discussion of relationship between the 'domestic' aspect of the assemblages and the likely symbolic associations, as evidenced by the dumping of flintwork in specific locations within the settlement, the emulation of earlier implement forms and the widespread reuse of earlier flintwork
- a consideration of how the later prehistoric assemblages compare and contrast to other contemporary lithic assemblages from the region

Recommendations for further work

A.4.44 In order to realise these aims, further work is required. This should include:

- cataloguing the entire assemblage in full, to both isolate earlier flintwork and identify significant sub-assemblages from within the later prehistoric material
- full raw material, metrical, attribute and technological analyses of all significant sub-assemblages present across the site
- a detailed mapping of the assemblages' spatial and chronological distribution
- refitting exercises in order to elucidate pre-depositional history and discard patterns of the significant sub-assemblages
- research and compilation of contemporary assemblages from the region

A.5 Metalwork

By Chris Howard-Davis

Introduction

A.5.1 In total, 309 items of metalwork were recovered from the excavation, comprising 185 copper alloy items, 99 fragments of ironwork, 21 lead objects and 4 silver items.

Methodology

A.5.2 Every fragment was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Copper Alloy

Summary

A.5.3 In all, 185 fragments of copper alloy, including coins, and representing considerably fewer objects, were submitted for assessment. A substantial proportion of the material had been cleaned and conserved, but much of the unstratified material remained 'as excavated'. This had some impact on the identification of objects, especially in the case of coins, meaning that most of them remain unidentified at this stage of the project. Approximately 45% of the objects were originally recorded as unstratified, although this was subsequently reduced to c 26%. Descriptions of all the copper alloy finds can be found in the archive, only those of relevance are mentioned below.

Date range and distribution

A.5.4 The assemblage included a range of objects dating from probably the Middle Bronze Age to the present day, reflecting the long period of activity attested stratigraphically. The material was distributed between excavated areas, but it must be noted that the high representation of Late Iron Age/Romano-British finds seen in Area C reflects the numerous individual elements of a single casket burial (cremation burial **10909**).

Evaluation

A.5.5 As is often the case, a significant proportion of the copper alloy objects cannot be assigned a precise date or date range. There are, however, sufficient well-dated objects within the assemblage to allow it to be discussed in related chronological groups, the earliest of which can be placed in the Middle-Late Bronze Age. Within the chronological groups, the material is also reviewed in function-related groups.

A.5.6 An extremely well-preserved, relatively small, side-looped and socketed spearhead was recovered from Middle Bronze Age pit/ditch **5281** (fill 5207; SF 182) in Area B, and a possible chape (SF 152), equally well-preserved, came from topsoil (4025) in the same part of the site. Both objects can be dated with confidence to the Middle Bronze Age. A second spearhead, in much poorer condition, came from Early Roman infilling (group

729) of Middle Bronze Age ditch **728** (fill 808; SF 66) in Area E and is almost certainly residual. As there is considerable damage to the socket and lower part and edges of the blades, probably reflecting disturbance and redeposition, it cannot yet be further described. A blade fragment (SF 41), found unstratified, seems likely to be of similar date, but is largely undiagnostic.

A.5.7 A single, well-preserved swan-necked ring-headed pin from Area A Middle Iron Age pit **6276** (fill 6280; SF 273) is an Early-Mid Iron Age type, and would seem to pre-date other Iron Age metalwork from the site. The main focus of the copper alloy finds lies in material spanning the transition from the Late Iron Age to the Early Roman period (the 1st century BC to the 1st century AD), but there is also an appreciable amount of later Roman material (from the 2nd century onwards, but mainly 3rd/4th-century).

A.5.8 In all, seven copper alloy coins were identified as potentially of Late Iron Age date, of these, only two were stratified. Buried subsoil 1700 (Area E) produced an uninscribed Class II type potin coin (Spink 2010, 7, pl 64), cast as part of a strip (SF 37), and in Area E topsoil (4025) there was another, as yet unidentified, coin. Potin coins cannot be closely dated, but it seems most likely that Class II coins date to the early part of the 1st century AD (Reece 1995). Unstratified examples (SFs 48, 169, 17, 302, 364) have not yet been cleaned and remain unidentified.

A.5.9 Pre-Roman conquest cremation burial **10909** in Area C produced a considerable number of copper alloy items, most of them disassociated fittings from a single casket. One complete and one partial hinge from 10913 imply a hinged lid, and a hinge element from 10911 is sufficiently similar to be regarded as completing the set. All retain mineralised wood impressions which could allow the wood species to be identified. The remainder of the objects comprise small decorative plates, a lock plate, and various detached studs, presumably decorating the lock plate and the casket. There is no evidence for handles of any sort. An extremely well-preserved chatelaine set (SF 340) was clearly amongst the accompanying grave goods.

A.5.10 Two brooches could pre-date the arrival of Rome, both are stratified, and both were recovered from Early Roman features. In Area C ditch cut **11593** (SF 317; fill 11615, part of the 'cemetery garden' enclosing ditch **11588**) produced a large badly distorted La Tène III type, which can be paralleled amongst material from Baldock (Stead 1986, fig 40.1) and is regarded by Stead as related to a Nauheim type. In Area E ditch **1365** (fill 1367, group 729) produced a small, complete example of a Nauheim derivative, a form which dies out before the Flavian period (Olivier 1996, 237). Three Colchester type brooches were recovered, one of which was unstratified (SF 306). The second (SF 310) accompanied skeleton 10896 (grave **10966**) in Area C. The third is from Area E buried subsoil 1700, a small fragment from a bow brooch (SF 32). Another, from Area C (fill 11815, ditch **11811**) could be a fourth example. A Langton Down-type brooch, currently unconserved, came from Early Roman pit **11724** (fill 11727) in Area C. Both Colchester and Langton Down-type brooches can be dated to the 1st century AD (Hattatt 2000). The pin from a hinged brooch-type came from context 13398. An enamelled umbonate chatelaine-type plate brooch from Early Roman ditch **11996** (fill 12017; SF 375) in Area D is most likely to date to the 2nd century (Hattatt 2000, 351).

A.5.11 Copper alloy armlets or bangles were at the peak of their popularity in the 3rd/4th century, but occasionally appear earlier (Cool and Philo 1998). In Area B, Late Iron Age ditch **4120** (fill 5322; SF 190) produced what could be a small plain bangle, possibly of Iron Age date. Early Roman ditch cut **12282** in Area D (fill 12284, group **12242**) produced three plain bangles (SF 374, 378, 379) while the inner ditch of the Late Roman monument (fill 247, ditch **115**) in Area F produced no less than five complete

bangles (SFs 1-4, 7), all most likely to date to the 3rd/4th centuries, and easily paralleled in Crummy's 1983 corpus of Roman finds from Colchester. A fourth plain bangle was found unstratified (SF 388). A small penannular ring or brooch from Early Iron Age pit **5898** (fill 5994) in Area A cannot be dated, except by stratigraphic context, and in Area E, a typically 2nd-3rd century Roman finger ring was found in an upper fill of Middle Bronze Age ditch **925** (fill 46), where it is undoubtedly intrusive. Two strap ends came from Early Roman ditch **10044** (fill 10602) in Area C, one of which (SF 197) is a late Roman form (see, for instance Stead 1986b, fig 58). A belt plate from Area B topsoil 4025 could also be Roman in date, but at this stage of the analysis this cannot be confirmed.

A.5.12 There was a range of other copper alloy finds, most fragmentary, which fall into no particular groups. Amongst them is a well-preserved enamelled seal box, probably of 2nd century date, from Area E buried subsoil 1700, and a probable chatelaine pick from post medieval ditch **2147** (fill 2551) in the same part of the site. In Area C the white metal-coated bowl of a spoon of typical earlier Roman type came from Early Roman ditch **12076** (fill 12074).

A.5.13 In all, 24 Roman coins were recovered, of which 11 were stratified. Being uncleaned, identification of unstratified examples has not as yet been attempted.

A.5.14 No Romano-British coins came from Area A, and the two from Area B topsoil 4025 remain unidentified. In Area C, a coin of Constantius I (AD 305-6) came from the upper fill of Middle Iron Age ditch **10403** (fill 10406) and an issue of Magnentius (AD 350-53) from Late Iron Age ditch **10624** (fill 12036).

A.5.15 In Area D coins came from several Early Roman features (ditch **11996,** fill 12170), ditch **12244** (x2; fill 12246), ditch **12327** (fill 12326), ditch **12372** (fill 12374), natural hollow **12498** (fill 12497), ditch **11981** (fill 12553), ditch **12936** (fill 13069), but although all are obviously Romano-British, they require cleaning before positive identifications can be made. A single Romano-British coin came from Late Roman ditch **12325** (fill 12361). Currently unidentifiable Romano-British coins in Area E came from Late Iron Age ditches **397** (fill 495) and **1288** (fill 1290).

A.5.16 Three copper alloy objects have been provisionally identified as of Anglo-Saxon date, all are from Area B. A fragmentary object from a short length of well dated Middle Iron Age gully **4172** (fill 4171) has been tentatively identified as part of the pin of a buckle, potentially of 5th-6th century date, although the stratigraphic position of this object should prompt a review. A faceted pin head with ring-and-dot decoration came from natural hollow or tree throw **5437** (fill 5439; SF 185), and is probably of middle Saxon date (Rogers 1993, fig 662.5344). A fragment with rocker decoration, from topsoil 4025 (SF 285), could be of similar, or later date.

A.5.17 Later Medieval material is confined almost entirely to small personal objects, most notably buckles and belt plates, all of which, where datable, can be attributed to the 14th century or later. These include an oval buckle frame from Area C Middle Iron Age ditch **10361** (fill 10419), which can be dated, in London, to the period 1350-1400 (Egan and Pritchard 19 fig 43.285). A second buckle frame of similar date came from Early Roman ditch **11634** (fill 11651) in the same area of the site. Both were metal detected from the surface of these earlier features. A double-oval buckle frame from context 13398 is of similar date. The remaining examples are an oval buckle from context 301 and fragmentary buckle and belt plates, from Area B topsoil 4025, and unstratified (SFs 143, 253, 331). Other items of dress are represented by two similar solid-cast, spherical, looped buttons, one from Area B modern trackway fill 5439 and the other

unstratified (SF 254). Such buttons come into use in England after the 13th century (Egan and Pritchard 1991, 272), but undoubtedly carry on in use into the post-medieval period. A further two objects have been identified as small harness pendants, possibly of medieval date, although again, their use continued into the early post-medieval period. A plain circular example comes from Area C Early Roman ditch **11561** (fill 11741), and another, in the form of a six-petalled flower with central boss, from Area E modern ditch **1018** (fill 2480).

A.5.18 Late medieval to early post-medieval material also includes three jettons. One comes from Early Roman ditch **11561** (fill 12024) in Area C and two are unstratified (SFs 165, 392). One unstratified example (SF 165) is a Hans Krauwinkle token, issued c 1550-1630, the others have not been cleaned, but are likely to be of similar date. Four fragments of rumbler (or crotal) bells, probably from packhorse tack, were recovered. A plain example came from modern trackway **5434** (fill 5436) in Area B, a complete example was from context 301 and a fragment from a similar example was found unstratified (SF 47). A small plain rumbler bell with an extended suspension loop was from Early Roman ditch **11636** (fill 11792) in Area C and could conceivably be much earlier.

A.5.19 There were few personal items of post-medieval date. Part of a (probably) 18th century shoe buckle was recovered unstratified, and two other ornate fragments, from Area B topsoil 4025 and Middle Iron Age ditch **10031** (fill 10929) in Area C have been tentatively identified as parts of buckle frames. A decorative stud (SF164), facetted and possibly gilt, found unstratified, is probably a button cap. The oval bowl of a small spoon was found unstratified. The shape of the bowl suggests that it is post-medieval or modern in date.

A.5.20 A small group of five post-medieval coins includes a farthing of William and Mary (1694) from Late Iron Age ditch **5358** (fill 5357) in Area B. Three pennies of George III were all recovered unstratified (SFs 6, 359, 363), a fifth coin (from Area B topsoil 4025) remains unidentified.

A.5.21 What appear to be two spent bullets come from World War Two ring ditch **4350** (fill 4352) and are probably the most recent objects of copper alloy from the site.

Ironwork

Summary

A.5.22 A total of 99 fragments of ironwork, representing c. 70 objects, very few of which are unstratified, were submitted for assessment. Descriptions of all of the ironwork can be found in the archive. Identification was made without benefit of x-radiographs, and thus remains provisional. The assemblage comprises a narrow range of largely undateable objects. The majority of the objects can be identified with relative confidence as hand-forged nails, but includes a few other types of potentially Roman or post-Roman date. Ironwork came from all of the excavated areas, although Areas A and B generated only one object each.

Evaluation

A.5.23 Little of the ironwork can be assigned a precise date or date range, as iron was put to a number of practical uses, which means that the forms of individual artefact types, for

instance nails, have not particularly changed through long periods of time. As a result, the ironwork can only be discussed in broadly chronological terms.

A.5.24 Three largely unidentifiable fragments come from tertiary fills of Middle Bronze Age ditches. It seems likely that all are intrusive. A small possible blade fragment is from Area B ditch **4212** (fill 4775), a second blade fragment is from Area C ditch **10320** (fill 10770), and a hand-forged nail came from ditch **396** (fill 752) in Area E.

A.5.25 Middle Iron Age contexts produced no more than four items. Grave **6485** (fill 6486) in Area A produced a single nail, as did ditch **10455** (fill 10488) and pit **11191** (fill 11190, pit group **11187**), both in Area C. Pit **10157** (fill 10172, pit group **10155**), again in Area C, produced a small unidentifiable fragment. Very few iron objects were associated with the Late Iron Age, which is perhaps surprising at a time when the use of iron was increasing significantly; both were from Area E. A single nail came from waterhole **1333** (tertiary fill 1337) and a small fragment of tapering strip, probably too narrow to be a knife blade, came from waterhole **364** (layer 399, which sealed the top of the waterhole).

A.5.26 Areas C, D, and E produced ironwork from a number of Early Roman contexts, and indeed this period produced the largest group from the site, a probable 25 objects. All those from Area C are hand-forged nails, with two examples coming from ditch **11636** (fills 11826 and 12273), and three (SF 407, 408, 410) from Early Roman roundhouse gully **12459** (SW section 12463 (two nails) and NW section 12465 (one nail)).

A.5.27 Area D produced more ironwork than any of the others during this period, again most were nails. A relatively well-preserved whittle-tang knife blade came from ditch **11996** (fill 12170; SF 370). It is not of typical Roman form (see for instance Manning 1986, fig 28) and its blade shape, with the blade back running parallel to a straight cutting edge for most of its length before angling steeply down to the cutting edge, and a centrally-placed tang, hints at a post-Roman date, possibly as late as the 9th century (Pritchard 1991). A second possible blade fragment came from ditch **12590** (fill 12787; SF 448). An oval link was from ditch **12327** (fill 12359), and a thin rectangular plate of no obvious purpose came from posthole **12692** (fill 12694; SF 437, part of structure with sunken feature **12913**). The remainder of the ironwork from Area D was all small nails, with single examples from gully **12261** (fill 12262), ditch **11981** (fill 12454), ditch **12242** (fill 12478) ditch **12605** (fill 12609), boundary ditch **12626** (fill 12671), ditch **12777** (fill 12778), ditch **12996** (fill 12997), ditch **12936** (fill 13147), ditch **13126** (fill 13252), structure **12913** (fill 12907; SF 418), and two each from ditch **12590** (fill 12850) and post hole **13229** (13230). Again, in Area E, most of the ironwork was small nails (from ditch **305** (fill 766); pits **2153** (fill 2154), **2821** (fills 2822 and 2823), and **3667** (fill 3666), and tree bowl **2067** (fill 2069). Ditch **2806** (fill 2985) produced two small fragments from other objects, one remains completely unidentifiable, the other is a small oval or rectangular plate in thin sheet.

A.5.28 With the exception of a single item from Area D, Late Roman finds of ironwork are restricted to Area F. A total of 23 items, all nails, were recovered, mainly from ditch **115**, the inner ring ditch of the monument (cut **126,** fill 124; ditch **137,** fill 136; ditch **119,** fill 246; ditch **676;** fills 654 and 664), which alone produced 21 nails, many of them rather large (between 90 and 145 mm in length). Several of the nails from this group are clenched, indicating the thickness of wood through which they had been driven. Ditch **205** (fill 204) and ditch **104** (fill 645) also produced individual, probably much smaller, nails. In Area D, ditch **12396** (fill 12397; SF 386) produced a single item of potential interest. A square-sectioned bar bent into a curvilinear, almost symmetrical U-shape,

could be the remnant of a scabbard binding or chape, although it could equally be a relatively insubstantial nail, bent on extraction.

A.5.29 Only one context, from Area E, produced late ironwork, with a single nail from post-medieval ditch **2824** (fill 3668). Two hand-forged nails came from currently unphased ditches in Areas C (ditch **11912**) and F (ditch **540**, fill 537). A large square buckle, probably from horse harness, was found unstratified (SF 362), and is probably post-medieval or modern in date.

A.5.30 A large object with an obvious socket came from context 302, and has been tentatively identified as a spear head, although this would require confirmation from x-rays. A group of 22 fragments of wide, thin strip came from pit **10106** (fill 10101; SF 301) in the north of Area C. No attempt was made at this stage to refit these fragments, but two identifications are possible, either part of an iron band reinforcing a wheel, or elements of armour, which might be corroborated by what appear to be two lines of rivets running across the fragments, which would have served to attach the leather strips on which such armour was articulated.

Lead

Summary

A.5.31 In all, 21 fragments of lead representing a similar number of objects, were submitted for assessment, approximately 25% of them are unstratified. Descriptions of all the lead finds can be found in the archive. The assemblage comprises a range of largely undateable objects, but includes demonstrably late medieval and post-medieval items. Lead finds came from all of the excavated areas except Area A.

Evaluation

A.5.32 Most of the lead finds cannot be assigned a precise date or date range, as lead was put to a number of practical uses, which means that the forms of individual artefact types have not particularly changed through time. As a result, the lead finds can only be discussed in broadly chronological terms.

A.5.33 One small and unusual object was recovered from fill group 1054, the upper fills of Middle Bronze Age ditch **1057** (context 3408; SF 71) in Area E. Now folded in two, it was originally a thin, flat, almost butterfly-shaped object, and was probably cast with one surface bearing a raised abstract design. Although lead was widely used in the Bronze Age, being a constituent of bronze and other copper alloys, lead objects are unusual, and only occasionally reported (see for instance Hunter and Davis 1994), and it is possible that this object could be of Bronze Age date.

A.5.34 A small, deformed sphere came from Middle Iron Age context 10318, a layer sealing pit **10292** in Area C. Whilst this might well be a contemporary object, it is equally possible that it is in fact pistol shot, deformed from firing, and thus intrusive in its context. A second small folded fragment of lead came from Middle Iron Age ditch **10031** (fill 4015). Whilst not identified with confidence, it bears a generic resemblance to a cloth seal, and could, again, be intrusive.

A.5.35 Lead vessel plugs, used to repair holed pots, were recovered from several contexts, one example came from Area D subsoil 12691, and a second example from Early Roman ditch **11996** (fill 12017) in the same area. A third example was from Area E ditch **3458** (fill 3487), assigned to the same period, and a fourth example was found

unstratified (SF 42). These are commonly found in the Roman period and after. A cast block of lead from Area D ditch **12530** (fill 12531), also assigned to the Early Roman period, is probably an informal weight, as is a similar example from unphased hollow 1134 in Area F, and a small sub-conical weight with an iron suspension loop, found unstratified (SF 389), is a Roman type.

A.5.36 Two similar fragments of very thin crumpled sheet came from Early Roman pits: Area C pit **11739** (fill 11738) and Area D pit **12291** (fill 12288; SF 469). It is possible that the former is simply a solidified spill of molten metal, but the latter appears rectangular, and the possibility that it is a curse tablet cannot be ruled out.

A.5.37 Two medieval or early post-medieval cloth seals came from context 11339 (SFs 467, 468), one bears a stamp, but this has not yet been identified. There were, in addition, two examples of small-bore cast lead shot, one unstratified (SF 35), the other from a currently unphased ditch (**768**, fill 770) in Area E. A small fragment of milled lead window frame, probably of late medieval or early post-medieval date, came from an Early Roman ditch in Area F (ditch **568**, fill 1117), where it is most likely to be intrusive.

A.5.38 A small lead disc from Area B topsoil 4025 remains undated. Two further objects, a small spiral of strip (SF 75) and a large folded and crimped fragment of thick sheet (SF 36) were recovered unstratified.

Silver

Summary

A.5.39 In total, four fragments of silver, three of them coins, were submitted for assessment. All had been cleaned and conserved. Two of the three coins were found unstratified. The small assemblage can be placed in the early medieval and medieval periods. The stratified objects were from Area E.

Evaluation

A.5.40 The assemblage is too small for any trends or groupings to be of significance. Probably the earliest item was a large silver finger ring from post-medieval ditch **2147** (fill 2693). Quasi-cable decoration suggests an early medieval date, but it is possible, from its stratigraphic position, that this object is more recent.

A.5.41 The three coins are all long cross pennies, of which only one, cut to a quarter, is stratified (ditch **2147**, fill 2805). Unstratified coin SF 368 can be identified as a penny of Edward I, probably the new coinage after AD 1279 (Spink 2010).

Conservation

A.5.42 All metal finds are well packed and in general require no further conservation. It would, however, be of benefit to clean and fully conserve the remainder of the copper alloy coins (approx 30) and brooches (approx 2). The ironwork requires x-radiography in order to confirm preliminary identifications and guide the requirement for any further conservation. Of the lead objects, it would be of benefit to clean and conserve the potentially Bronze Age object (SF 71), the possible curse tablet (SF 469), and the two medieval cloth seals (SFs 467, 468).

Potential

Copper alloy

A.5.43 It is clear that many of the copper alloy finds have the potential to further inform the dating and interpretation of this complex palimpsest site. The small group of Bronze Age artefacts is of interest, although only one of the objects is likely to be in its primary place of deposition. This is a period when, throughout East Anglia (Brown and Murphy 1997), potential settlement evidence and its associated finds, is not particularly well-known and markedly patchy, although in the north of the region Fen-edge deposition of metalwork is a well-attested phenomenon (*ibid*).

A.5.44 Although Late Iron Age and Romano-British material is well known throughout East Anglia, and numerous comparanda can be provided for most of the objects recovered, there remains further potential for study. The coins have an obvious potential to refine dating on the site, as do the brooches, and many of the other less precisely objects serve to reinforce dating provided from other sources. In addition the Late Iron Age coins, and selected other objects will contribute to an understanding of local and wider contacts in the period immediately prior to the arrival of Rome. The Romano-British assemblage comes mainly from ditch fills. It is perhaps of interest that it is almost completely confined to coins and personal items from clothing or adornment. This apparent concentration could add to the further interpretation of activity on the site.

A.5.45 The few early medieval objects are from potentially disturbed contexts and can add little to the interpretation of the site except to confirm the presence of some immediately post-Roman activity.

A.5.46 It would be unrealistic to suggest that the later medieval and post-medieval material can contribute significantly to the further analysis of the site, except for general corroboration of the other sources of dating. The association of several of the finds with a late trackway is of possible significance, and the coins will contribute to a refinement of the dating of the later periods of activity.

A.5.47 Taken as a group it can be stated that limited further analysis will contribute to the dating, interpretation, and understanding of the development of the site and to a lesser extent, aid in an illustration of changes through time.

Ironwork and lead objects

A.5.48 The ironwork and lead objects have very little potential for further analysis. There is effectively no potential to contribute to any refinement of dating on the site, except in assessing the stratigraphic integrity of individual contexts. Both will, however, contribute marginally to understanding the nature of activity and potential structures on the site, primarily in the Roman period. The potentially Bronze Age lead object (SF 71) is a rarity, and thus of intrinsic interest, but beyond a literature search for potential parallels, will not sustain further research.

Recommendations for further work

A.5.49 In addition to the conservation, archival catalogue entries should be completed, an illustrated report prepared for inclusion into any proposed publication, and some contribution be made to the incorporation of comment on the relevant classes of finds into the main stratigraphic text.

Material	Task	Time required/ no. of objects
Copper alloy	Completion of conservation and cleaning	30-40 small objects, mainly coins
	Complete archive catalogue entries	3 days
	Research local and regional comparanda	2 days
	Select items for illustration and liaise with illustrator	0.5 day
	Write brief report for inclusion in publication	3 days
Ironwork	X-ray all relevant objects	
	Completion of conservation and cleaning	? six objects?
	Complete archive catalogue entries	2.5 days
	Research local and regional comparanda	0.5 day
	Select items for illustration and liaise with illustrator	1 hour
	Write brief report for inclusion in publication	0.5 day
Lead	Completion of conservation and cleaning	4 small objects
	Complete archive catalogue entries	0.5 day
	Research local and regional comparanda	0.5 day
	Select items for illustration and liaise with illustrator	1 hour
	Write brief report for inclusion in publication	0.5 day
Silver	Complete archive catalogue entries	0.25 day
	Research local and regional comparanda for parallels finger ring	0.25 day
	Select items for illustration and liaise with illustrator	1 hour
	Write brief report for inclusion in publication	0.25 day

Table 64: Metalwork task list

A.6 Industrial Residues

By Peter Boardman

Summary and Quantification

A.6.1 A total of 31g of industrial residues was recovered during the excavation. As well as material recovered via hand excavation, residues in bulk samples were also recorded. These were separated and analysed under microscope. The residues recovered consisted of vitrified non-magnetic slag (Table 65).

Results

Context No.	Feature No.	Feature type	Area	Material	Description	Interpretation	Total weight (kg)	Period
1440	**995**	ditch	E	coal	Small fragment	fuel	<0.001	MBA
1779	-	layer	E	coal	Small fragment	fuel	<0.001	?
2589	**1378**	ditch	E	slag	Small, light with vitrification attachment	Ambiguous ferrous slag	0.007	Early Ro
3593	**3595**	pit	E	cinder	Light weight, fragmentary pieces.	High temperature process	0.003	LIA
5418	-	layer	B	coal	Partially combusted fragment	fuel	0.010	Post-Med
5418	-	layer	B	Vitrified clay	Flat, slightly glass like surface	Unknown industrial process residue	0.001	Post-Med
5735	**4206**	ditch	B	cinder	Lightweight small fragment	Unknown industrial process	0.001	MBA
11619	**11620**	pit	C	cinder	Lightweight small fragment	Unknown industrial process	0.001	MIA
11649	**11650**	ditch	C	Partially combusted fuel	Fragment with iron pan attachment	Unknown industrial process residue	0.002	Early Ro
12104	**4209**	ditch	B	cinder	Lightweight small fragment	Unknown industrial process residue	0.004	MBA

Table 65: Quantification of industrial residues

Discussion

A.6.2 The amount of residue recovered from the site is very small compared to the area of excavation and the number and variation of features present on the site. This is, however, unsurprising as the majority of the features on site date between the Middle Bronze Age and the Early Roman period. The geology of Cambridgeshire means that there are very few naturally occurring metallic ore deposits within the local environs of Clay Farm, Trumpington. This would limit the occurrence of any process involving metal whether it be smelting or smithing. The small weights of material recovered for the most part can be put down to contamination through bioturbation and modern ground interference, such as ploughing and field drains.

A.6.3 Much of the material recovered is non-metallic in nature and the result of non-specific industrial processes. The fragments of cinder and non-combusted fuels, such as wood from ditch **11650** and coal from contexts 1440, 1779 and 5418 could be from any process involving fire and heat. Cinder is a by-product of any process involving consistent heating, being a mixture of semi-combusted fuel and compressed ash material.

Statement of Research Potential

A.6.4 This small assemblage of metalworking debris is of limited potential and can probably be described as a typical background spread of slag associated with many sites where both iron production and manipulation has occurred in the near vicinity.

Further Work and Methods Statement

A.6.5 No further work is required.

A.7 Worked Bone

By Chris Howard-Davis

Summary and Quantification

A.7.1 A total of 34 fragments of worked bone and antler, representing probably 20 objects, were submitted for assessment. All were from stratified contexts and, with the exception of an antler handle from natural feature **13394** (fill 13395) in Area D, were in very good condition.

Methodology

A.7.2 Every fragment of worked bone was examined, assigned a preliminary identification and, where possible, date range. An outline database was created, using Microsoft Access 2000 format, and the data recorded (context, small finds number, material, category, type, quantity, condition, completeness, maximum dimensions, outline identification, brief description, and broad date) serve as the basis for the comments below. The state of preservation (condition) was assessed on a broad four point system (namely poor, fair, good, excellent).

Date range and distribution

A.7.3 The assemblage included a range of objects dating from probably the Middle Bronze Age to the Romano-British period, reflecting the long period of activity attested stratigraphically. Bone finds were concentrated in Areas A and B, but also occurred in Area C cremation burial **10909**, with Areas D and E producing only two fragments and one fragment respectively.

Evaluation

A.7.4 Most bone artefact forms, being very simple, are effectively undateable and are dated by their stratigraphic context rather than *vice versa*.

A.7.5 Six bone objects were recovered from Area A, primarily from features dated Early Iron Age, four of them from large pit **5898**. The latter comprised a bone point from fill 5911 (SF 262), a carefully-made double-ended point (fill 5910; SF 264), possibly a pin-beater, made from a fragment of longbone, a flat sub-oval spatulate object resembling a tie-on label, with a small hole in one end (fill 5962; SF 266), and a needle (fill 6139; SF 271). Similar spatulate objects are known from Late Bronze Age and Iron Age contexts on a number of sites, and Cunliffe (1974, fig 14.1) has suggested a use in the preparation of skins and leather. The presence of a pin beater and a carefully-made needle from the same feature would seem to corroborate the working of leather and textiles. A substantial antler handle came from a fill (5971; SF 289) of ditch **5826**, the presence of four or five small holes drilled at the blade edge must suggest some repair or reinforcement. A single antler handle came from Middle Iron Age pit **6276** (fill 6280; SF 275) and would appear to have been intended for a fairly large blade.

A.7.6 Area B produced eight bone objects, all of them from Middle Bronze Age ditch fill group 4206 (Settlement 1). Simple bone points, perhaps awls, are relatively common finds, their simplicity making them a long-lived type. Two came from context 5735 (SF 286 and 287), and a third from context 12088 (SF 454). Two perforated pins from contexts 5144 (SF 172) and 12105 (SF 453), possibly made from pig fibulae, are also relatively common types. A well-made and almost complete bone point, cut from the shaft of a

small longbone, came from context 5183. A well-known and very long-lived type, there is debate as to what purpose they served, with suggestions including arrowheads, spearheads, or more general piercing tools. Like many examples, this one is well polished, and as is usual (MacGregor 1985, 174), has wear suggesting a thrusting movement in use, rather than twisting. A second object from the same context bears cut-marks but appears otherwise unmodified, suggesting that it could reflect food debris rather than a specific object. One final bone object came from ditch fill 4206. A small carefully-made spatulate object (context 5738; SF 205), it has not yet been identified with certainty, but bears a generic resemblance to the spatulate object from Area A.

A.7.7 In Area C, two bone objects were associated with Late Iron Age cremation burial **10909**. A fragmentary and heavily calcined object, probably a toggle or cheekpiece (SF 335.3), was presumably amongst the pyre goods, whilst a pin from the same context (SF 341) is not burned, and thus was not amongst the pyre goods. The pin has a conical head with collar beneath, and a single ring-and-dot motif on the top. The shaft narrows markedly over a short distance, suggesting that it was a relatively short example. The burned item, which has been provisionally identified as a bone toggle or cheekpiece, is a common Late Iron Age or Roman type, with several known, for instance, from Late Iron Age or Early Roman contexts at Dragonby (Taylor and May 1996, fig 14.3) and further afield, at Meare in Somerset (Coles 1987, fig 3.26). It is, however, badly distorted, and could be a hinge element, although its intricate decoration and apparently rectangular perforations, could make this a less likely identification.

A.7.8 A poorly preserved antler handle came from a natural deposit (**13394**, fill 13395) in Area D. Fragments of a Romano-British hair or clothes pin came from Early Roman posthole **13229** (fill 13230). Its form appears in Colchester in pre-Flavian contexts and probably persists to c AD200 (Crummy 1983, 21).

A.7.9 Middle Bronze Age upper ditch fill 2376 (Settlement 3) produced a well preserved point (context 2471; SF 128), similar to that from Area B.

Conservation

A.7.10 The finds are well packed and in general require no further conservation.

Potential

A.7.11 The worked finds have only limited potential to further inform the dating of the site. They do, however, have some potential to contribute to the interpretation of activity within the successive Bronze Age and Iron Age occupations of the site, and should be considered in conjunction with other contemporary finds from the site. It is particularly important that the bonework from cremation burial **10909** be discussed alongside other finds from the burial casket.

Proposed further work

A.7.12 Archival catalogue entries should be completed, and a brief illustrated report prepared for inclusion into any proposed publication.

Complete archive catalogue entries	1 day
Research local and regional comparanda	1 day
Select items for illustration and liaise with illustrator	0.25 day
Write brief report for inclusion in publication	1 day

Table 66: Worked bone task list

A.8 Worked Stone

By Ruth Shaffrey

Summary and Quantification

A.8.1 A total of 59 worked stone objects were retained; these are described by general phase below.

Methodology

A.8.2 The stone was examined with the aid of a x10 magnification hand lens.

Description - Bronze Age

A.8.3 A total of eleven items of worked stone were recovered from Middle – Late Bronze Age contexts (Table 67). One of these is of unknown function, but the others are all either saddle querns (6) or rubbers (4) and thus associated with food production. At least two of the rubbers are also heat cracked (SF 60 and 183), suggesting they were used for cooking; their possible rubbed surfaces could be incidental. One of the rubbers (2380, ditch **1982**) is of an unusually fine material, possibly indicating a different function but the other objects are of similar types of quartzitic sandstone. All the worked stone from Bronze Age contexts is indicative of occupation.

Context	Feature No.	Area	SF No	Descrip.	Notes	Size	Lithology	Period
895	Pit **894** (Group **824**)	E	512	Saddle quern fragment	Shaped from a boulder. Grinding surface is very slightly concave and worn smooth. Edges are straight and base is curved and convex	Measures 50mm thick x >180 x >100mm	Sarsen	Middle – Late Bronze Age
994	Ditch **995**	E	60	Possible rubber	Heat cracked pebble with one smooth surface. Could be natural	Measures	sarsen	Middle – Late Bronze Age
1262	Pit **1263**	E	55	Saddle quern	Pecked sides, rough base not pecked. Grinding surface is worn smooth - very smooth around the edges with longitudinal wear marks.	Measures 340 x 240 x 67mm thick	Sandstone, micaceous and quartzitic	Middle – Late Bronze Age
2334	Ditch **1982**	E	123	Possible saddle quern / rubber fragment	Cobble with, convex face, smooth, possibly pecked. Other face is pecked and worn suggesting use as saddle quern, although no original edges survive	Measures approx 50mm thick	Sarsen	Middle – Late Bronze Age
2380	Ditch **1982**	E		Smoothed stone	Slab shaped stone with both faces worn, but one more than the other. It is a fine material so unusual, possibly indicating a different function	Measures 18mm thick	Fine grained quartz sandstone	Middle – Late Bronze Age
2469	Ditch **2376**	E		Worked stone	Fragment with one smoothed surface, function unknown	Measures 27mm thick	pale pink quartzitic sandstone	Middle – Late Bronze Age

Context	Feature No.	Area	SF No	Descrip.	Notes	Size	Lithology	Period
2471	Ditch **1982**	E	129	Possible saddle quern	Fragment with worn faces and with one slightly finely pecked surface. Possibly saddle quern	Measurements are indeterminate	Quartzite	Middle – Late Bronze Age
4816	Ditch **4560**	B	183	Possible rubber	Heat cracked pebble with one smooth surface. Could be natural	Measures	sarsen	Middle – Late Bronze Age
4993	Ditch **4461**	B	168	large saddle quern	Concave in both directions. Not very worn. Pecked upper surface, underneath looks like a boulder	Measures >200mm long x 400mm wide x 95mm thick	fine to medium grained sandstone	Middle – Late Bronze Age
11055	Ditch **10942**	C	339	Possible saddle quern	One smooth worn face, quite concave but rest of stone is an odd shape for a saddle quern. Possibly it is a boulder that has been used		Possible Greensand	Middle – Late Bronze Age
13045	Pit **13044**	D	422	Rubber	Cobble, damaged on one side and blackened. Worn very smooth, almost polished on one face through use as a rubber (for use with a saddle quern)	Measures 95 x 112 x 46mm	Fine grained quartz sandstone	Middle – Late Bronze Age

Table 67: Bronze Age Worked Stone

Description - Iron Age

A.8.4 Twelve objects of worked stone were recovered from Iron Age contexts (Table 68). These include four saddle querns, one each from the Early and Late Iron Age and two from Middle Iron Age features. There are also five rotary quern fragments, all from Late Iron Age features including one of puddingstone as well as fragments of lava from ditch **1291** (fill 1607). Three other objects include two whetstones and one block of building stone (probably Bath stone) - this block was recovered from a pit provisionally dated to the Middle Iron Age so its position in the feature will need closer investigation.

A.8.5 The artefacts recovered from Iron Age contexts represent the tools of food production and tool maintenance and as such are indicative of settlement and domestic occupation. The exploited materials are generally in keeping with what is known of the region, however there are unusually early dates of deposition associated with the lava (pre-Roman lava is rare), the Millstone Grit (typically Roman) and Hertfordshire Puddingstone (typically 1st century AD). It will be very interesting to investigate how securely dated the quern fragments are as they have the potential to contribute to our understanding of quern production and use in the region.

Context	Feature No.	Area	SF No	Descrip.	Notes	Size	Lithology	Period
316	Ditch **317**	E	509	Whetstone fragment	Rectangular cross section. Even wear all over	Measures >40 x 40 x 20mm	Medium grained reddish grey sandstone	LIA
343	Pit **339**	E	33	Lower rotary quern fragment	In two fragments. Part of socket measuring 23mm diameter x 24mm deep. Heavily blackened	Measures 275mm diameter x 50m max thickness	Cream micaceous sandstone, possibly sarsen	LIA

Context	Feature No.	Area	SF No	Descrip.	Notes	Size	Lithology	Period
1607	Ditch **1291**	E		Probable rotary quern fragments	Approx 50 very friable weathered fragments	Measurements are indeterminate	Lava	LIA
1675	Ditch **1633**	E		Lower rotary quern fragment	Burnt and blackened on base. Worn into concentric patterns and slightly concave plus worn smooth around the circumference	Measures >300mm diameter x 32mm thick at edge	MG	LIA
2655	Ditch **1435**	E	507	Lower beehive rotary quern	Almost flat grinding surface with part of circular socket measuring 38mm deep. The edges are missing and it is not clear if they were deliberately removed	Measures 97mm max thickness x approximately 260mm diameter	Puddingstone (HPS)	LIA
3335	Pit **3330**	E	138	Saddle quern, unformed	Boulder worn into concave grinding surface, prepared by pecking. Some burning - greyed and broken along one edge	Measures 300 x 260 x 80mm thick	Grey quartzitic sandstone, slightly micaceous	LIA
3601	Ditch **3547**	E	505	Upper rotary quern fragment	Flat topped type, neatly pecked all over. Centre missing or just touched by fragment	Measures >200mm diameter	Possible MG	LIA
6412	Hearth **6411**	A	288	Probable saddle quern fragment	No edges but flat pecked and worn surface	Measures 57mm thickness	Fine grained pale brown sandstone	EIA
10299	Fill of pit **10292**	C		Probable building stone	With one flat tooled surface, other surfaces are damaged	Measurements are indeterminate	Shelly oolitic limestone, probably Bath	MIA
10430	Ditch **10455**	C	460	Probable saddle quern fragment	Small fragment with flat grinding surface and curved edges.	Measures >90mm thick	fine grained sandstone	MIA
10982	Ditch **10812**	C	311	Quern fragment, possibly saddle quern	Pecked flat grinding surface. Edge damaged but does not look circular. Sloping down to flattish base. Burnt	Measures 60mm thick	Fine grained grey micaceous sandstone	MIA
11801	Ditch **11588**	C	377	Complete primary whetstone	Oval cross section, evenly worn all over. Quite coarse lithology for a whetstone	Measures 108 x 24 x 14mm thick	Greensand	MIA

Table 68: Iron Age Worked Stone

Description - Roman

A.8.6 The majority of worked stone objects from Clay Farm (36 items) were recovered from Early Roman contexts and of these, 28 are rotary quern fragments (see Tables 69 and 70). Old Red Sandstone and Millstone Grit are represented in roughly equal numbers and far outweigh the use of other materials, although Lava has survived only as small weathered fragments, so its quantities should be treated with caution. Puddingstone is usually represented only in single or small numbers of querns, so the use here for two querns is typical.

A.8.7 One of the more interesting aspects of the assemblage is the possibility that up to eight millstones might be represented. Seven fragments could be from millstones but are

difficult to identify absolutely, while one is definitely from a millstone, albeit a small one (SF 118, 2295, fill of pit **2294**). Seven of the possible millstones as well as the definite example are of Millstone Grit, whilst one is possibly of Old Red Sandstone.

A.8.8 Five processors were also found. Four are pebbles /cobbles that have been used as rubbers and the fifth is a slab, worn on one side, that could have been used as a rubber or in a floor (fill 801, ditch **702**). One possible whetstone (fill 1096, waterhole **928**) is the only evidence for tool sharpening. For such a large excavation, it is intriguing that other tools, in particular whetstones, spindle whorls and weights are so limited in number and their absence may be as informative as the presence of other things.

Lithology	Total
ORS	9
Possible ORS	1
Millstone Grit (MG)	7
Possible MG	2
Millstone Grit (MG) or local sandstone	1
Lava	4
HPS (puddingstone)	2
Other	2
Grand Total	**28**

Table 69: Rotary quern lithology types

Ctxt	Feature No.	Area	SF NO	Descrip	Notes	Size	Lithology	Period
0	UNP	C	406	Lower rotary quern quarter	Centre is missing. Base is roughly worked into curved convex shape, grinding surface and edges are neatly pecked. Burnt and blackened towards centre of grinding surface	Measures approx 400mm diameter x 78mm max thickness	Old Red Sandstone	UNP
38	Surface find from enclosure ditch	E		Possible quern fragment	Small fragment only with part of worked face surviving. Quern material	Measurements are indeterminate	Medium to coarse grained greensand	ER possibly
42	Surface find from medieval ditch	E		Probable rotary quern fragments	Approx 20 very friable weathered fragments	Measurements are indeterminate	Lava	Med
324	Ditch **305**	E	508	Small upper quern fragment	With roughly parallel faces - grinding surface is pecked and slightly concave. No edges or centre remain	Measures 33mm max thickness	Millstone Grit (MG)	ER
595	Ditch **228**	F	8	Lower rotary quern fragment	Base is damaged and only small section of edge survives. Centre is missing. Grinding surface and edges are pecked, edges are vertical and straight	Measures > 53mm thick	Old Red Sandstone	ER
931	Waterhole **932**	E		Possible quern fragment	Flat pecked surface with some possible rotary wear	Measures 40mm thick	Possibly MG	ER

Ctxt	Feature No.	Area	SF NO	Descrip	Notes	Size	Lithology	Period
1540	Pit **1538**	E	142	Lower rotary quern fragment	Lozenge shaped, tapered in thickness to edge. Fully perforated biconical shaped eye measuring 30mm diameter. Burnt and blackened on base.	Measures 380mm diameter x 52mm thick	Old Red Sandstone	ER
1540	Pit **1538**	E	513	Lower rotary quern fragment	No edges. Fully perforated with narrow biconical eye measuring 12mm at narrowest point.	Measures 54mm thick x >360mm diameter	Old Red Sandstone	ER
1645	Layer /spread fill of **1685**	E	511	Upper quern fragment or possible millstone	Pecked all over. Thick quern with slightly concave curved grinding surface. Thick kerb measuring 40mm wide x approx 15mm high. Grinding surface is concave	Measures 95mm thick on kerb - need to measure diameter but > 300	Millstone Grit (MG)	ER
2189	Ditch **2190**	E	117	Upper rotary quern quarter	Flat-topped type with straight vertical edges, flat to and concave curved grinding surface. Tapered to centre. Neatly pecked all over. Burnt	Measures approx 330mm diameter x 53mm thick	Old Red Sandstone	ER
2295	Pit **2294**	E	118	Upper millstone	With keyhole shaped eye. Kerb around circumference measures 60mm wide. The grinding surface is worn into a slight rim indicating it was paired with a smaller stone	Measures 600mm diameter x 90mm thick	Millstone Grit (MG)	ER
2591	Pit **2592**	E	463	Possible millstone or rotary quern	No edges and no centre but thick with flat faces. Deep irregular spaced pecking on one side and iron residues on the other face and over the broken edge so presumably occurred while the stone was in the ground	Measures 65mm thick	Millstone Grit (MG)	ER
2647	Waterhole **2652**	E	506	Upper beehive rotary quern fragments	In several fragments including two larger adjoining pieces. Central fragments with part of steeply sloping conical hopper.	Measures >120mm thick	Puddingstone	ER
3525	Pit **3522**	E		Possible quern fragment	one worn face with some slight grooving although worn	Measures 33mm thick	Poss MG (Millstone Grit)	ER
3624	Pit **3630**	E	139	Rotary quern fragment	Part of pecked curved outer surface. Grinding surface does not survive	Measurements are indeterminate	HPS (puddingstone)	ER
4326	Ditch **4024**	B		Rotary quern fragments	Two larger and 20 or so very small rounded fragments	Measurements are indeterminate	Lava	ER
11567	Ditch **11556**	C	361	Possible millstone fragment	Spaced pecking on one face and concentric grooving on the other face, probably deliberate. Burnt and blackened on grooved face.	Measures 55mm thick x unknown diameter	Possible Old Red Sandstone	ER
11617	Ditch **11588**	C	366	Rotary quern upper stone	Wide eye - only a fragment of the centre survives but the angle suggests it is wide. Pecked all over and worn but not smooth on grinding surface	Measures approx 360mm diameter x 42mm thick	Old Red Sandstone	ER

Ctxt	Feature No.	Area	SF NO	Descrip	Notes	Size	Lithology	Period
12211	Ditch **11996**	D	456	Upper quern or millstone fragment	parallel faces, top being slightly convex, curved an worn smooth, probably from reuse and grinding surface being grooved with straight grooves	Measures 34mm thick, probably max	Millstone Grit (MG)	LR
12592	Ditch **12590**	D	464	Lower rotary quern	Socket measuring 28mm deep that has been reworked from the other side but this face is rough and slightly convex. Grinding surface is convex (straight).	Measures approx 340mm diameter x 87mm thick	Old Red Sandstone	ER
12669	Ditch **12625**	D	413	Probable quern fragment	Chunk with small section of flat pecked surface, probably from quern, although no edges or centre survive. Burnt and blackened	Measurements are indeterminate	Fine grained sandstone, burnt	ER
12778	Ditch **12777**	D	416	Possible millstone or rotary quern fragment	Worn all over but possible part of millstone edges which are straight and vertical and worn plus curved like a millstone.	Measurements indeterminate	Millstone Grit (MG) or local sandstone	ER
12786	Ditch **12590**	D	457	Possible millstone, upper stone	Pecked sides and spaced pecking on top. Grinding surface has wide deep concentric grooves, probably deliberate	Measures >340mm diameter x 46mm thick	Millstone Grit (MG)	ER
12850	Ditch **12590**	D		Probable rotary quern fragments	approx 10 very friable weathered fragments	Measurements are indeterminate	Lava	ER
12899	Pit **12896**	D	417	Upper rotary quern fragment	Very neat quern with fine pecking all over. Flat topped type with straight vertical edges and slightly curved concave grinding surface that is worn, although not smooth. Centre is damaged	Measures approx 320mm diameter x 38mm max thickness	Old Red Sandstone	ER
13012	Ditch **12936**	D		Probable rotary quern fragments	100+ very friable weathered fragments	Measurements are indeterminate	Lava	ER
13252	Ditch **13126**	D	458	Upper rotary quern fragment	Small fragment with part of wide circular eye but no edges survive. Eye is an estimated 60mm diameter	Measures 46mm thick	Old Red Sandstone	ER
13373	Ditch **13126**	D	461	Possible millstone, lower	Pecked grinding surface with rotary marks. Part of possible worked edge	Measures 50mm max thickness	Millstone Grit (MG)	ER

Table 70: Roman rotary querns and millstones

Ctxt	Feature No.	Area	SF NO	Descrip	Notes	Size	Lithology	Period
0	UNSTRAT		21	Worn stone	Of indeterminate function	Measurements are indeterminate	lava (not of quern type)	UNP
801	Ditch 7**02**	E		Possible processor	Thin slab shaped stone, smooth on one side, possibly through use as a rubber, whetstone flooring or other processor	Measures 13mm thick	Fine grained quartz sandstone	ER
1096	Waterhole **928**	E		Possible whetstone	Fragment with opposing faces worn smooth	Measures 18mm thick	Fine grained quartz sandstone	ER
1312	Ditch 729	E		Possible rubber	Small pebble, slightly worn on one flat face, poss through use as a rubber although not certain	Measures 54 x 58 x 21	Fine grained quartz sandstone	ER
1430	Pit **1432**	E		Possible rubber	Small flat cobble, worn all over but more so on one side. Could possibly have been used as a rubber	Measures 130 x 95 x 27mm	Fine grained quartz sandstone	ER
12472	Posthole **12471**	C		Probable saddle quern or rubber	Large cobble with one original rounded face and one almost perfectly flat face. This is smoothed and could have been used as either a saddle quern or rubber	Measures 215 x 120 x 37mm	Fine grained quartz sandstone	ER
13230	Posthole **13229**	D	459	Worked	Three fragments, probably from same object with flat possibly pecked but worn face. Other faces are damaged. Could be natural.	Measures		ER
13252	Ditch **13126**	D		Rubber	Flat cobble, more worn on one face than the other. Not as obviously a rubber as SF422 but reasonably likely	Measures 95 x 100 x 98mm	Fine grained quartz sandstone	ER

Table 71: Other worked or utilised stone

Statement of Potential

A.8.9 The assemblage of worked stone has good potential to add to our understanding of activity at Clay Farm. The material is mostly indicative of settlement, in particular of domestic food production, in the form of querns and other, probably domestic tasks, in the form of rubbers. Looking at where the querns were found will help us interpret the function of individual buildings. In addition, the stone types recovered can help place the site in its local and regional context by looking at how similar or different the tools are to other sites. The presence of millstones also has the potential to inform about more centralised grain processing and whether this occurred on site.

A.8.10 Understanding precisely which types of stone were used here will contribute to regional and national schemes of research and a growing body of data about the manufacture, distribution, and dating of different quern sources. Assemblages of 20 or more querns are fairly infrequent and thus of particular value. This region also represents the cross-over area between two of the major quern producers in Roman Britain - the south Wales source of Old Red Sandstone and the Midlands source of Millstone Grit. Understanding the interaction of these two materials is imperative to our understanding of quern distribution. This assemblage is also useful for looking at quern production and

development because it lacks later Roman stratigraphy and so gives a clear representation of Early Roman quern use.

Recommendations for further work

A.8.11 The assemblage has been briefly recorded and some detail will need to be studied more carefully during the full analysis stage. Possible millstones will need to be very carefully recorded, especially in terms of dimensions and use wear. The use wear on the rubbers will also need closer scrutiny.

A.8.12 In order to fulfil the potential of the assemblage, further work will start with identifying the less distinctive stone types more closely. Millstone Grit, Old Red Sandstone and local sandstones are sometimes very hard to distinguish from one another and this is true of a number of specimens from Clay Farm. Thin section work would help with this study and it is recommended that five items be thin sectioned (Table 72). There are a number of known sources of both Millstone Grit and Old Red Sandstone. For the latter there is a published reference of thin sections for comparison which will help determine the sources of querns from Clay Farm (Shaffrey 2006). There is no similar published work for Millstone Grit, and work on those querns is focussed on the specimens that could be Millstone Grit or another type of stone.

SF No	Description	Lithology	Reason for thin section
505	Upper rotary quern fragment	Medium grained well sorted feldspathic sandstone	Possible Millstone Grit - of an unusual type which cannot be identified by eye alone
168	large saddle quern	Fine to medium grained, moderately sorted sandstone unsure of type	Of an unknown stone type. Thin section would help identify mineral components and help pin point source
361	Possible millstone fragment	Possible ORS	Possible Old Red Sandstone - but needs microscopic study to be sure
416	Possible millstone or rotary quern fragment	Millstone Grit (MG) or local sandstone	Possible Millstone Grit in which case of an unusual type or could be a local sandstone. A thin section would enable closer study of the minerals and help identify a source
117	Upper rotary quern quarter	ORS	Old Red Sandstone of a type that cannot be tied to source by hand specimen examination. There are several known sources of ORS querns and it would be useful to know which this is from

Table 72: Worked stone suitable for thin sectioning

A.8.13 Following analysis and full recording, the report will describe all the stone objects and discuss the types of stone used, where they have come from and how this compares to other sites locally. It will then discuss what the querns (and millstones) and other objects tell us about activity at Clay Farm and status / trade links.

A.8.14 The following items (Table 73) have been selected as appropriate for illustration. These can be expected to take approximately 3 days to illustrate.

Context	SF NO	Description	Illustration
343	33	Lower rotary quern fragment	Poss
4993	168	large saddle quern	Poss
11801	377	Complete primary whetstone	Poss
12786	457	Possible millstone, upper stone	Poss
3335	138	Saddle quern, unformed	Poss
1262	55	Saddle quern	Poss
2189	117	Upper rotary quern quarter	Poss
1540	142	Lower rotary quern fragment	Poss
13045	422	Rubber	Poss
10982	311	Quern fragment, possibly saddle quern	Poss
1540	142	Lower rotary quern fragment	Yes
2380		Smoothed stone	Yes
1645	511	Upper quern fragment or possible millstone	Yes
2295	118	Upper millstone	Yes
12592	464	Lower rotary quern	Yes

Table 73: Items of worked stone suitable for illustration

A.9 Fired Clay and CBM

By Tom Phillips

Introduction

A.9.1 An assemblage of fired clay and CBM (Ceramic Building Material) weighing 83378g was collected from the excavation. It was retrieved from a range of features, including ditches, pits, gullies, postholes, hearths, a kiln and an oven.

A.9.2 Fired clay (once removed from its primary source of use) is not presently closely datable. It can be analysed, however, by the period features from which it was recovered. The features varied in date between the Middle Bronze Age and the Early Roman period, with several pieces coming from post-medieval and modern contexts. This is a very basic assessment which presents the fired clay by period and identifies any obvious artefacts or interesting assemblages within each period.

Middle – Late Bronze Age

A.9.3 The Middle Bronze Age assemblage weighed a total of 2210g. The feature with the largest single assemblage was the Settlement 1 upper ditch fill (4206, ditch **4209**) in Area A, 1156g by weight. It consisted mainly of pale pinkish grey fragments, some of those from context 5144 were large and had a definite flat surface. A fragment of loom weight (SF 171) also came from this feature. Other Middle Bronze Age fired clay includes a large fragment of daub like material with a withie mark from pit **10012** (fill 10018; SF 195) in the north-east corner of Area C. Another fragment of daub came from ditch **925** (fill 1847) in Area E. The Middle Bronze Age assemblage is summarised in Table 74.

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
751	796	Area E	ditch	447	Fired Clay	118	Includes artefact
882	883	Area E	ditch	821	CBM	65	Tile?
1654	1656	Area E	ditch	995	Fired Clay	2	
1754	1761	Area E	ditch	925	Fired Clay	3	
1759	1761	Area E	ditch	925	Fired Clay	7	
1847	1854	Area E	ditch	925	Daub	107	
2469	2473	Area E	ditch	2376	Fired Clay	33	
2844	2843	Area E	ditch	1057	Fired Clay	6	
3290	3296	Area E	ditch	1054	Fired Clay	9	
4331	4330	Area B	ditch	4217	Fired Clay	27	
4467	4467	Area B	pit	0	Fired Clay	5	
4504	4408	Area B	ditch	4217	Fired Clay	34	
4830	4828	Area B	ditch	4828	Fired Clay	10	
4989	4798	Area B	ditch	4206	Fired Clay	41	
5105	4359	Area B	ditch	4206	Fired Clay	4	
5143	4798	Area B	ditch	4206	Fired Clay	79	
5144	4798	Area B	ditch	4206	Fired Clay	848	
5153	5148	Area B	ditch	4206	Fired Clay	70	Loom weight - SF 171
5154	4798	Area B	ditch	4206	Fired Clay	63	
5183	4798	Area B	ditch	4206	Fired Clay	5	
5509	5504	Area B	ditch	5414	CBM	120	

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
5735	0	Area B	ditch	4206	Fired Clay	2	
5992	5991	Area A	ditch	5991	Fired Clay	51	
10018	10012	Area C	pit	0	Daub	260	Daub? - SF 195
12009	12007	Area C	ditch	12005	CBM	5	
12102	0	Area B	ditch	4206		11	
12155	0	Area B	ditch	4206		12	
12156	0	Area B	ditch	4206		21	
13227	13293	Area D	waterhole	13276	CBM	38	
Total						*2210*	

Table 74: The Middle – Late Bronze Age fired clay and CBM

Early Iron Age

A.9.4 In all, 5391g of fired clay and CBM was retrieved from Early Iron Age features, all of it in Area A. The majority of this (5127g) came from just three features; large pit **5898** and hearths **6221** and **6361**. Fill 5961 in pit **5898** contained several fragments of a ceramic thatch weight, which would have been attached to something, possibly rope, to help keep roofing thatch in place. The Early Iron Age assemblage is summarised in Table 75.

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
5803	5804	Area A	post hole	5804	Fired Clay	210	
5883	5884	Area A	post hole	5882	Fired Clay	29	
5911	5924	Area A	pit / waterhole	5898	Fired Clay	13	
5913	5924	Area A	pit / waterhole	5898	Fired Clay	163	
5913	5924	Area A	pit / waterhole	5898	Fired Clay	91	
5925	5926	Area A	post hole	0	Fired Clay	25	
5961	5956	Area A	watering hole	5898	Fired Clay	266	Ceramic thatch weight
6139	5924	Area A	pit / waterhole	5898	Fired Clay	867	
6140	5924	Area A	pit / waterhole	5898	Fired Clay	537	
6220	6221	Area A	pit	0	Fired Clay	800	SF 272
6359	6361	Area A	hearth	0	Fired Clay	2390	Top layer of hearth
Total						*5391*	

Table 75: The Early Iron Age fired clay and CBM

Middle Iron Age

A.9.5 A total of 14310g of fired clay and CBM was retrieved from Middle Iron Age features, all in Area C. The majority of this (10060g) came from a single feature, oven **11175**, which consisted of *in situ* fired clay in the base of an oval pit. The exact function of the oven is unknown at this stage. The Middle Iron Age assemblage is summarised in Table 76.

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight	Comments
10175	10157	Area C	pit	10155	CBM	284	
10175	10157	Area C	pit	10155	Fired Clay	27	
10218	10216	Area C	pit	10213	Fired Clay	37	
10392	10391	Area C	ditch	10722	Fired Clay	6	
10609	10608	Area C	ditch	10608	Fired Clay	2	
10626	10902	Area C	ditch	10031	Fired Clay	9	

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight	Comments
10731	10729	Area C	pit	10729	CBM	221	
10733	10732	Area C	ditch	10076	Fired Clay	102	?Artefact
10754	10755	Area C	pit	10722	Fired Clay	5	
10810	10812	Area C	ditch	10812	Fired Clay	5	
11174	11175	Area C	oven	11175	Fired Clay	9	
11174	11175	Area C	oven	11175	Fired Clay	18	
11190	11191	Area C	pit	11187	Fired Clay	24	
11241	11239	Area C	ditch	10812	Fired Clay	192	Artefact
11304	0	Area C	hearth	0	Fired Clay	2919	
11349	11348	Area C	pit	0	Fired Clay	1	
11498	11175	Area C	oven	11175	Fired Clay	6944	
11498	11175	Area C	oven	11175	Fired Clay	3089	
11598	11597	Area C	ditch	0	Fired Clay	7	
11663	11665	Area C	ditch	0	Fired Clay	21	
12589	12588	Area C	pit	0	Daub?	388	
Total						*14310*	

Table 76: The Middle Iron Age fired clay and CBM

Late Iron Age

A.9.6 The fired clay and CBM from Late Iron Age features weighed a total of 9632g. The majority came from Areas B and E, with a small amount from Area C. Amongst the most significant Late Iron Age assemblages was 2816g of vitrified clay found in pit **3215** (see below, A.9.7) and 1242g of very fragmented fired clay from a curvilinear gully, possibly a structure, (**1633**) in Area E, found in association with crop processing waste. Fragments of fired clay from pit **3528** in Area E and from ditch **11029** in Area C had withie marks, while parts of a loomweight were found in pit **3330** in Area E. Pit **2513**, also in Area E, contained a large, flat piece of fired clay of unknown function, which was smoother on one side than the other. In addition to those listed in Table 77, there were a further 16 Late Iron Age contexts containing 5g or less.

A.9.7 Pit **3215** in Area E contained 2.816kg of heavily vitrified clay. The material is very light in weight with large and consistent voids. The material has been heated at high temperatures for a consistent period of time. There is no metallic element present within the material. This suggests that it is from a non-metallic process which involved long periods of exposure to high temperature. Pit **3215** measured 1.38m wide, 1.44m in depth and approximately 3.5m in length. Its shape was roughly rectangular with a flat base and straight sides. This shape suggests a recess cut for the building of some form of kiln although there was no evidence of in situ heating. The high temperatures and exposure period during the firing of the pottery within the kiln creates a heavily vitrified clay layer around the inside of the superstructure and the clay pedestals used within the kiln and would contain little or no metallic element, other than that which was naturally occurring in the clay. The large number of fragments and weight of the material recovered from pit **3215** is evidence of this process. The fragmentary nature of the pieces recovered would also suggest that the kiln had been destroyed, whether deliberately or after it had gone out of use.

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
94		Area B		0	Fired Clay	8	
1632	1633	Area E	ditch	1633	Fired Clay	987	

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
1672	1673	Area E	ditch	1633	Fired Clay	57	
1675	1677	Area E	pit	1633	Fired Clay	100	
1676	1677	Area E	pit	1633	Fired Clay	52	
1676	1677	Area E	pit	1633	Fired Clay	9	
1698	1699	Area E	ditch	1633	Fired Clay	24	
1709	1711	Area E	ditch	1633	Fired Clay	13	
1712	1713	Area E	ditch	1713	Fired Clay	6	
1747	1748	Area E	ditch	1713	Fired Clay	202	
1749	1750	Area E	ditch	1255	Fired Clay	73	
1764	1765	Area E	gully	441	Fired Clay	107	Area 3
1871	1870	Area E	ditch	1843	Fired Clay	248	
1874	1875	Area E	ditch	1843	Fired Clay	72	
1891	1892	Area E	ditch	1843	Fired Clay	12	
1958	1959	Area E	ditch	1843	Fired clay	2	Vitrified clay
2022	0	Area E	ditch	1843	Fired Clay	15	
2051	0	Area E		1843	Fired Clay	91	Artefact
2054	0	Area E		1843	Fired Clay	57	
2429	2430	Area E	ditch	2211	Fired Clay	26	
2458	2456	Area E	hearth or posthole	0	Fired Clay	431	
2514	2513	Area E	pit	0	Fired Clay	449	Artefact
2515	2513	Area E	pit	0	Fired Clay	688	
2564	2566	Area E	grave	0	Fired Clay	7	
2867	2868	Area E	ditch	0	Fired Clay	9	
2871	3086	Area E	ditch	0	Fired Clay	88	
2886	2884	Area E	ditch	2884	Fired Clay	11	
3010	3011	Area E	ditch	3005	Fired Clay	209	Artefact
3214	3215	Area E	pit	3215	Fired Clay	2911	Vitrified clay
3243	3258	Area E	waterhole	0	Fired Clay	16	
3340	3330	Area E	pit	0	Fired Clay	237	
3341	3330	Area E	pit	0	Fired Clay	273	Loom weight
3529	3528	Area E	pit	0	Fired Clay	188	Artefact
3593	3595	Area E	pit	0	Fired Clay	48	
3593	3595	Area E	pit	0	CBM	41	
3593	3595	Area E	pit	0	Fired Clay	228	
3593	3595	Area E	pit	0	Fired Clay	91	
3636	3635	Area E	ditch	2733	Fired Clay	26	
3653	3651	Area E	pit	0	Daub	11	
3658	3657	Area E	pit	3655	Fired Clay	6	
3658	3657	Area E	pit	3655	Fired Clay	145	Artefact
4095	4095	Area B	ditch	4022	Fired Clay	152	
4482	4479	Area B	pit	0	Fired Clay	27	
4542	4552	Area B	ditch	4120	Fired Clay	16	
4544	4552	Area B	ditch	4120	Fired Clay	8	
4889	4890	Area B	roundhouse gully	4793	Fired Clay	13	
4893	4894	Area B	roundhouse gully	4793	Fired Clay	8	

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
4983	4984	Area B	ditch	4984	Fired Clay	6	
5006		Area B	occupation buildup?	0	Fired Clay	7	
5007		Area B	occupation/ buildup?	0	Fired Clay	67	
5173	5177	Area B	ditch	5004	Baked Clay	98	
5173	5177	Area B	ditch	5004	Fired Clay	101	
5217	5219	Area B	ditch	4022	Fired Clay	17	
5220	5221	Area B	pit	0	Fired Clay	299	
5226	5227	Area B	ditch	5182	CBM	34	
5238	5240	Area B	ditch	4157	Fired Clay	10	
5265	5266	Area B	ditch	5266	Fired Clay	11	
5315	5304	Area B	ditch	4120	Fired Clay	83	
5343	5344	Area B	ditch	4541	Fired Clay	8	
10629	10633	Area C	ditch	10077	Fired Clay	6	
10806	10807	Area C	ditch	10624	Fired Clay	108	
11293	11281	Area C	ditch	10624	Fired Clay	6	
12572	12571	Area C	ditch	11029	Fired Clay	105	Artefact? Possibly daub?
12575	12571	Area C	ditch	11029	Fired Clay	123	

Table 77: The Late Iron Age fired clay and CBM

Early Roman

A.9.8 In all, 38566g of fired clay and CBM were retrieved from Early Roman features. By weight this is the largest group from a single period. However, 25526g of this consisted of kiln furniture from pottery kiln **2122** in Area E. The kiln included three partial pedestals, a number of kiln bar fragments and a large assemblage of kiln lining. The kiln assemblage is summarised in Table 78.

Context	Cut	Material	Weight (g)	Comments
2227	2122	Fired Clay	22	
2331	2122	Fired Clay	921	Kiln lining
2331	2122	Fired Clay	2079	SF 130 - Pedestal fragment
2332	2122	Fired Clay	210	SF 122 Kiln bar fragment
2332	2122	Fired Clay	256	SF 120 Kiln bar fragment
2332	2122	Fired Clay	641	SF 119 Kiln bar fragment (x2)
2332	2122	Fired Clay	1207	Kiln lining
2341	2122	Fired Clay	6850	SF 127 - Kiln material
2341	2122	Fired Clay	244	SF 126 Kiln bar fragment
2341	2122	Fired Clay	2135	
2341	2122	Fired Clay	465	SF 121 Kiln bar fragment
2341	2122	Fired Clay	142	SF 124 Kiln bar fragment
2341	2122	Fired Clay	156	SF 125 Kiln bar fragment
2543	2122	Fired Clay	174	Kiln lining
2583	2122	Fired Clay	4350	SF 134 - Pedestal fragment
2583	2122	Fired Clay	4850	SF 135 - Pedestal fragment
2583	2122	Fired Clay	824	Lining
Total			*25526*	

*Table 78: Summary of kiln furniture from Early Roman kiln **2122** in Area E*

A.9.9 The remaining Early Roman fired clay consisted mainly of undiagnostic fired clay although there were a number of pieces of CBM, especially from Areas C and D. In addition to those listed in Table 79, there were a further 17 Early Roman contexts containing 10g or less.

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
584	585	Area F	ditch	170	CBM	313	tegulae
684	685	Area F	ditch	568	CBM	1629	Brick and tile
1223	1224	Area E	ditch	1224	Fired Clay	44	
1648	1647	Area E	ditch	0	Fired Clay	16	
1752	1753	Area E	ditch	702	Fired Clay	35	
1795	1793	Area E	pit	0	CBM	84	
1797	2254	Area E	pit	0	Fired Clay	110	
1798	1793	Area E	pit	0	Fired Clay	28	
2069	2067	Area E	tree bowl	0	Fired Clay	220	?artefact
2154	2153	Area E	pit	0	Fired Clay	103	
2154	2153	Area E	pit	0	CBM	35	Tile
2155	2153	Area E	pit	0	Fired Clay	1134	
2155	2153	Area E	pit	0	CBM	50	
2295	2294	Area E	pit	0	Fired Clay	55	
2483	2484	Area E	ditch	2099	Fired Clay	33	
2487	2467	Area E	ditch	2467	CBM	358	
2622	2623	Area E	post hole	0	Fired Clay	14	
2823	2821	Area E	pit	0	Fired Clay	16	
3050	3051	Area E	ditch	1224	Fired clay	52	Vitrified clay
3262	3261	Area E	pit	0	Fired Clay	77	
3624	3630	Area E	pit	0	Fired Clay	61	
3626	3630	Area E	pit	0	Fired Clay	30	
3627	3630	Area E	pit	0	Fired Clay	50	
3629	3630	Area E	pit	0	Fired Clay	14	
4377	4378	Area B	ditch	4213	Fired Clay	138	
11066	11124	Area C	ditch	10029	Fired Clay	88	
11615	11593	Area C	ditch	11588	CBM	365	
11617	11593	Area C	ditch	11588	Fired Clay	473	
11617	11593	Area C	ditch	11588	CBM	118	
11812	11811	Area C	ditch	11811	CBM	55	
11813	11811	Area C	secondary	11811	CBM	355	
11927	11917	Area C	enclosure ditch	11917	CBM	145	
11945	11944	Area C	ditch	11944	CBM	26	
11956	11957	Area C	ditch	11957	Fired Clay	313	Loom weight
11977	11976	Area D	ditch	11976	Fired Clay	16	
11985	11981	Area D	ditch	11981	CBM	54	
12057	12058	Area D	ditch	12058	Fired Clay	44	
12063	12061	Area D	ditch	11996	CBM	874	
12080	12081	Area C	ditch	12081	CBM	54	
12144	12113	Area D	gully	0	CBM	77	
12153	12151	Area D	pit	0	CBM	26	Modern drain

Context	Cut	Trench	Feature Type	Feature No.	Material	Weight (g)	Comments
12170	12167	Area D	ditch	11996	CBM	610	
12211	12198	Area D	ditch	11996	CBM	202	Tile
12217	12191	Area C	enclosure ditch	11811	CBM	261	Tile
12243	12242	Area D	ditch	12242	CBM	311	Tegulae
12271	12272	Area C	ditch	11957	Fired Clay	56	
12395	12394	Area D	post hole	0	Fired Clay	24	?Artefact
12432	12431	Area D	ditch	12370	CBM	73	Tile
12436	12435	Area D	pit	0	CBM	197	Tile
12494	12493	Area D	ditch	12372	CBM	254	
12496	12493	Area D	ditch	12372	CBM	525	
12504	12503	Area D	ditch	0	CBM	47	
12624	12625	Area D	ditch	12625	Fired Clay	301	Kiln bar - SF 411
12669	12670	Area D	ditch	12625	Fired Clay	12	
12903	12904	Area D	pit	0	Fired Clay	11	
13007	13005	Area D	pit	0	Fired Clay	27	Possibly daub?
13013	13010	Area D	ditch	12936	Fired Clay	53	
13076	13077	Area D	hedge line	12861	CBM	371	Tile
13111	13112	Area D	droveway ditch	13080	CBM	616	
13252	13251	Area D	ditch	13126	CBM	1203	

Table 79: Other Early Roman fired clay and CBM

Late Roman

A.9.10 One piece Of CBM weighing 409g was recovered from Late Roman ditch **12325** (fill 12512) in Area D. There was no other fired clay or CBM from Late Roman features.

Statement of potential

A.9.11 More detailed analysis of the fired clay and CBM will contribute towards an understanding of the structures present on site and the range of activities taking place. The kiln furniture from Early Roman kiln **2122** is an important assemblage in its own right.

Recommendations for further work

A.9.12 The fired clay and CBM needs to be fully catalogued and fabrics assigned. The kiln furniture from Early Roman kiln **2122** needs to be fully recorded and compared to other examples such as the ones found at the Hutchison Site (Evans *et al.* 2008).

A.10 Glass

By Stephen Wadeson

Introduction

A.10.1 Recovered during excavations and submitted for identification, the glass assemblage comprises of nine vessel glass fragments and a near complete unguent bottle recovered from a cremation burial pit. In addition a single bead and the partial remains of a counter or gaming piece were also identified. Consistent with a Roman date, the assemblage can be separated into two broad groupings, those found during general excavations and associated with settlement activity and those related with cremation burials.

Glass from Settlement activity

A.10.2 In total nine vessel glass fragments were recovered from seven contexts and identified as Roman in date, of which a few can be dated more closely. These fragments can be divided into two broad categories: table wares and storage vessels/containers and range in date from the 1st – 4th centuries AD. With the exception of SF 514 in Area E (from fill 2069, tree throw **2067**), a single fragment from a cast bowl, all remaining fragments were either mould blown or free blown.

A.10.3 The majority of the assemblage is characteristic of 1st – 4th century table wares. Due to their fragmentary nature most are not closely datable or identifiable to form and can only be assigned a broad date. Of the eight fragments recovered only SF 514 (2069), a single wall fragment from a pillar moulded bowl, dating from the mid 1st to early 2nd century, can be identified with certainty.

A.10.4 Storage vessels are limited in the assemblage with a single fragment from the lower wall and base of a mould blown prismatic bottle, SF 420 (fill 13013, ditch **12396**) in Area D the only example identified. Produced in a blue/green glass, bottles of this type are typical of the late 1st and 2nd centuries and are commonly found on most sites of this date in Britain.

Glass from Cremations

A.10.5 A single, near complete unguent bottle, SF 333 (fill 10911) was the only glass vessel recovered from cremation burial **10909**. Produced in a strong, translucent purple glass which appears black until held up to the light, 'Black' forms were produced in small quantities in the 1st and 2nd centuries AD (Price & Cottam, 1998, 15). Two thirds of the vessel's rim is broken, which appears to have happened in antiquity. It is not clear if this break is due to depositional processes or if it represents the deliberate breaking or 'killing' of the vessel prior to deposition. Popular during the period AD 43-70 in Britain this example however pre dates this period and is almost certainly pre-conquest in date. An early date is supported by the presence of pre-conquest pottery including a stamped samian vessel dating form AD 10-30 (Brenda Dickinson pers. comm).

A.10.6 Unguent bottles of this type were often placed in both cremation and inhumation burials, many containing scented oils, pastes and powders and regularly accompanied the deceased as a gift into the afterlife (Price & Cottan 1998). Found *in situ*, the contents of the bottle have not currently been examined and may still contain residues of its original contents.

Glass Artefacts

A.10.7 These include SF 398, (fill 11993) a small, complete melon bead of turquoise faience from ditch **11992** in Area C. Heavily abraded and chipped, small patches of glaze are visible between vertical score marks. Melon beads such as this are commonly recovered finds on 1st century sites, becoming less numerous in the 2nd century. Examples do however, occasionally occur throughout the Roman period (Allen 1991, 229).

A.10.8 In addition, two adjoining fragments from a glass counter or gaming piece, SF 472, (fill 11801) were recovered from ditch **11588** in Area C. Consisting of the partial remains of a roughly plano-convex disc of blue/green opaque glass, the surface of the counter is heavily abraded and pitted with iridescent weathering. Not closely datable, glass counters or gaming pieces are commonly found on Roman sites of all dates. Predominantly recovered in black and white opaque glass, blue and blue/green pieces are also often identified (Allen 1991, 229).

Conclusions

A.10.9 This is a small glass assemblage of Roman date, the majority of the material consisting of fragmentary vessel sherds, which are not closely datable. This suggests high levels of post-depositional disturbance such as ploughing and is consistent with most of the sherds being residual. The single exception to this is SF 333 (fill 10911), the glass unguent bottle from cremation **10909**.

A.10.10 The assemblage recovered from the settlement related contexts is too small and fragmentary to make specific comments on the nature of glass supply to the site, other than that it was available throughout the Roman period from the late 1st – 4th centuries AD.

A.10.11 The glass counter or gaming piece, SF 472, (fill 11801) and melon bead SF 398 (fill 11993) provide little assistance with dating due to the nature of their re-use and longevity.

Recommendations

A.10.12 Exploration of parallels is recommended for unguent bottle SF 333 (fill 10911, cremation **10909**) as it would add to the published record in this region.

A.10.13 Analysis of the contents in unguent vessel SF 333 by Dana Goodburn-Brown, is recommended, to identify any residues which may indicate the substance contained in the vessel at the time of deposition.

A.10.14 Subject to publication format melon bead, SF 398 (fill 11993) and the near complete unguent bottle, SF 333, should be illustrated.

A.10.15 All remaining glass in the assemblage is in a stable state of preservation to which no further work is recommended.

A.10.16 The catalogue below will suffice as both an archive listing of the glass and if necessary a publishable catalogue of the assemblage as a whole with the exception of SF 333 (see recommendations A.10.12 and A.10.13 above).

Assessment Catalogue

A.10.17 SF 292 (fill 5835, ditch **5826**, Area A), two small, very thin, body fragments from a tableware of undiagnostic form (most probably either a cup or beaker). Blown; green

tinged colourless glass, iridescent weathering, small bubbles visible in the glass, suggestive of a Late Roman tableware. Date: uncertain, 4th century AD.

A.10.18 SF 333 (fill 10911, cremation pit **10909**, Area C), a small, near complete ungeunt bottle. Blown; purple glass, (appearing black). Out turned rim, edge sheared, short cylindrical neck, convex body with a concave base. Partial rim, (broken in antiquity) with slight iridescent weathering; height 6.6cms; neck diameter 1.5cms; body diameter 5.2cms. Date: 1st century, pre conquest.

A.10.19 SF 398 (fill 11993, ditch **11992**, Area C), a small, complete melon bead of turquoise faience. Heavily abraded and chipped, small patches of glaze are visible between vertical score marks; height 1.3cms; diameter 1.4cms; perforation diameter 0.5cms. Date: 1st to 2nd centuries AD.

A.10.20 SF 412 (fill 12778, ditch **12777**, Area D), single body fragment from a tableware of undiagnostic form. Blown; green tinged colourless glass, decorated with a single shallow, vertical tooled rib. Date: uncertain, 1st to 3rd centuries AD.

A.10.21 SF 420 (fill 13013, ditch **12936**, Area D), single fragment from the lower wall and base of a prismatic bottle (probably a square bottle). Mould blown; blue/green glass. Base contains the partial remains in relief of a two concentric circle design. Date: *c.* 43 AD to late 2nd century AD.

A.10.22 SF 425 (fill 13252, ditch **13126**, Area D), single fragment from the neck of a jug of unspecific type. Blown; blue/green glass. Date: uncertain, *c.* 43 AD to late 2nd centuries AD.

A.10.23 SF 426 (fill 13252, ditch **13126**, Area D), single, thin body fragment containing the partial remains of three horizontal wheel cut lines, from a tableware of undiagnostic form (most probably either a cup or beaker). Blown; green tinged colourless glass, small bubbles visible in the glass. Date: uncertain, late 1st to 2nd centuries AD.

A.10.24 SF 471 (fill 11603, ditch **11601**, Area C), two small, thin body fragments from a tableware of undiagnostic form (most probably either a cup or beaker). Blown; blue/green glass, small bubbles visible in the glass, suggestive of a Late Roman tableware. Date: uncertain, late 3rd to 4th centuries AD.

A.10.25 SF 472 (fill 11801, ditch **11588**, Area C), two adjoining fragments from a glass counter or gaming piece. Plano-convex disc of blue/green opaque glass, circular in shape. Surface heavily abraded and pitted, with iridescent weathering; height 0.5cms; diameter 2.0cms. Date; Not closely datable, *c.* 43 AD to late 4th centuries AD.

A.10.26 SF 514 (fill 2069, tree throw **2067**, Area E), single fragment from the body of a (Ribbed bowl) pillar moulded bowl. Cast; blue/green glass. Outer surface contains the partial remains of two prominent vertical ribs while the inner surface contains two horizontal abraded bands. Date; *c.* 43 AD to late 1st/early 2nd centuries AD.

A.11 Amber bead

By Chris Howard-Davis

Introduction

A.11.1 A single amber bead was submitted for assessment. It had been cleaned but was unconserved.

A.11.2 The bead (SF 137) was from ditch fill group 2376 in Area E. This was the upper fill of ditch **1982**, the midden-like fill associated with Middle Bronze Age Settlement 3. Although the use of amber for beads has a long life, from possibly as early as the Neolithic period to the present day (Johns 1996, 15), stratigraphic evidence suggests a Middle Bronze Age date for this item. Appreciably more amber beads have been recovered from the Early Bronze Age than the Middle and Later Bronze Age (Beck and Shennan 1991, 101), but as there is no well-dated typological series, the bead cannot be given a more precise date.

A.11.3 SF 137 is a medium-sized biconical amber bead, probably of Bronze Age date. It appears to be an isolated find, and thus is unlikely to have been deposited as part of a complex necklace.

Conservation

A.11.4 The find is well packed, but appears to be deteriorating and would thus benefit from conservation.

Potential

A.11.5 Limited further analysis will contribute to the interpretation and understanding of the development of the site during the Bronze Age.

Proposed further work

A.11.6 The archival catalogue entry should be completed, and a brief illustrated comment prepared for inclusion into any proposed publication.

A.12 Waterlogged wood assessment

By Mike Bamforth

Introduction

A.12.1 This document aims to assess the potential of the waterlogged wood assemblage from Clay Farm in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, dendrochronology and conservation and retention.

A.12.2 A total of 19 discrete items and one bulk collection were recovered from the excavation and recorded off site. Waterlogged wood was recovered from several different contexts:

A.12.3 Context (360), waterhole **364** Forming the primary fill of a Late Iron Age watering hole, roundwood W09 was recovered from this context.

A.12.4 Context (1792), cut **1809** (ditch **1723**) Forming the secondary fill of a Middle Bronze Age enclosure ditch, roundwood W15 <177> was recovered from this context.

A.12.5 Context (4459), cut **4460** (ditch **4250**) Forming the basal fill of a Middle Bronze Age ditch, roundwood W16 was recovered from this context.

A.12.6 Context (5259), cut **5260** (ditch **5228**) Forming the upper fill of a Middle Bronze Age ditch, Timber W07, roundwood W03, W05, W06 and debris W01, W02, W04 and W20 were recovered from this context. This is the same feature as **5765**.

A.12.7 Context (5610), pit **5611** Forming the primary fill of a Middle Bronze Age pit, bulk collection W10 <520> was recovered from this context.

A.12.8 Context (5774), cut **5765** (ditch **5228**) Forming the secondary fill of a Middle Bronze Age drainage ditch, roundwood W11 SF247, W12 SF248, W13, W17 SF249 and Timbers W18 SF222 and W19 SF243 were recovered from this context. This is the same feature as **5260**.

A.12.9 Context (10269), pit **10272** Forming the tertiary fill of a possible post-medieval brushwood drain, roundwood W08 was recovered from this context.

A.12.10 Context (13284), waterhole **13293** Forming the secondary fill of a Middle Bronze Age waterhole, roundwood W.14 was recovered from this context.

Methodology

A.12.11 This document has been produced in accordance with English Heritage 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.

A.12.12 All discretely numbered items and those displaying evidence of modification or woodland management were given a unique identifier (eg: W99), recorded individually using a pro forma 'wood recording sheet' which is based on the sheet developed by the Fenland Archaeological Trust for the post excavation recording of waterlogged wood. All records were then entered into a database.

A.12.13 Bulk collections or samples of natural wood were assessed as a whole.

A.12.14 Every effort was made to refit broken or fragmented items. However, due to the nature of the material, the possibility remains that some discrete yet broken items may have been processed as their constituent parts as opposed to as a whole.

A.12.15 The metric data were taken with hand tools including rulers and tapes, the toolmarks were measured using a profile gauge.

A.12.16 The system of categorisation and interrogation developed by Taylor (1998 & 2001) has been adopted within this report.

A.12.17 Joints and fixings are described in accordance with the Museum of London archaeological site manual (Spence 1994).

A.12.18 Items identifiable to species by morphological traits visible with a hand lens (oak - Quercus sp.) were noted. Other items were sub-sampled to allow later identification to taxa via microscopic identification as necessary.

Condition of material

A.12.19 The condition scale developed by the Humber Wetlands Project (Van de Noort *et al*. 1995, table 15.1), is used throughout this report (Table 80). The condition scale is based primarily on the clarity of surface data. Material is allocated a score dependent on the types of analysis that can be carried out, given the state of preservation. The condition score reflects the possibility of a given type of analysis but does not take into account the suitability of the item for a given process.

CONDITION SCORE	MUSEUM CONSERVATION	TECHNOLOGY ANALYSIS	WOODLAND MANAGEMENT	DENDRO-CHRONOLOGY	SPECIES IDENTIFICATION
5 excellent	+	+	+	+	+
4 good	-	+	+	+	+
3 moderate	-	+/-	+	+	+
2 poor	-	+/-	+/-	+/-	+
1 very poor	-	-	-	-	+/-
0 non-viable	-	-	-	-	-

Table 80: Condition scale

A.12.20 If preservation varies within a discrete item, the section that is best preserved is considered when assigning the item a condition score. Items that were set vertically in the ground often display relatively better preservation lower down and a relatively poorer preservation higher up.

CONDITION SCORE	FREQUENCY	% OF ASSEMBLAGE
5	0	0.0
4	4	21.1
3	14	73.7
2	1	5.3
1	0	0.0
0	0	0.0
total	*19*	*100.0*

Table 81: Condition of material

A.12.21 Using the above condition scale, the majority of the material scores a 3 (Table 81), describing a moderately preserved assemblage in which woodworking evidence is likely to be visible, but not always clear.

Range and Variation

A.12.22 A broad range of material has been recorded from this site, with 'artefacts' the only category not represented (Table 82). Over half the assemblage is formed of roundwood. The next most frequent category is debris, including timber debris - the offcuts and discards from shaping up larger timbers and a woodchip. Timber also forms a component of the assemblage. In addition to the items listed below, a bulk collection of bark was also recovered.

CATEGORY OF MATERIAL	FREQUENCY	% OF ASSEMBLAGE
artefact	0	0.0
roundwood	12	63.2
debris	4	21.1
timber	3	15.8
total	*19*	*100.0*

Table 82: Categories of material

Roundwood

Middle – Late Bronze Age

A.12.23 W15 was recovered from context (1792), the primary fill of a feature interpreted as an enclosure ditch (**1809**). This item does not have any bark remaining, scores a 2 for condition, remains unidentified to species and measures 100mm in length with a diameter of 20mm.

A.12.24 W16 was recovered from context (4459), the basal fill of a feature interpreted as a ditch (**4460**). This item does not have any bark remaining, scores a 3 for condition, remains unidentified to species and measures 130mm in length with a diameter of 30mm. It is lightly charred on one side.

A.12.25 W03 (105x24mm), W05 (135x30mm) and W06 (180x95mm) were recovered from context (5259), the upper fill of a feature interpreted as a ditch (**5260**). These items have no bark remaining. They score a 3 for condition, with the exception of W03 that scores a 4. The items remain unidentified to species. Roundwood W03 has a tool facet where it has been trimmed from one end in one direction. The facet is slightly concave, in keeping with the use of a bronze axe (Coles & Orme 1978).

A.12.26 W11 (710x80mm), W12 (570x55mm), W13 (210x26mm) and W17 (750x85mm) were recovered from context (5774), the secondary fill of a feature interpreted as a drainage ditch (**5765**). W12 and W17 both have intact bark. They score a 3 for condition. The items remain unidentified to species. Roundwood W17 has a tool facet where it has been trimmed at the proximal end from one direction. Roundwood W12 is somewhat bent and W11 has a sharp, right-angled bend.

A.12.27 W14 was recovered from context (13284), the secondary fill of a feature interpreted as a watering hole. This item has bark remaining, scores a 3 for condition, remains unidentified to species and measures 230mm in length with a diameter of 30mm.

Late Iron Age

A.12.28 W09 was recovered from context (360), the primary fill of a feature interpreted as a waterhole (**364**). This item does not have any bark remaining, scores a 4 for condition, remains unidentified to species and measures 230mm in length with a diameter of 30mm. It has a straight, even stem suggestive of coppicing (Coles & Orme 1982).

Post-medieval

A.12.29 W08 was recovered from context (10269), the tertiary fill of a feature interpreted as a brushwood drain (**10272**). This item has its bark intact, scores a 3 for condition, remains unidentified to species and measures 230mm in length with a diameter of 80mm.

Debris

Middle – Late Bronze Age

A.12.30 W01, W02, W04 and W20 were recovered from context (5259), the upper fill of a feature interpreted as a ditch (**5260**). W01 is a radially aligned woodchip, derived from working small-diameter roundwood. It has been trimmed from one end in one direction, is formed from sapwood and heartwood, scores a 4 for condition and measures 70x19x12mm. It is derived from a piece of roundwood with a diameter of 40mm.

A.12.31 W02 is also a piece of roundwood debris. Formed of sapwood and heartwood, it scores a 3 for condition, has no bark remaining, and has not been identified to species. This half split item measures 125x35x20mm and is derived from a piece of roundwood with a diameter of 35mm.

A.12.32 W04 is a piece of timber debris (the off-cuts produced by the shaping up of larger timbers) formed of sapwood and heartwood. It scores a 4 for condition and has a twisted grain. It is a radial quarter-split which has been worked at one end, from one direction into a blunt point. This item measures 150x36x30mm and is derived from an item with an original diameter of 70mm. The sharpened end suggests it may have been used as a stake.

A.12.33 W20 is a piece of debris. This item is formed from the junction of a side branch with the main trunk and is half split. The item is 165mm long, 25mm thick and the side branch originally had a diameter of 45mm. The size and morphology initially raised the possibility that this item was a broken section of axe haft: axe hafts of this period are generally constructed from the junction of a side branch with the trunk of the tree. The side branch forms the handle and the trunk the foreshaft, the natural angle of the grain providing excellent strength (Taylor 2001). In this case the angle between the supposed foreshaft and handle was too great (being more open than 90 degrees). Such an open angle would lead to an unusable tool (pers. comm, M. Taylor). This item is therefore interpreted simply as a piece of debris.

Timber

Middle – Late Bronze Age

A.12.34 W07 was recovered from context (5259), the upper fill of a feature interpreted as a ditch (**5260**). This timber is formed of heartwood only, remains unidentified to species and scores a 3 for condition. The timber has been cleaved into a boxed half and has been cross cut at one end. The other end terminates in a broken mortise joint. One edge of the timber was also broken in antiquity. The remaining fragment of the timber measures 190x67x60mm. The broken section of mortise is 90x25mm, having only two truncated edges remaining.

A.12.35 W18 and W19 were recovered from context (5774), the secondary fill of a feature interpreted as a drainage ditch (**5765**). W18 is unconverted, but is classed as a timber due to its size (890x130mm). This item scores a 3 for condition, has no bark remaining and has not been identified to species.

A.12.36 W19 is a half-split oak timber, formed of sapwood and heartwood. It scores a 3 for condition and measures 1740x150x80mm.

Bark

Middle – Late Bronze Age

A.12.37 W10 was recovered from context (5610), the primary fill of a feature interpreted as a pit (**5611**). This is a bulk collection consisting of 30 fragments of bark. Lengths vary between 15-150mm, width between 10-75mm and thickness from 3-25mm.

Statement of potential

A.12.38 This document aims 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.

Middle – Late Bronze Age

A.12.39 Context (1792), the secondary fill of enclosure ditch **1809**. The single piece of unworked roundwood (W15) is likely to represent natural debris accumulating in the feature.

A.12.40 Context (4459), the basal fill of ditch **4460**. The single piece of unworked roundwood (W16) is likely to represent natural debris accumulating in the feature. It is unclear whether the burning is a result of human intervention or natural processes.

A.12.41 Context (5259), the upper fill of ditch **5260**. Although broken, the mortise joint in timber W07 suggests this item originally formed part of a structure. Three pieces of roundwood were recovered (W03, W05, W06), the first of which has a trimmed end. Debris W01, W02, W04 and W20 were also recovered from this context, including two items derived from small-diameter roundwood and an offcut from reducing large timbers. When taken as a group, and considering the materials' location in the upper fill of this feature, the high prevalence of woodworking debris and the broken structural item suggest that either woodworking was being undertaken in the vicinity, or possibly that a structure of some sort may have disintegrated or been deliberately dismantled, in the vicinity. This is the same feature as **5765**.

A.12.42 Context (5774), the secondary fill of ditch **5765**. Four pieces of roundwood (W11, W12, W13 and W17) were recovered from this context. With the exception of W17 that has a trimmed end, the items appear to be natural debris that has accumulated in the feature. Timbers W18 and W19 were also recovered from this context. Whilst the former is unworked and is only classed as timber due to its size, the latter is half split and would have been suitable for structural use. This is the same feature as **5260**.

A.12.43 Context (5610), the primary fill of pit **5611**. Bulk collection W10 was recovered from this context. Unfortunately, it is not usually possible to identify bark to species. There is no evidence of woodworking, raising the possibility that this material is naturally accumulated debris. However, the bark of various species of tree is used in many different processes, including tanning and firelighting (Gale & Cutler 2000).

A.12.44 Context (13284), the secondary fill of waterhole **13293**. Roundwood W14 was recovered from this context. This unworked item cannot add to the interpretation of this feature and is likely to present naturally accumulated debris.

Late Iron Age

A.12.45 Context (360), the primary fill of waterhole **364**. The single piece of roundwood (W09) has morphological features suggestive of woodland management in the form of coppicing. However, no conclusions can be made from a single item. It seems likely that this item represents natural debris accumulating in the base of the feature.

Post Medieval

A.12.46 Context (10269), the tertiary fill of a possible brushwood drain **10272**. The single piece of unworked roundwood (W08) recovered from this context cannot add to the interpretation of this feature. It seems likely that this item represents natural debris accumulating in the base of the feature.

Summary and statement of potential

A.12.47 It is not unusual to recover assemblages of waterlogged, worked wood from the deeper features of sites excavated on the fenland terrace gravels. Often these take the form of collapsed or intact linings or revetments (Pryor and Bamforth 2010; Bamforth 2009). In other cases, the material seems to be detritus that has built up naturally in the features either during their use or after they have been abandoned. The majority of the material in this assemblage is unworked roundwood or bark and is likely to represent naturally accumulated debris.

A.12.48 The exception to this is the Middle - Late Bronze Age material recovered from Context (5259), ditch **5260**. The material recovered from this feature, including a worked timber with a broken mortise joint, may simply be debris resulting from woodworking in the vicinity. However, the materials position high in the matrix, and the structural timber broken in antiquity both point towards some or all of the material being derived from a structure that has either collapsed or been dismantled in the vicinity.

A.12.49 There is not sufficient material to address the issue of woodland reconstruction via species identification. Decay analysis is not advised as the author is unaware of any ongoing debate regards the nature or stability of the burial environment in the immediate area of the site. None of the oak material has sufficient growth rings to be suitable for dendrochronology. None of the material is of sufficient interest to warrant conservation and retention. Similarly, the woodworking technology is not of sufficient interest to warrant further analysis. The simple splits and trimmed ends are well represented in the literature, as is the broken mortise joint (Taylor 2001).

Recommendations

A.12.50 Production of archive: It is suggested that, for the sake of completeness, structural timber W07 is drawn at an appropriate scale and photographed.

A.12.51 Further analysis: No further analysis is advised.

A.12.52 Dissemination of data: It is suggested that an illustration of W07 is added to this document as an addendum, and that this document is then submitted along with the site archive.

A.12.53 Suggested timetable of works: Once removed from an anoxic burial environment, waterlogged wood will begin to break down and decay. It is therefore essential that additional recording work takes place as soon as possible. Therefore, it is advised that the suggested illustration and photography of W07 is carried out as soon as possible, preferably within six months.

Appendix B. Environmental Reports

B.1 Human Skeletal Remains

By Louise Loe

Introduction

B.1.1 This report details the findings of an assessment of burnt and unburnt human remains recovered from the excavation. Unburnt remains include 16 articulated skeletons and disarticulated bone fragments from 16 contexts (pits and ditches), all provisionally assigned to the Bronze Age, Iron Age and Early Roman periods. Burnt remains include one box cremation, two urned cremations and one unurned cremation, and have provisionally been dated to the Middle Iron Age and Early Roman periods.

Methodology

B.1.2 The remains were excavated in accordance with IFA guidelines (McKinley and Roberts 1993). The box cremation and urned cremations were block lifted and excavated in spits in the laboratory. Deposits were then processed by flotation, the flot collected in a 0.3mm nylon mesh and the residue washed through a 0.5mm sieve. Bone was not fully sorted by fragment size at this stage. Unurned deposit 10923 (in pit **10924**, Area C) was recovered in bulk and processed by employing the same methodology.

B.1.3 All remains, cremations, articulated skeletons and bone fragments, were assessed by reference to the guidelines set out by Brickley and McKinley (2004) and Mays (2002) in conjunction with relevant standards for estimating osteological sex (Buikstra and Ubelaker 1994) and age (Brooks and Suchey 1990; Brothwell 1981; Buckberry and Chamberlain 2002; Lovejoy *et al*. 1985 and Miles 1962, 2001; Scheuer and Black 2003). For the burnt bone this involved recording the weights (in grams) of each deposit and, based on macroscopic examination, recording fragment sizes and fragment colour. The potential of the deposits to yield information relating to demography (minimum number of individuals present, sex and age), palaeopathology and funerary rite (for example, whether certain elements were selected for burial) was also considered.

B.1.4 For the unburnt bone (articulated skeletons and bone fragments) assessment involved rapidly scanning the remains to make observations regarding their condition (after McKinley 2004, 16), completeness and degree of fragmentation. For the latter, skeletons were scored as either 'low' (<25% of the skeleton fragmented), 'medium' (25-75% of the skeleton fragmented) or 'high' (>75% fragmented). These observations were used as a basis for considering the potential of the remains for estimating sex and age, physical attributes (stature, skeletal indices) and recording information relating to palaeopathology and funerary rite by the application of standard methodologies (for example, Buikstra and Ubelaker 1994). Bone fragments were also considered for ancient modification with reference to McKinley (2004, 15) and Loe and Cox (2003).

Results

B.1.5 The results of the assessment are discussed and tabulated by area below. This is followed by a statement of the potential of the entire assemblage, with recommendations for further work.

Area A

B.1.6 The human remains from Area A comprise fragments of a Late Bronze Age skull, long bone fragments from Early Iron Age features, an articulated skeleton of a neonate from an Early Iron Age waterhole, and three Iron Age crouched inhumations comprising one male, one female and one possible female.

*Skull fragments (fill 5967, ditch **5815**)*

B.1.7 Remains of a skull, believed to be of Middle – Late Bronze Age date, were recovered from the secondary fill (5967) of enclosure ditch **5815**. It comprised five fragments of left parietal bone (comprising less than 10% of a complete skull), all of which were in very good condition, consistent with grade 1 of McKinley's scoring system (McKinley 2004, 16). Their un-weathered appearance suggests that the fragments had not been exposed to the elements during their post-depositional history.

B.1.8 No indicators that are diagnostic of sex or age were present, although the overall morphology of the bone suggested they were from an adult. Pathology was observed in the form of new bone on the endocranial surface. This is a non-specific lesion that may be related to the active haemorrhaging of the tissues (the meninges) that cover the brain (Schultz 1993a,b). Haemorrhaging may be the result of numerous conditions, meningitis, trauma, anaeima and venous drainage disorders, being among them (Lewis 2002). The appearance and extent of this lesion on skull fragments 5967 should be recorded in full.

*Femur fragment (fill 6044, large pit **6162**)*

B.1.9 This fragment comprised a cylinder from the right shaft of an adult femur, recovered from a large pit and of Early Iron Age date. It was reasonably well preserved with some post-mortem erosion consistent with McKinley's grade 2 (2004,16). Sharp, straight, striations, that ran transverse to the long axis of the bone were present on the anterior surface at the proximal end. These share features with cut marks that have been made by a sharp tool (Loe and Cox 2003). The entire bone was abnormally thickened and heavy, and in cross-section it was observed that there had been a complete loss of trabecular space. Diagnosis requires further analysis by the application of radiography, but among the possibilities is Paget's disease ('Osteitis Deformans') in which there is progressive enlargement of and deformity of bones, possibly as a result of chronic low grade viral infection (Aufderheide and Rodriguez-Martin 1998). If this diagnosis is confirmed, it will be the earliest case of Paget's disease ever seen in Britain (Roberts and Cox 2003, 127).

*Tibia (fill 6075, large pit **5898**)*

B.1.10 Bone from this context comprised a well preserved complete left tibia of a neonate (birth to one month). The bone was of Early Iron Age date and was recovered from a large pit. No pathology or bony abnormality was observed.

*Skull fragment 6549 (fill 6139, large pit **5898**)*

B.1.11 Also recovered from large pit **5898** was a single piece of skull which comprised a complete frontal bone. The bone was unweathered and in very good condition, consistent with grade 1 after McKinley (2004,16).

B.1.12 The morphological appearance of the bone suggest that is was from an adult individual. Although the frontal bone is a key part of the skull for estimating sex, the present bone had ambiguous features. While the brow was considered to be sloping (a male

characteristic), the glabella region was unpronounced and the supra-orbital margins were sharp (female features). No pathology or bony abnormality was seen.

*Skeleton 6550 (fill 6139, large pit **5898**)*

B.1.13 Skeleton 6550 came from the same fill as skull fragment 6549 and was less than 25% complete. It was represented by skull fragments and bones from the upper extremities, torso and lower limbs. Despite its incompleteness the skeleton was in very good condition, having suffered little or no post-mortem erosion or breakage. The lengths of the diaphyses of the long bones are consistent with those of a neonatal skeleton (birth to one month). Endocranial lesions (see 5967 above for definition) were observed on some of the skull fragments and require further analysis to record their appearance and extent in more detail.

*Skull fragment (fill 6448, shallow pit **6447**)*

B.1.14 This Early Iron Age skull fragment was recovered from a shallow pit and comprised part of an adult occipital bone (approximately 10%), in good condition (McKinley grade 1; 2004,16). A single modification - a deep striation - was present and requires further analysis to determine whether it is peri- or post-mortem.

*Skeleton 6036 (fill 6037, grave **6035**)*

B.1.15 Skeleton 6036, a crouched inhumation, was recovered from a pit (provisionally dated as Early Iron Age) and was lying with the skull in the east end. Both the skull, torso and upper extremities were lying prone, with the legs on their left side. This was the best preserved skeleton from Area A. The bones had suffered little fragmentation and their surfaces had slight, patchy erosion only (consistent with McKinley's grade 1; McKinley 2004, 16). The skeleton was approximately 90% complete, with all regions represented.

B.1.16 The full range of traits that are employed to estimate sex and age had survived. Features of the skull and pelvis were consistent with those of a female, while dental attrition, metamorphosis of the auricular surfaces and pubic symphyses, and the degree of fusion of the medial clavicle and sacral vertebrae combined, suggest an age of between 20 and 30 years (young/prime adult).

B.1.17 The good preservation of this skeleton means that it will be possible to record almost the full suite of non-metrical traits and measurements that are recorded during most standard analyses of well preserved archaeological skeletons (Brickley and McKinley 2004). These will permit a more detailed appraisal of the individual's physical attributes, including their stature and build. An exception to this is the skull, which is in fragments and therefore only a few measurements of this region will be possible. Thus, analysis of skull shape, as a way of exploring biological distance, will not be possible.

B.1.18 Cribra orbitalia (iron deficiency anaemia) was observed on both orbital bones in the form of interconnected trabeculae, a severe expression of this condition (Stuart Macadam 1991). Also seen was non-specific bone inflammation involving the right and left tibias, possible sinusitis (non-specific bone inflammation in the sinus bones) and trauma involving the lower spine (spondylolisis with probable spondylolisthesis). A detailed written and photographic record should be made of these lesions, including differential diagnoses, so that the health status of the individual may be explored and compared with contemporary individuals from other sites.

*Skeleton 6394 (fill 6393, grave **6395**)*

B.1.19 This skeleton was recovered from a rectangular grave in the north of Area A and was lying in a crouched position on their right hand side with their skull in the north. It has provisionally been dated as Early Iron Age. The skeleton was poorly preserved, was approximately 50% complete and comprised upper and lower extremities only. The bones were highly fragmentary and their overall condition was consistent with McKinley's grade 5, which refers to heavy erosion affecting all surfaces, completely masking the normal surface morphology (McKinley 2004, 16). Despite this, some joint surfaces had survived in tact.

B.1.20 Fragments of the sciatic notch and auricular surface of the left innominate bone had survived and will allow the sex and age of the individual to be estimated. Provisionally they suggest a possible female aged between 36 and 45 years. Both of these observations are tentative and should be viewed with caution because the bone was incomplete, damaged and required reconstruction. Other observations, such as those relating to the estimation of stature and the presence or absence of non-metric traits are precluded by the poor condition of the bones.

B.1.21 No pathology or bony abnormality was observed, but it is possible that lesions could have been missed; the skeleton was highly fragmented and detailed examination of all fragments was beyond the scope of the present assessment. Lesions may also be masked by post-mortem erosion, but the presence of fragments of in tact joint surfaces warrants closer examination. Further analysis of the fragments is therefore recommended.

*Skeleton 6487 (fill 6486, grave **6485**)*

B.1.22 Skeleton 6487 was found in a circular pit and was lying on its right hand side, with its skull in the north facing west, its legs flexed and left arm extended posteriorly. The unusual position of the skull (looking over the individual's left shoulder) needs further investigation, but it may relate to slumping as a result of body decomposition. Grave goods included a Middle Iron Age pot and a small iron nail (SF 277).

B.1.23 The skeleton was approximately 75% complete with skull (including an incomplete dentition), axial skeleton and upper and lower extremities all surviving to varying degrees. It was in a very poor condition being highly fragmentary and considerably eroded (as described for Skeleton 6394 above).

B.1.24 Almost the full range of traits used to estimate sex from the skull and an incomplete set of molar teeth had survived. Provisionally these suggest a male who was over 35 years of age when he died. Poor preservation means that no metrical analysis will be possible for this individual. Thus, it will not be possible to estimate the individual's stature or explore other physical attributes by calculating skeletal indices. Only a very limited number of landmarks had survived for scoring non-metric traits.

B.1.25 Despite the poor condition of this skeleton, pathological lesions were observed including joint disease (osteoarthritis) involving both hips and degenerative disc disease involving the spine (spndylosis deformans). The full extent of these conditions, and the identification of any further lesions, should be realised through detailed analysis.

Context number	Period	Context	Condition	Age	Sex	Pathology
5967	M LBA	Skull fragments from ditch	1	Adult	?	Endocranial lesions
6044	EIA	Right femur shaft from disused pit	2	Adult	?	?Paget's disease; ?cut marks
6075	EIA	Complete left tibia from waterhole	0	Neonate	N/A	None observed
6448	EIA	Skull fragment from a shallow pit ('scoop')	1	Adult	?	Peri or post-mortem modification
6550	EIA	Skeleton from pit / waterhole	35%/1/low	Neonate	N/A	Endocranial lesions
6549	EIA	Skull fragment from pit / waterhole	1/low	Adult	? female	None observed
6394	EIA	Crouched inhumation in rectangular grave lying on rhs, orientated n-s with head in north	50%/5/high	? mature adult	? female	None observed
6036	EIA	Crouched inhumation in pit (fits comfortably in pit, so purpose built?), lying front with legs crouched, head in east end facing west.	90%/4/low	20-30	Female	Severe cribra orbitalia, periostitis R + L tibias, possible sinusitis (needs analysing with lens), spondylolisis with probable spondylolisthesis
6487	MIA	Flexed inhumation in large pit (size suggests used for something else previously), associated with pot and iron clasp. Lying on rhs, orientated n-s, with head in north. Head facing west.	75%/5/high	Over 35 years	Male	Spondylosis deformans, OA

Table 83: Summary of osteological assessment of human remains from Area A. Condition = % present/erosion grade/fragmentation* (* applies to articulated skeletons only)*

Area B

B.1.26 A single bone, of Middle – Late Bronze Age date, was recovered from the fill (5573) of ditch **5564** in Area B. It comprised the proximal and middle portions of a left femur shaft, was approximately 30% complete and was in a fair condition having been affected by some degree of cortical erosion, consistent with McKinley's erosion grade 3 (McKinley 2004,16). The morphological appearance of the bone suggested that it was from an adult individual, but it was not possible to determine whether it was from a male or a female. No pathology, ancient modifications or abnormality was observed.

Area C

B.1.27 Human remains from Area C comprise four Middle and Late Iron Age cremation deposits (10286, 10313, 10913 and 10923), Early Roman skull fragments (11576), a Middle Iron Age fragment of femur (10617) and three inhumations (10831, 10325 and 10896) dating to the Middle Iron Age, Late Iron Age and Early Roman periods respectively.

*Cremation deposits 10286 (pit **10287**), 10313 (pit **10314**), 10913 (pit **10909**) and 10923 (pit **10924**)*

B.1.28 The deposits included two Late Iron Age urned cremations (10286 and 10313), one pre-Roman conquest box cremation (10913) and one Middle Iron Age un-urned cremation (10923). The box cremation derives from an 'Aylesford-Swarling' type of burial (Hill *et al*. 1999), with an associated pottery assemblage (amphorae, gallo-Belgic terra negra and terra rubra), bone pin and and toilet instruments. Neither this box cremation, nor the unurned deposit (10923) had been disturbed and were contained within features that were 0.3m and 0.16m deep respectively. However, both of the features containing urned deposits 10286 and 10313 had been truncated by plough action and were both only 0.05m in depth. As a result of this the quantity of bone recovered from these two contexts is unlikely to be a true reflection of what had originally been deposited in the urns; only the very bottoms of the urns and their contents had survived.

B.1.29 Cremation deposit 10913 was by far the largest, with 935 grams of bone. Approximately 50% and 40% of the deposit comprised fragments that were greater than 5mm and 10mm respectively in size, including many that could be identified to skeletal region and, in some cases, element. Several teeth were also present. The presence of large, identifiable fragments will aid in estimating the minimum number of individuals represented within the deposit, and increases the likelihood that elements, diagnostic of age and sex, will have survived. Preliminary observations suggest that this deposit comprises the remains of a single adult. Further examination of the bone may also identify evidence for pathology.

B.1.30 The other cremation deposits had much lower bone weights of between 62.5g (10313) and 160g (10923). None were fully sorted into fraction sizes, but provisionally it was noted that all had sufficient amounts of bone that were greater than 10mm in size and all contained fragments that were identifiable to element or skeletal region. Preliminary observations suggest that all deposits comprised the remains of at least one adult each, but further sorting is required to confirm this. The presence of identifiable bone fragments also raises the possibility that other information, regarding sex and pathology may be obtained.

B.1.31 Fragments that were a range of colours (buff white, black, blue, grey and reddish brown) were observed in all deposits. The colour of cremated bone is reflective of the degree of heat exposure, which can vary depending on the temperatures achieved during cremation and its duration, factors which are affected by many variables including quality of fuel, weather conditions, the quality of the pyre construction and the position of the body on the pyre (among others). The fact that some fragments can be identified in all deposits means that it may be possible to explore differential exposure to the heat source between body regions and deposits.

Ctxt	Date	Deposit type	Disturbance	Colour of bone	Total weight of bone (g)	Degree of fragmentation	Comments
10286	LIA	Urned cremation	Truncated	Buff white, light blue-grey light grey, neutral black and reddish brown	141.4 g	Bone not separated into fractions. Fragments range from <2mm to 38mm. Approximately 50% is >10mm	Some identifiable fragments, including skull and upper limb. Adult. Limited/no potential for more precise age or sex estimation. Potential to explore MNI once sorted.

Ctxt	Date	Deposit type	Disturbance	Colour of bone	Total weight of bone (g)	Degree of fragmentation	Comments
10313	LIA	Urned cremation	Truncated	Reddish brown,neutral white, neutral black, blue-grey and light grey	62.5 g	Bone not separated into fragment sizes. Fragments range from 32mm to <2mm; approximately X is >10,,	Some identifiable to lower and upper limb bones, flat bones. No cranial bone identified. Adult. Limited/no potential for more precise age or sex estimation
10913	LIA	Box cremation found with associated pottery assemblage, toilet instruments, bone pin	Undisturbed	Full colour range seen: reddish brown, grey, black blue-grey and buff white. Buff white bone seems to mainly involve skull and ?upper limb fragments	935 g	Some bone sorted into <5->2mm fraction (64.9g), otherwise unsorted. Fragments range from c.2mm to 55mm. Approximately 40% is >10mm, 50% is >5mm and 10% is <5mm	c. 60% identifiable to skull, upper limbs and lower limbs. Some identifiable to element (e.g. pelvis). Tooth roots present. Adult. Potential for age and sex estimation and estimation of MNI.
10923	MIA	Un-urned cremation	Undisturbed	Needs washing to confirm colour range, but mostly buff white	160 g	Some bone sorted to <10->5mm (22.2g), the rest is unsorted (135.4g) and ranges from <2mm to>10mm. Approximately 60% is >10mm, 20% >5mm and 20% <5mm	Some identifiable fragments including limb bones, tooth root, ?tibia and ?femur joint surfaces and a few skull fragments. Potential for MNI once sorted, but limited no potential for age and sex estimation.

Table 84: Summary of osteological assessment of cremation deposits from Area C

*Skeleton 10325 (fill 10321, grave **10322**)*

B.1.32 This Late Iron Age inhumation was found in close proximity to urned cremations 10286 and 10313 in the north-west of Area C. Like the cremations, it had been heavily truncated by later plough activity. The grave was orientated south-west to north-east and the skeleton was lying with their head in the west end on their right hand side, facing south, with their legs semi-flexed. Approximately 25% of the skeleton had survived and was in a fair condition with erosion on most bone surfaces (McKinley grade 3; 2004, 16). All of the bone was extremely fragmentary and included remains of ribs, vertebrae, pelvis and hand and leg bones (all incomplete). The overall morphology of the bones suggested they were those of an adult, but it will not be possible to determine a more precise age or estimate the sex of the individual. Abnormal porosity was observed on an incomplete right acetabulum, but further analysis is required to diagnose the changes, which may have been caused by osteoarthritis or infection. In addition, it is possible that further pathology may be identified on the vertebrae when the fragments are examined more closely.

B.1.33 The extremely fragmentary and incomplete nature of the the present skeleton precludes further analysis to assign the individual to an age range, estimate their sex and other biological parameters (for example, stature). Potential for analysing non-metric traits is also very limited. However, some further work is recommended to complete a more

detailed inventory of the remains and establish the range and extent of pathological changes on the bones.

*Skeleton 10831 (fill 10830, grave **10832**)*

B.1.34 This partially articulated skeleton, provisionally dated Middle Iron Age, was recovered from a pit/natural hollow in the north of Area C and was accompanied by animal bones, including cow and sheep. The human bones were very eroded, extremely fragmentary and represented less than 25% of a complete skeleton (104 grams of bone in total). They included splinter and shaft fragments of humerus, femur, tibia and fibula, in addition to some small fragments of flat bone (?pelvis). The minimum number of individuals present (one) was estimated based on the non-repetition of elements, as observed during excavation. It was not possible to estimate the sex or age of the individual. The bone is too poor for metrical analysis and observations relating to non-metric traits and modifications. No pathology was observed.

*Femur fragment (fill 10617, ditch **10042**)*

B.1.35 A single human bone was recovered from fill 10617 of Middle Iron Age ditch **10042**. The bone is provisionally dated to the Middle Iron Age and comprises a cylinder of right proximal femur shaft (approximately 5% of a complete femur), from an adult of unknown sex. The bone was judged to be in a fair condition; its surface was covered in some degree of erosion consistent with a McKinley (2004, 16) score of 3. No pathology or modification was observed on the bone. No further work is required.

*Skeleton 10896 (fill 10965, grave **10966**)*

B.1.36 Skeleton 10896 was recovered from a north to south aligned grave and had been buried in an extended, supine position with their head in the north end, facing west. A 1st century copper alloy Colchester type brooch was found in the region of the individual's right shoulder (SF 310), dating the burial as Early Roman.

B.1.37 The skeleton was approximately 40% complete; all skeletal regions (skull, torso, upper and lower extremities) were present, but were very incomplete and extremely fragmented. Bone surfaces were judged to be in a fair condition, with erosion present in most places (joint surfaces largely spared), consistent with McKinley grade 3 (2004, 16). No indicators had survived that would allow the age of the individual to be estimated. However, their overall size suggest that they are the remains of an adult. Surviving indicators that will allow the individual's sex to be estimated include the mastoid process and occipital bone of the skull. Provisionally, these suggest that the individual was possibly female. However, this observation should be treated with caution because the skulls of young adult males have features that are ostensibly female (Cox 2003); it is not possible to say whether the skeleton was that of a young or older adult.

B.1.38 Although the long bones of this individual fragmented on recovery, the maximum length of the right femur (41.6 cm) was measured *in situ* and was applied to the regression equations for set out by Trotter and Gleser (1952;1958) and revised by Trotter (1970), to estimate the stature of the individual. Given that the estimated sex of the individual is uncertain, calculations were made by employing both male and female equations. The results give an estimated stature of between 1.57 metres (5ft 2”) and 1.64 metres (5 ft 5”) for males and 1.53 metres (5 ft) and 1.61 metres (5ft 3”) for females. Observed pathological lesions include healed periostitis (non-specific bone inflammation) on the shafts of the tibias. The tibias and the femurs also appeared to be hypertrophic

(increased thickness), suggesting increased bone turnover, possibly as a result of a currently undiagnosed metabolic imbalance Full analysis of this skeleton should be undertaken so that estimated sex and age may be reviewed, any non-metric traits scored, and the pathology may be explored in more detail by the application of X-radiography.

*Skull fragments (fill 11576, ditch **11561**)*

B.1.39 Bone from this context (the fill of ditch terminus **11561** in the south of Area C) comprised two conjoining fragments of skull, provisionally dated to the Early Roman period. The fragments, which represented approximately 40% of a complete frontal bone, were those of an adult of unknown sex. They were in a fair condition with surfaces that were affected by some degree of erosion (consistent with grade 3; McKinley 2004, 16). Some of the fracture margins had features that suggest they were ancient and had occurred when the bone was still fresh. In addition, the bone had been modified including one margin, in the region of the frontal sinus, that was highly polished. Transverse striations, possibly scrape marks from a sharp tool, were also present on the ectocranial surface of the bone. These modifications suggest that the bone had been defleshed and deliberately worked. Further analysis is required to record the modifications in detail and interpret them.

Context number	Period	Context	Condition	Age	Sex	Pathology / ancient modification
10325	LIA	South-west aligned inhumation	25% / 3 / 3	Adult	Unknown	Osteoarthritis / infection?
10831	MIA?	pit/natural hollow	<25% / 4 / 3	Unknown	Unknown	None observed
10617	MIA	Femur shaft from ditch	3	Adult	Unknown	None observed
10896	ER	North-south aligned inhumation with 1st century brooch	40% / 3 / 3	Adult	?female	Periostitis, hypertrophic bones
11576	ER	Skull fragments from ditch terminus	3	Adult	Unknown	Peri-mortem fracture, cut marks and polishing

Table 85: Summary of osteological assessment of human remains from Area C. Condition = % present/erosion grade/fragmentation* (* applies to articulated skeletons only)*

Area D

B.1.40 One inhumation (skeleton 13057, fill 13056, grave **13058**) of Early Roman date was excavated in Area D and comprised the remains of a discrete, articulated skeleton. The skeleton was lying in a rectangular grave, on their right hand side with their legs semi-flexed and their skull in the west end facing south.

B.1.41 The skeleton was approximately 40% complete and was represented by skull, ribs, pelvis and arm and leg bones. All bones were incomplete and extremely fragmentary, but their surface condition was considered to be generally good, having patchy erosion on the cortical bone only. This is consistent with grade 2 of McKinley's (2004, 16) system. Several indicators of sex had survived including the occipital protruberance, the glabella region and the orbital margin (Buikstra and Ubelaker 1994). Preliminary

analysis of these suggests that the skeleton was that of a male. At least twelve adult teeth had survived, but no other indicators were present that would allow a more precise age estimate, other than adult, to be arrived at. The condition of the skeleton means that only limited analysis for non-metric traits will be possible.

B.1.42 Mild changes associated with hyperostosis frontalis interna (HFI) were note in passing on a fragment of frontal bone. This condition may be caused by a disorder in the pituitary gland, but it is also linked to diabetes and obesity (Aufderheide and Rodriguez-Martin 1998). There were also numerous, sharp, multi-directional striations present on the long bone shafts. These may either be trampling marks and/or cut marks.

B.1.43 It is recommended that the skeleton is subjected to full analysis. The full extent of the HFI on surviving skull fragments should be recorded. In addition, the striations should be examined under a high powered microscope so that detailed descriptions of their appearance can be recorded and interpretations as to their cause, reviewed.

Area E

B.1.44 Bone from Area E comprised fragments of skulls and longbones from eight separate contexts, provisionally dated to the Middle-Late Bronze Age (722, 814, 815, 994, 2530 and 2910), Late Iron Age (2055) and Early Roman periods (2105). There were also eight articulated skeletons, including one Middle – Late Bronze Age adult (813), four Late Iron Age neonates (1995, 3174, 3298 and 3594), one Late Iron Age probable adult female (2565) and two Early Roman adults, one female (1351) and one male (1352).

Fill/ Bone no.	Period	Feature	Bone	Erosion grade	Sex	Age	Pathology	Ancient modifications
722	MBA	ditch	skull	5	?	Adult	None	None
814	MBA	pit	femur	3	?	Adult	None	Dense patch of striations on medial border - ?? cut marks
815	MBA	pit	fibula	3	?	Adult	None	One or two sharp striations, - ?? cut marks
994	MBA	ditch terminal	skull	2	? Male	Adult	None	Cut/chop mark
2530	MBA	ditch	skull	1	Male	? young adult	None	?Trampling modifications
2910	MBA	enclosure ditch	skull	1	? Male	Adult	None	None
2055	LIA	ditch	clavicle	2	n/a	Neonate	None	None
2105	ER	pit	femur	3	?	Adult	None	Polished with ?cut marks

Table 86: Summary of osteological assessment of individual bone fragments from Area E

Bone fragments

B.1.45 The bone fragments, representing the remains of eight individuals, included the remains of four skulls, two femurs, one fibula and one clavicle from pit and ditch fills and dating between the Middle Bronze Age and Early Roman periods (Table 81). All of the bones were in a fair or poor condition, having eroded surfaces and being crumbly. Erosion grades ranged from grade 1 (no surface erosion) to grade 5 (heavily eroded with normal surface morphology masked), however most were grade 3 (most surfaces affected by erosion). All were adult except for the clavicle, which is from a neonate (approximately birth-28 days old). One (fill 2530, Middle Bronze Age ditch **1057**) was possibly a young

adult (18-25 years), but this observation is based on the degree of attrition on an incomplete set of molars, which is not very reliable (Brothwell 1981). Three skull fragments had features preserved that were diagnostic of sex and from these it was determined that one was a probable male and two were possible males. No pathology was observed, but two femurs, two skulls and one fibula had ancient modifications. Among them was a deep striation on a skull fragment (fill 994, Middle Bronze Age ditch **995**), from the occipital bone, and is a cut/chop mark that had been made to the back of the head. Femur fragment (fill 2105, Early Roman pit **2104**) had cut marks and a polished margin, possibly as a result of having been worked. The other modifications were less clear and may have been environmentally and/or anthropogenically induced. Full, detailed analysis and description of the modifications is required.

*Neonates 1995 (fill 1994, grave **1993**), 3174 (fill 3193, grave **3194**), 3298 (fill 3297, grave **3299**) and 3594 (fill 3593, grave **3595**)*

B.1.46 Four Late Iron Age neonates were found in pits and ditches. They were lying in crouched positions on their right hand side (3174, 3298 and 3594) and, in the case of 1995, on their front with their head to one side. All were generally well preserved being either 80% or 90% complete with slight to moderate fragmentation. Bone surface condition was good to fair ranging from McKinley (2004,16) grade 1 (slight, patchy erosion) to grade 3 (some degree of erosion affecting the bone).

B.1.47 All skeletons had at least one complete bone (either a tibia or a femur) and tooth buds surviving which allowed age to be estimated based on diaphyseal lengths (Scheuer and Black 2000) and dental development (Moorees *et al*. 1963). The measurements and stages of dental development for all suggest that they were between birth and 28 days old when they died. It is not possible to say, based on macroscopic analysis alone, whether any of these were still or live births. There was no evidence for any pathology or abnormality.

Skeleton 813

B.1.48 Skeleton 813, of Middle Bronze Age date, was found towards the bottom of pit 812. The skeleton comprised skull, arm bones and ribs and was approximately 30% complete. The overall condition of the bone, which was relatively uneroded (McKinley grade 1; 2004,16), was good and had suffered fragmentation that was scored as medium. Although sexually dimorphic features of the skull had survived, they were not particularly diagnostic of either sex. A review of these features would be beneficial. The skeleton was an adult, but it was not possible to estimate a more precise age. The incompleteness and fragmentary nature of the bones means that only limited information can be obtained regarding non-metric traits and no measurements can be recorded.

B.1.49 The distal third of the left ulna had been amputated, leaving a stump of smooth remodelled new bone. The distal end of the radial shaft from the same side had been broken, the broken margin appearing to have features that suggest it was ancient (the margins were smooth, but not healed). Detailed examination of the fracture margin should be pursued at full analysis.

*Skeleton 2565 (fill 2564, grave **2566**)*

B.1.50 Approximately 45% of this skeleton had survived. The individual, of Late Iron Age date, had been buried in an extended position and was lying on their left hand side with their head to the north. The bone was judged to be good/fair with slight surface erosion

(grade 2, McKinley 2004,16). The preservation of the pelvis, skull and intact long limb bones means that it will be possible to examine this skeleton for the full range of information that is usually obtained during most standard full analyses of human remains from archaeological sites (Brickley and McKinley 2004). This includes information relating to age, sex, stature, the presence/absence of non-metric traits and pathology. Provisional observations suggest that the skeleton was probably female aged between 25 and 35 years. No pathology or abnormality was observed on the bones, but closer analysis is needed to confirm this.

*Skeletons 1351 and 1352 (fill 1353, grave **1350**)*

B.1.51 These Early Roman skeletons were buried together in the same grave alongside one another, in supine, extended positions. Both were approximately 50% complete, were highly fragmentary and were in good or fair condition (McKinley grade 2 or 3, 2004,16). Sufficient indicators had survived in both skeletons to estimate that one was a possible female (1351) and one was a possible male (1352). The male may have been younger (possibly by more than a decade) than the female, but this requires further analysis. The highly fragmentary nature of the remains precludes any detailed metrical or non-metrical analyses. However, pathological lesions were noted in passing (osteoarthritis and cortical defects, the latter possibly from muscle exertion) and therefore the remains should be examined in more detail to record the extent of the lesions and confirm the full extent of pathology.

Context number	Period	Context	% present	Condition (erosion/ fragmentation)	Sex	Age	Pathology
813	MBA	pit	30.00%	1/medium fragmentation	?	Adult	Amputated left ulna
1995	LIA	Prone with head facing west and legs tightly flexed. Buried in grave that had been dug into bottom of enclosure ditch when ditch was still open	90%	1; low fragmentation	N/A	Neonate	None
2565	LIA	Grave, Extended burial, prone??	45%	2; medium fragmentation	probable female	25-35	None
3174	LIA	crouched, lying on rhs in grave with head facing south	90%	1; low fragmentation	N/A	Neonate	None
3298	LIA	crouched, lying on rhs, buried in top of ditch, probably after ditch had silted up.	80%	3; medium fragmentation	N/A	Neonate	None
3594	LIA	crouched? Lying on rhs, otherwise could not determine position; found in base of pit	80%	2; low fragmentation	N/A	Neonate	abnormal bone turn over – metabolic disease??
1351	ER	supine extended, in same grave alongside 1352	50%	2; high fragmentation	possible female	Adult	OA spine
1352	ER	supine extended, in same grave alongside 1351	50%	3; high fragmentation	possible male	Young adult	unusual cortical defects on clavicles

Table 87: Summary of osteological assessment of articulated skeletons from Area E

Area F

*Skeleton 531 (fill 547, cultivation strip **526**)*

B.1.52 This Early Roman east-west orientated inhumation comprised a skeleton that was approximately 40% complete and was represented by remains of skull, arm and leg bones. The bones were in a poor condition overall, being extremely fragmentary and eroded (McKinley grade 3; 2004,16). However, despite its poor condition, it was possible to conclude that the skeleton was an adult and, based on a surviving occipital protruberance, possibly male. Healed periostitis, and possibly osteitis (non-specific bone inflammation), were observed on some bone fragments. While there is no potential for obtaining metrical or non-metrical data, or more precise age or sex data from these remains, the full extent of the pathological lesions should be explored further.

*The Monument (inner ditch **115**)*

Disarticulated bone spread 246

B.1.53 The remains with this context number comprise a spread of disarticulated bone found in association with bracelets and butchered animal bones in the upper fill of the southern side of inner ring ditch **115**. They have been assigned a Late Roman date.

B.1.54 The bones include fragments of skull, femur, clavicle, tibia, ribs, vertebrae, radius and possible pelvis. All were very incomplete with fair to poor surface preservation (grades 3-4; McKinley 2004,16). Preliminary observations suggest that they represent one individual, although further analysis is needed to confirm this. No features had survived that will allow the sex or age of the remains to be estimated, although overall morphology suggests an adult. Non-specific bone inflammation was observed on the endo-cranial surface of some skull fragments.

B.1.55 Ancient modifications identified on the bones include burning on one, possibly two skull fragments and cut marks on a fragment of clavicle. In addition, the fracture margins of a probable tibia shaft had features indicative of dry or wet bone breakage (i.e. ancient fracturing of the bone when the organic content was at least partially intact).

B.1.56 The remains have limited potential for any further information regarding the age and sex, but further analysis is recommended to confirm the minimum number of individuals present, record the full extent of pathological lesions and undertake detailed examination and recording of the ancient modifications.

Disarticulated bone 653, 654, 658, 661,662, 663 and 799

B.1.57 Deriving from the same context as disarticulated bone spread 246 were small groups of disarticulated bones and single bones, also of Late Roman date. These are considered together here.

B.1.58 They comprised fragments from several different parts of the skeleton, including small (for example, patella) and large bones (for example, lower limb bones and pelvis), although there was a preponderance of skulls and fibulae. None appeared to be articulated, but this requires clarification by further analysis of plans, photographs, context sheets and stratigraphy.

B.1.59 The fragments represented several individuals, but it was not possible to estimate, at this stage, the minimum number of individuals (MNI) present because bones were too fragmentary to apply standard anthropological methods that employ gross anatomical landmarks (Buikstra and Ubelaker 1994). The application of higher resolution methods

for estimating the MNI, such as zonation (knüsel and Outram 2004), combined with refitting exercises and detailed analysis of spatial relationships of bones is required to explore this further.

B.1.60 The majority of bones were probably those of adults, based on their overall size and cross-sectional appearance. A small number of bones were notably gracile (clavicles and metatarsals), and this may be because they are from individuals who had not attained adulthood when they died. However, this is far from certain because none of the biological indicators, that are employed in standard methods to age and sex human skeletal remains (Brickley and McKinley 2004; Buikstra and Ubelaker 1994), had survived.

B.1.61 Two bones, both skull fragments, were noted in passing as having pathological lesions. In one, the changes were on the endocranium and consisted of fine layers of new bone, a non-specific condition that may be caused by many conditions such as anaemia, trauma and meningitis (Lewis 2002). In the other, the lesions were on the outer and inner table of the parietal bone of the skull and consisted of sieve-like porosities. This may have been caused by metabolic deficiency, but it requires further investigation.

B.1.62 Three skull fragments had been burnt. Two of the fragments were buff white with blue/black tips (context 661) and one of the fragments was blackened along one of its edges (context 246). This colour variation indicates differential exposure to heat, the white colour being consistent with bone that has oxidised due to high temperatures and the black/blue colours being consistent with lower temperatures, even singeing. Approximately three further fragments of bone (all context 246) were noted for discolouration, being a grey/green colour in places. This is probably the result of contact with metal in the burial environment. Probable or possible ancient cut marks were noted in passing on several fragments (see Table 88).

Context number	Context	Period	Condition (McKinley grade/ fragmentation	Element/s	Age/sex	Pathology	Modifications
246	Spread of bone associated with bracelets	LR	1-4/ extremely fragmentary (identification of elements is difficult);	skull, femur, flat bones (? ribs/pelvis), vertebrae, tibia, radius	Adult/?	possible endocranial lesions/ sinusitis	burning (skull), cut marks (clavicle), copper staining, possible dry/wet bone fracture (tibia)
531	discrete E-W inhumation	ER	3/extremely fragmentary (identification of elements is difficult)	skull, femur, fragments of long bones, humerus, radius, ulna, 4 teeth	Adult/ ?Male	osteitis	None
653	bone from ditch fill	LR	3, single fragment	fibula	Adult/?	None	?cut marks
659	disarticulated bones from ditch fill	LR	2-4/ fragments	clavicle, patella, skull, fibula fragments, metatarsals,	Adult/?	None	cut marks (clavicle), one fragment of fibula may be burnt
661	bone from ditch fill	LR	3-4/ fragments	skull, fibula	Adult/?	None	burning, ?cut marks
654	bone from ditch fill	LR	5/ fragments	fibula	Adult/?	None	?cut marks

Context number	Context	Period	Condition (McKinley grade/ fragmentation	Element/s	Age/sex	Pathology	Modifications
662	bone from ditch fill	LR	3/fragments	skull, ?fibula	Adult/?	None	None
663	bone from ditch fill	LR	3/fragments	Skull	Adult/?	increased porosity (ectocranial)	None
799	bone from ditch fill	LR	2/single fragment	rib	?	None	None
654	disarticulated bones from ditch fill	LR	2-3/ fragments	skull, long bone, pelvis	Adult/?	None	None
654	Bone from ditch fill	LR	4/fragments	1 tibia	Adult	?periostitis	None (but detailed analysis may identify some?)

Table 88: Summary of osteological assessment of human remains from Area F

Statement of Potential and recommendations

B.1.63 Collectively, the human remains from Clay Farm (16 articulated skeletons, four cremation deposits and a quantity of bone fragments from 16 different contexts) are highly significant in that they comprise a good example of a multi-period funerary assemblage. They therefore have the potential to contribute to current understanding of funerary practices, demography, physical attributes and health of individuals spanning the Iron Age to Roman periods from a single landscape. The osteological potential of the remains to contribute to these aspects is considered further below. Cremation deposits, articulated skeletons and bone fragments are discussed separately.

Cremation deposits

B.1.64 All of the cremation deposits contained moderate to frequent diagnostic elements and therefore there is potential to retrieve information relating to demography, palaeopathology and funerary rite. It is recommended that all cremation deposits are fully analysed.

Articulated skeletons

B.1.65 Of the 16 articulated skeletons, four neonates (1995, 3174, 3298 and 3594) from Area E require no further analysis because their full potential has been realised at this assessment stage (i.e. all possible information that may be obtained has been recorded). The remaining 12 skeletons all have potential for further analysis, but to varying degrees (see Table 89).

B.1.66 With the exception of a small number of skeletons, the majority were incomplete, fragmentary and had eroded surfaces. Nine out of the twelve had indicators surviving that will allow their sex to be estimated. For the majority this will be based on one or two indicators only. Sex estimation is more accurate if it is based on a range of skull and pelvic indicators (Buikstra and Ubelaker 1994). This is also true of age estimation, which will be possible for 11 of the 12 skeletons. For four of these it will only be possible to say they are adults, rather than assign them to a specific age range. In addition, with the exception of one skeleton (6036), only one or two age indicators (some of which are incomplete) are available. Skeleton 6036 has the full range of sex and age indicators

surviving, and therefore the potential to assign more confident estimations is high. Only three skeletons have complete bones surviving for stature estimation, or four if the measurements taken *in situ* for Skeleton 10896 are included. Besides stature, other analyses to explore physical attributes will be very limited because no skulls have survived in tact and only a small range of post-cranial measurements (such as those for calculating platymeric and platycnemic indices) will be possible. Non-metric analyses will also be very limited.

B.1.67 Considering that most of the skeletons were incomplete, eroded and very fragmentary, the above results indicate potential for a sufficient body of data to be obtained from them nonetheless. Further, the potential for palaeopathological observations are surprisingly high. A broad range of pathological conditions have already been noted in passing, including an amputated arm, osteoarthritis, non-specific inflammation, degenerative disc disease, cribra orbitalia and spondylolisis with possible spondylolisthesis.

B.1.68 Six of the skeletons (6487, 6036, 13057, 813, 1351, 1352 and 2565) had teeth surviving. In addition to the potential they have for exploring dental pathology, they also afford the potential for exploring the geographic origins and diets of the individuals by the application of isotope analysis.

B.1.69 It is recommended that further analysis of 11 articulated skeletons is undertaken. For three skeletons (6394, 1351 and 1352), this will be limited to completing a detailed inventory of all bones present, reviewing observations relating to age and and sex, and examining bones for any pathology or abnormality which, where present, will be fully described. Analysis of the remaining skeletons will also include recording of non-metric traits (6487, 10325, 13057, 813, 6550, 6036, 10896 and 2565), and metrical recording (6550, 6036, 10896 and 2565). No further work is recommended for skeleton 10831, or the neonates (1995, 3174, 3298 and 3594) from Area E, although it is recommended that their records are reviewed. Radiocarbon dating the skeletons is also recommended. Skeletons that have surviving dentitions should also be considered for isotope analysis, if this fulfils the overall project research aims.

		Potential (yes/no)				
Area	**Skeleton No.**	**Sex (indicator)**	**Age (indicator)**	**Metrics (bone)**	**Non-metrics**	**Pathology / ancient modification**
Area A	6550	Not relevant	Yes / diaphyseal length	Yes / Femur, ulna	Not relevant	Yes
	6394	Yes / fragmentary sciatic notch	Yes / fragmentary auricular surface	No	No	Yes
	6487	Yes / skull	Yes / incomplete dentition	No	Yes (limited)	Yes
	6036	Yes / full range	Yes / full range	Yes / (major long bones, incl. femur)	Yes (full range)	Yes
Area C	10325	No	Yes / no more precise than 'adult'	No	Yes (very limited)	Yes
	10896	Yes / skull	Yes / no more precise than 'adult'	Yes / measured in situ for stature	Yes (limited)	Yes
	10831	No	No	No	No	No
Area D	13057	Yes / skull	Yes / no more precise than 'adult'	No	Yes (limited)	Yes
Area E	813	Yes / skull (but diagnostic?)	Yes / no more precise than 'adult'	No	Yes (limited)	Yes
	1351	Yes / skull	Yes / dentition?	No	No	Yes
	1352	Yes / skull	Yes / dentition	No	No	Yes
	2565	Yes / skull & pelvis	Yes / dentition & pelvis	Yes / (major long bones, incl. femur)	Yes (a moderate range)	Yes

Table 89: Summary of osteological potential of articulated skeletons from Areas A-F (excludes neonates 1995, 3174, 3298 and 3594)

Bone fragments (Areas A, B, C and E)

B.1.70 Human bone fragments were assessed from 15 separate contexts from Areas A, B, C and E. The overall condition of these was poor (although there were some exceptions). The osteological potential of all of these fragments has been realised at this assessment phase, including element identification, minimum number of individuals

(MNI), estimation of age and sex and observations relating to palaeopathology and ancient modification.

B.1.71 The fragments represent an MNI of 15 (one individual from each context). Two are neonates and the remainder are adults, three probable or possible males and 10 of unknown sex. Pathological lesions were observed on fragments from at least five contexts and include bone inflammation and, if provisional diagnosis proves to be correct, the earliest example of Paget's disease ever found in Britain. In addition, probable or possible ancient modifications, including cut marks, chop marks and polishing were observed on fragments from at least eight contexts. Two of the more interesting fragments, both Early Roman, are polished and cut marked skull (11576) and femur (2105) fragments, both of which may have been worked. Anthropogenically modified bones such as these are known from other Early Roman contexts, but they are not widely reported in the published literature. Contemporary examples include an adult frontal bone from Gill Mill, Oxfordshire, which had cut marks and a small perforation, possibly a drill hole (Clough and Loe, unpublished) and a longitudinally split adult femur with associated cut marks from Alveston Swallet, Gloucestershire (Cox 2001).

B.1.72 The overall potential of the these remains is considered to be low in terms of biological information (age, sex), but high in terms of information pertaining to pathology and ancient modification. No further analysis for biological information is therefore required, but it is recommended that detailed analysis of pathology and modifications should be undertaken. In addition it is recommended that the possible pagetic bone is radiographed in order to confirm a diagnosis. Radiocarbon dating is also recommended to confirm the dates of the remains.

Bone fragments (Area F)

B.1.73 Bone fragments from the upper fills of ring ditch **115** in Area F, including bone spread (246) and seven isolated fragments or groups of fragments (653, 654, 658, 661, 662, 663 and 799) were in a poor condition overall. The absence of anatomical landmarks means that observations regarding age and sex will be very limited. However, preservation should be sufficient for examining the bones in greater detail to determine the MNI present. In addition, ancient modifications (burning cut marks and peri-mortem fracturing) are preserved on some surfaces and are important for exploring the depositional history of the remains. For example, the anatomically meaningful location of the cut mark on a clavicle from fill 246 suggests that it may have been made to de-flesh the bone, possibly as part of a mortuary processing ritual.

B.1.74 It is recommended that all fragments are examined in greater detail to establish a more accurate MNI, review age and sex and record, in full, pathology and ancient modifications. Radiocarbon dates should be obtained from a selection of the bones.

Methodology for further work

B.1.75 Further analysis of articulated skeletons and bone fragments will be undertaken in accordance with the guidelines set out by Brickley and McKinley (2004). Where possible, sex will be estimated by employing sexually dimorphic features of the skull and pelvis (Phenice 1969; Bass 1987; Buikstra and Ubelaker 1994). This applies to adults only because there are currently no methods that are considered reliable for estimating the sex of juveniles (Brickley and McKinley 2004). Juvenile ages will be estimated by employing the measurements of diaphyses with reference to the relevant tables in Scheuer and Black (2000), and by observations relating to the eruption and development of the teeth (Moorees *et al*. 1963; Scheuer and Black 2000). Adult ages

will be estimated by employing, where possible, multiple indicators, including the auricular surface (Lovejoy *et al*. 1985; Buckberry and Chamberlain 2002), pubic symphysis (Brooks and Suchey 1990) and dental attrition (Brothwell 1981; Miles 1962, 2001). Skeletons will be assigned to one of the age categories in Table 90.

Age category	**Age range**
Juvenile	
Pre-term	<37 weeks gestation
Neonate	Birth-1 month
Infant	1 month-1 year
Young child	1-5 years
Older child	6-12 years
Adolescent	13-17 years
Juvenile (unspecified)	<18 years
Adult	
Young adult	18-25 years
Prime adult	26-35 years
Mature adult	36-45 years
Older adult	>45 years
Adult (unspecified)	>18 years

Table 90: Age categories employed for full analysis

B.1.76 Metrical analysis will involve a standard set of measurements (Brickley and McKinley 2004) and, for the estimation of stature, the bone with the lowest margin of error will be employed in the equations set out by Trotter and Gleser and revised by Trotter (Trotter and Gleser 1952; 1958; Trotter 1970). Non-metric analysis will refer to the recommendations of Brothwell and Zakrzewski (2004, 27-28). In addition, all pathological lesions will be described, photographed and, where required, radiographed. Differential diagnoses will be explored by reference to standard texts (for example, Aufderheide and Rodriguez-Martin 1998; Ortner 2003 and Resnick 1995).

B.1.77 Detailed analysis of probable or possible ancient modifications, including cut marks, will include detailed visual inspection of all bones by slowly rotating them relative to the light source (Blumenschine *et al*. 1996). Any modifications would be examined and digitally photographed using a microscope (up to x 50 magnification) and where present these should be recorded with reference to their location, orientation, shape, profile, texture, and other such features (see Loe and Cox 2003). Modifications will be interpreted with reference to relevant literature on ancient modification (for example, Shipman 1981).

B.1.78 Calculation of the MNI for the ring ditch in Area F will be undertaken by identifying fragments, where possible, to anatomical zone, as described by Knüsel and Outram (2004), in conjunction with observations relating to the repetition of elements and size differences (Buikstra and Ubelaker 1994). A re-fitting exercise and analysis of the spatial distribution of the bones will also be employed. Recording fragments to anatomical zone will not only facilitate the calculation of the MNI, but it will also make the assemblage directly comparable with the butchered animal bone found within the same context, so that their relationship to each other, and hence depositional history, can be explored.

B.1.79 Cremation deposits will be washed and sieved to sort them more fully into groups comprising fragments that are >10mm, 10-4mm and 4-2mm in size. Deposits will be examined in accordance with standard practice (Mays *et al*. 2004; McKinley 2000). In addition to the information already obtained, this would include, for each deposit, the identification of skeletal elements (where possible) to explore whether there has been a selection process favouring certain skeletal parts over others. The cremation processes

employed would also be explored, giving consideration to the range of colours and fragmentation patterns on different elements/body regions. The minimum number of individuals represented would also be confirmed based on the repetition of elements, combined with observations relating to age and size differences (Buikstra and Ubelaker 1994). Ages and sexes would be estimated (where possible) and pathology described and diagnosed, as described above. The full analysis would also involve detailed examination of the depositional context, and any associated artefacts and burnt material.

B.1.80 The findings of all of the above analyses, osteological and funerary data combined, will be contextualised by comparisons with contemporary examples that exist locally, regionally and nationally in both the grey and published literature. For example, this includes data on the orientation of Bronze Age crouched inhumations in relation to the sex of the individual (Ray 1999) and modified bones from Iron Age and Early Roman contexts (Cox, 2001; Cunliffe and Poole 1991; Knüsel and Carr, 2005; Redfern 2008).

Task	**Days**
Sorting cremations	1
Analysis of 4 cremations	1.5
Analysis of 11 articulated skeletons	4 days
Analysis of bone fragments (Areas A, B, C and E)	2 days
Analysis of bone fragments (Area F)	3.5 days
Radiography	
Full report with comparisons (including research and review)	4 days
TOTAL	**16**

Table 91: Human skeletal remains task list

B.2 Faunal Remains

By Chris Faine

Introduction

B.2.1 A total of 385kg of hand collected bone (see below) was recovered from the excavation. This constituted 11,548 fragments, with 8748 identifiable to species or classified as "Large/Medium Mammal" (75% of the total sample, see below). Material from environmental samples is not included in this assessment. Preservation is largely good, with gnawing being observed on many elements.

Methodology

B.2.2 All data was initially recorded using a specially written MS Access database. Bones were recorded using a version of the criteria described in Davis (1992) and Albarella & Davis (1994). At this preliminary stage all elements were scanned and assessed in terms of species, siding (where appropriate), and completeness. Completeness was expressed in terms of percentage and zones present (after Dobney & Reilly 1988). Elements not identifiable to species were classified as "Large or Medium mammal" sized where possible. The entire identifiable assemblage was quantified in terms of number of individual fragments (NISP). Numbers of ageable mandibles (after Grant 1982), and measurable elements (after Von Den Driesch 1974). Numbers of bones available for analysis of epiphyseal fusion rates (after Silver 1969) were also recorded.

Assessment Results

B.2.3 Table 92 shows the species distribution for the entire assemblage by phase in terms of identifiable fragments (NISP). Numbers in brackets refer to articulated skeletons. No faunal remains were recovered from Post-Roman and Medieval contexts. The vast majority of identifiable remains were recovered from Middle to Late Bronze Age contexts, with 1563 fragments identifiable to species. The remainder of the sample is concentrated in the Early Iron Age to Early Romano-British periods, with the majority being recovered from Late Iron Age/Early Roman contexts. Few elements were recovered (4% of the total sample) from other phases. The assemblage is dominated by the domestic mammals, along with smaller amounts of wild fauna including Red/Roe deer, rabbit, polecat and bird (bird remains were not identified to species at this stage). Of particular interest is the large number of dog remains in relation to domestic species in the Middle Bronze Age sample. Whilst rates of dog are also high in the Late Iron Age/Early Roman sample this can be attributed to the presence of articulated animals.

B.2.4 The species distribution is mirrored in the numbers of ageable, measurable and sexable elements, with the majority of these also coming from the Middle Bronze Age cattle assemblage (see Tables 93, 94, 95, 96). In terms of ageable elements large numbers of epiphyses were recovered from the main domestics from all phases as a proportion of sample size. There is however a lack of ageable mandibles from Early/Middle Iron Age contexts in proportion to sample size (see Table 94). Few ageable pig mandibles were recovered from all phases. Sexable elements are largely confined to the cattle and deer samples due to the presence of horncores and antler fragments. However, further sexing information for a wider species range would be available after further metrical analysis, particularly for the ovicaprid sample.

Statement of Research Potential

B.2.5 This a large and significant assemblage with great potential to add to our knowledge of animal husbandry in the surrounding area. Of particular interest is the large Middle-Late Bronze Age assemblage. This is by far the largest assemblage of this period excavated in Cambridgeshire to date. Whilst numerous contemporary assemblages exist (especially further to the north around the fen edge), many are of a small nature or too fragmentary to be of use as comparative sites. Other Middle Bronze Age assemblages include Pode Hole Quarry (Daniel 2009), Brigg's Farm, Thorney (Pickstone and Mortimer 2011), Eye Quarry (Patten 2004), Langtoft (Hutton 2008a, 2008b) and Bradley Fen (Gibson & Knight 2006). Of these Bradley Fen is the most suitable comparative site in terms of sample size, although at the time of writing the material has been assessed only. Indeed similar sites are scarce further afield, with the nearest Middle Bronze Age assemblage of comparable size being recovered from Heathrow Terminal 5 (Knight & Grimm 2010).

B.2.6 Although smaller in size compared to the Middle Bronze Age assemblage the Iron Age to Early Roman samples are still significant and warrant further analysis. There are numerous contemporary sites in the area including the Trumpington Plant Breeding Institute (Lyons in prep (b)) for the Middle Iron Age and the Hutchison Site, Addenbrooke's (Evans 2008) and Babraham Road, (Hinman 1999) for the Late Iron Age/Conquest assemblage.

Further Work and Methods Statement

B.2.7 The assemblage will require full recording and analysis. All bones will be fully recorded using a specially written MS Access database. Recording will use a version of the criteria described in Davis (1992) and Albarella and Davis (1994). In brief, all teeth (lower and upper) and a restricted suite of parts of the skeleton will be recorded and used in counts. These are: horncores with a complete transverse section, skull (zygomaticus), atlas, axis, scapula (glenoid articulation), distal humerus, distal radius, proximal ulna, radial carpal, carpal 2+3, distal metacarpal, pelvis (ischial part of acetabulum), distal femur, distal tibia, calcaneum (sustenaculum), astragalus (lateral side), centrotarsale, distal metatarsal, proximal parts of the 1st, 2nd and 3rd phalanges. At least 25% of a given element must be present for it to be counted. The presence of large (cattle/horse size) and medium (sheep/pig size) vertebrae and ribs will be recorded for each context but not used in counts. Where practicable, these elements are attributed to taxon and numbers present estimated on the basis of vertebra centra and the heads of ribs. This information is retained on the animal bone database. Each element will be identified to species where possible using comparative collections and reference manuals. Siding is noted for the purposes of calculating MNI's. Where applicable the number of diagnostic zones is noted for each element (after Serjeantson 1996). Epiphyseal fusion data will also be recorded (after Silver 1969). Tooth wear data for domestic mammal loose molars and mandibles (after Grant 1982) is recorded to provide further ageing data. In addition to adult molars the presence of any other teeth i.e. deciduous, will also be noted. Where possible sexing is carried out via morphological criteria (e.g. Hatting 1995, Armitage and Clutton-Brock 1976), or metrical analysis (e.g. Grigson 1982, Ruscillo 2006, Greenfield 2002). Metrical analysis follows Von Den Driesch (1976), Grigson (1982) & Payne and Bull (1988). This information is used to aid in species differentiation e.g. between sheep and goat (after Boessneck 1969, Halstead *et al* 2002). Identification of horse versus other equids is carried via morphological criteria after Baxter 1998, Davis 1980 and Eisenmann 1986.

	Cattle	Sheep/Goat	Pig	Horse	Dog	Bird	Other	Large Mammal	Medium Mammal	Total	Comments
1 (Neolithic)	1	0	1	0	0	0	0	0	0	2	
2 (EBA)	0	0	2	0	0	0	0	0	0	2	
3 (M/LBA)	967 (1)	388 (2)	105	21	65	1	16	1500	522	3585	Red/Roe Deer, Polecat, Rabb
4 (EIA)	202	95	31	20	10	0	12	377	99	846	Red/Roe Deer
5 (MIA)	171	77	7	22	8	2	1	400	175	863	Red Deer
6 (LIA)	216 (1)	81	69	33	33(1)	0	2	550	88	1072	Red Deer
7 (ERB)	264	108	35 (1)	77	35 (1)	3	3	1002	300	1827	Red/Roe Deer
8 (LRB)	24	5	1	3	0	1	2	104	22	162	Red Deer
11 (Post-Med)	4	5	2	0	0	0	0	5	6	22	
12 (Mod)	1	0	0	0	0	0	0	2	0	3	
?	22	18	2	9	3	0	1	222	87	364	Red Deer

Table 92: Species distribution for the assemblage

	Cattle	Sheep/Goat	Pig	Horse	Dog	Bird	Other	Total
1 (Neolithic)	1	0	0	0	0	0	0	1
2 (EBA)	0	0	1	0	0	0	0	1
3 (M/LBA)	343	137	37	8	26	1	1	553
4 (EIA)	75	41	8	10	2	0	1	137
5 (MIA)	70	16	2	12	2	1	0	103
6 (LIA)	90	35	7	10	16	0	0	158
7 (ERB)	84	42	17	36	16	0	1	196
8 (LRB)	9	0	0	1	0	1	0	11
11 (Post-Med)	0	0	0	0	1	0	0	1
12 (Mod)	1	0	0	0	0	0	0	1
?	5	12	1	3	1	0	1	23
Total:	**678**	**283**	**73**	**80**	**64**	**3**	**4**	**1185**

Table 93: Number of bones with epiphyses

	Cattle	Sheep/Goat	Pig	Horse	Total
1 (Neolithic)	0	0	0	0	0
2 (EBA)	0	0	0	0	0
3 (M/LBA)	64	44	11	3	122
4 (EIA)	3	8	4	0	15
5 (MIA)	7	7	2	2	19
6 (LIA)	16	6	1	2	25
7 (ERB)	19	6	1	0	26
8 (LRB)	3	2	0	0	5
11 (Post-Med)	0	2	0	0	2
12 (Mod)	0	2	0	0	2
?	0	0	0	0	0
Total:	**112**	**77**	**19**	**7**	**216**

Table 94: Number of ageable mandibles

	Cattle	Sheep/Goat	Pig	Horse	Dog	Bird	Other	Total
1 (Neolithic)	0	0	1	0	0	0	0	1
2 (EBA)	0	0	0	0	0	0	0	0
3 (M/LBA)	225	72	23	3	17	0	0	340
4 (EIA)	35	26	7	9	3	0	0	80
5 (MIA)	51	12	2	9	2	0	0	76
6 (LIA)	43	15	3	14	17	0	0	92
7 (ERB)	46	22	9	17	5	0	0	99
8 (LRB)	7	0	0	0	0	0	0	7
11 (Post-Med)	1	2	1	0	1	0	0	4
12 (Mod)	1	4	0	0	0	0	0	5
?	10	0	0	1	0	0	1	12
Total:	**419**	**153**	**46**	**53**	**45**	**0**	**1**	**717**

Table 95: Number of measurable elements

	Cattle	Sheep/Goat	Pig	Horse	Dog	Bird	Other	Total
1 (Neolithic)	0	0	0	0	0	0	0	0
2 (EBA)	0	0	0	0	0	0	0	0
3 (M/LBA)	41	3	4	0	0	1	7	56
4 (EIA)	12	3	5	0	3	0	8	31
5 (MIA)	7	0	0	0	0	1	1	9
6 (LIA)	3	0	3	0	2	0	2	10
7 (ERB)	8	0	0	0	0	0	2	10
8 (LRB)	1	0	0	0	0	0	2	3
11 (Post-Med)	1	0	0	0	0	0	0	1
12 (Mod)	0	0	0	0	0	0	0	0
?	0	0	0	0	0	0	0	0
Total:	**73**	**6**	**12**	**0**	**5**	**2**	**22**	**120**

Table 96: Number of sexable elements

B.3 Environmental samples

By Rachel Fosberry

Introduction and methods

B.3.1 A total of eight hundred and forty-one samples were taken during the excavations. These include bulk samples (average size of 20L) taken in order to assess the quality of preservation of plant remains and their archaeobotanical potential, and monolith samples for pollen assessment.

B.3.2 Initially 10 litres of each sample was processed by water flotation (using a modified Siraff three-tank system) for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The flot was collected in a 0.3mm nylon mesh and the residue was washed through a 0.5mm sieve. Both flot and residue were allowed to air dry. The flot of each sample was examined under a binocular microscope at x16 magnification and was scored for cereals, chaff, weed seeds, charcoal, small bones etc. Based on this initial appraisal, those samples deemed to have archaeobotanical potential then had the full volume of soil processed (the remaining buckets) and will then be subjected to a more detailed examination in which cereals and weed seeds will be identified. Identification of plant remains is with reference to the Digital Seed Atlas of the Netherlands (Cappers, 2006) and the authors own reference collection. Nomenclature for the plant classification follows Stace (1997). It should be noted that processing only 10L of a sample gives a good general idea of potential and distribution of plant remains but there is the danger that, if a deposit is of large volume, 10L will not be representative. In this case the uniformity of a 10L sample size provided both positive and negative evidence that can be properly assessed for the entire site.

B.3.3 Sample residues were passed through a 10mm sieve and the larger fraction discarded (any finds >10mm were retained with the smaller fraction). Each residue was scanned by eye and any artefacts or ecofacts noticed were recorded and tabulated. This information will be used during later analysis if required.

B.3.4 Sixteen samples contain significant quantities and diversities of plant remains preserved by waterlogging. Waterlogged samples are time consuming to properly prepare and sort. As a cost-effective, time-saving measure, 10L of each waterlogged sample was processed by flotation and the flot allowed to air dry. A rapid scan provided an assessment of the quantity and diversity of plant and insect remains. Those samples with potential were then processed by wet-sieving.

Quantification

B.3.5 For the purpose of this initial assessment, items such as seeds, cereal grains and small animal bones have been scanned and recorded qualitatively according to the following categories:

= 1-10, ## = 11-50, ### = 51+, ### = 100+ specimens

B.3.6 Items that cannot be easily quantified such as charcoal, magnetic residues and fragmented bone have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

Results

B.3.7 The results of the initial assessment of environmental samples will be presented by period and then by each discrete area of settlement or land use. The majority of the environmental samples taken from features at Clay Farm produced flots of low volume and frequently of low archaeobotanical potential. Approximately 15% of the samples produced plant remains suitable for further archaeobotanical study.

Neolithic

B.3.8 Three bulk samples were recorded as having been taken but only two samples were submitted for processing.

B.3.9 Sample 542, fill 5789, pit **5788** is preserved by waterlogging and contains well preserved weed seeds including elderberry (*Sambucus nigra*), stinging nettles (*Urtica dioica*) and pondweed (*Potamageton sp.*)

Sample No	Context No	Cut No	Area	Feature type
542	5789	**5788**	Area B	pit

Table 97: Neolithic samples selected for assessment

Earlier Bronze Age

B.3.10 Two samples were taken from pits dated to the Earlier Bronze Age. Both samples contained only sparse charcoal flecks and neither were suitable for further archaeobotanical study.

Middle – Late Bronze Age

B.3.11 A total of two hundred and ninety-four samples were taken from contexts dated to the Middle – Late Bronze Age. The majority of the samples were taken from deposits within the deep ditches that characterize the MBA period at Clay Farm. Other features sampled include pits, post holes, three wells and three waterholes.

Feature type	*ditches*	*natural*	*gully*	*pit*	*Post hole*	*trough*	*unknown*	*Well/ waterhole*
Total No of samples	193	4	1	68	20	2	1	5
Area A	14							
Area B	68	1		28	1	2		3
Area C	19		1	7	9			
Area D	9			3				2
Area E	83	3		30	10		1	

Table 98: Middle Bronze Age samples by feature type and by area

B.3.12 Of the one hundred and ninety-three ditch samples, 8% are devoid of plant remains, 57% contain plant remains preserved by charring, 18% contain a mixture of charred and waterlogged plant remains and 17% contain only waterlogged remains. The remaining ditch samples were not processed for the recovery of plant remains and include pollen samples, wood and pot residues.

B.3.13 Charred plant remains include charred cereal grains (occurring in approximately 30% of the ditch fills) and occasional chaff elements. The cereals have been tentatively identified as emmer wheat (*Triticum dicoccum*) and barley (*Hordeum vulgare*). Charred weed seeds occur rarely and include vetches (*Vicia sp.*), goosefoot (*Chenopodium sp.*),

cleavers (*Galium sp*.), dock (*Rumex sp*.), clover/medick (*Trifolium/Medicago sp*.), knotgrass (*Polygonum aviculare*) and tubers of false oat grass (*Arrhenatherum elatius*)

B.3.14 In the majority of the ditch samples that contain plant remains they were preserved by both charring and waterlogging, the waterlogged component is comprised of abundant elderberry seeds only (i.e. no other plant parts such as roots/stems are present). These samples are predominantly from primary deposits in the MBA ditches. One of these deposits has been dated using plant remains extracted from bulk sample 263, primary fill 2684 of ditch **1016** (cut **2665**) in Area E. A single charred barley grain has been dated to 1450BC-1260 cal BC (at 95% confidence; SUERC-32557;3100 ± 40BP) and elderberry seeds from the same context were found to be contemporary 1450BC-1260 cal BC (at 95% confidence; SUERC-32556;3100 ± 40BP).

B.3.15 Of the 22 waterlogged ditch samples, nine were taken from ditch group **5228** in Area B and these samples contain abundant seeds of nettle (*Urtica sp*.), pond weed (*Potmogeton sp*.), brambles (*Rubus sp*.), club rushes (*Scirpus sp*.) and buds, berries and insects. All of the waterlogged ditch samples contain elderberry seeds.

B.3.16 Of the sixty-eight samples taken from pit deposits, sixty-one samples were processed. One sample was found to be devoid of plant remains, 52 samples contain plant remains preserved by charring, 5 samples contain a mixture of charred and waterlogged plant remains and 3 samples contain only waterlogged remains.

B.3.17 Nine of the pit samples contain sparse cereal grains, mainly as single specimens of poorly preserved indeterminate grains. A further three samples from possible pits or shallow scoops at the eastern end of ditch **4209** in Area B (sample 409, fill 4204 of pit **4205**; sample 412, fill 4251 of pit **4252**; sample 413, fill 4257 of pit **4258**) contain a moderate assemblage of emmer and spelt (*T. spelta*) wheat grains and chaff along with charred weed seeds of plants that may have been growing amongst the cereal crops such as vetch, clover and brome (*Bromus sp*.). Although recorded as pits these features were shallow and contained the same humic, midden like fill found in the Settlement 1 ditch fill (fill group 4206). The archaeobotanical remains in these features reflect the domestic occupation of Settlement 1. Other charred weed seeds recovered from the MBA pits include campion (*Silene sp*.), grass seeds (*Poaceae*) and a fragment of a possible flax seed (*Linum sp*.). Tubers of false oat grass and grass stems are also present.

B.3.18 Three of the pits contain plant remains preserved by waterlogging. Two of the samples from these features (sample 543, fill 5793 of pit **5792** and sample 510, fill 5549 of pit **5547**, both Area B) contain numerous seeds of wetland plants including sedges (*Carex sp*.), gypsywort (*Lycopus europaeus*) and a seed head of bog myrtle (*Myrica gale*) along with seeds of brambles (*Rubus sp*.) and elderberries. it is most likely that the waterlogged remains represent plant species growing around and/or within the features.

B.3.19 Seven of the pits contain uncharred elderberry seeds; one of these samples (sample 254, fill 2545 of pit **2474**) also contains a single charred elderberry seed.

B.3.20 Twenty samples were taken from post holes. Most of these samples contain no plant remains or just sparse charcoal. Six of the samples contain single cereal grains that are too poorly preserved for identification.

B.3.21 Three samples were taken from waterhole **4358** in Area B. The most productive of these samples is sample 435, fill 4424, which contains numerous nettle seeds, duckweed (*Lemna sp*.) and water crowfoot (*Ranunculus subgenus batracium*). Waterhole **13293** in Area D did not contain any waterlogged plant remains.

B.3.22 Well **5657** in Area B also was devoid of waterlogged plant remains and was found to contain occasional charred grains. Well **5709** in Area B contains a single elderberry and a sedge seed which suggests that the feature was deliberately kept clear of vegetation.

B.3.23 Thirty-four of the Middle Bronze Age samples have been selected for full archaeobotanical analysis (Table 99).

Sample Number	Context	Cut	Trench	Feature Type	Group	Prim/Sec/Tert
584	6004	5988	Area A	ditch	5815	1
428	4459	4460	Area B	ditch	4250	1
439	4532	4528	Area B	ditch	4461	1
460	4885	4798	Area B	ditch	4206	1
474	5046	4359	Area B	ditch	4206	2
479	5161	5163	Area B	ditch	4461	2
481	5183	4798	Area B	ditch	4206	2
486	5248	5251	Area B	ditch	5228	2
489	5259	5260	Area B	ditch	5228	2
491	5287	5284	Area B	ditch	5228	2
492	5307	5310	Area B	ditch	5228	2
495	5349	5331	Area B	ditch	5228	1
539	5770		Area B	ditch	5228	2
544	5759	5765	Area B	ditch	5228	
726	10349	10337	Area C	ditch	10337	2
951	13037	13038	Area D	ditch	13038	1
171	1755	1761	Area E	ditch	925	2
212	1984	1982	Area E	ditch	1982	1
301	3162	3149	Area E	ditch	3149	3
315	3577	3578	Area E	ditch	1057	2
408	4196	4197	Area B	pit	0	1
409	4204	4205	Area B	pit	4206	1
412	4251	4252	Area B	pit	0	1
413	4257	4258	Area B	pit	0	1
510	5549	5547	Area B	pit	0	2
543	5793	5792	Area B	pit	0	1
740	10437	10356	Area C	pit	0	2
748	10448	10450	Area C	pit	0	3
117	1009	1010	Area E	pit	0	1
124	1208	1213	Area E	pit	1207	3
125	1212	1213	Area E	pit	1207	1
435	4425	4358	Area B	waterhole	4358	2
157	1640	1637	Area E	well	1635	1
115	908	907	Area E		0	3

Table 99: Middle Bronze Age samples selected for analysis. Prim/Sec/Tert = Primary fill (1), Secondary fill (2), Tertiary fill (3)

Early Iron Age

B.3.24 A total of eighty samples were taken from Early Iron Age deposits that were mainly from features in the settlement spread across Area A and include pits, ditches, post-holes from sub-circular and four-post structures, two hearths, two graves and a waterhole. Isolated pits in Areas C and F were also sampled.

Feature type	*ditches*	*hearth*	*grave*	*pit*	*Post hole*	*Well/ waterhole*
Total No of samples	7	4	4	17	44	4

Area A	7	4	4	15	44	4
Area C				1		
Area F				1		

Table 100: Early Iron Age samples by feature type and by area

B.3.25 Seven samples remain unprocessed. Preservation of plant remains is by carbonisation including waterhole **5924** which contained a substantial amount of charcoal and occasional barley grains with no evidence of any waterlogged material.

B.3.26 The samples in ditch fills in Area A were mainly from the upper fills of Middle Bronze Age ditches and contained very few plant remains other than sparse charcoal. The hearth and grave samples from this area were also disappointing, their charred plant component comprised of sparse charcoal and occasional charred grains.

B.3.27 The numerous pits and post holes in Area A represent post-built structures. Samples taken from two sub-circular structures (**5804** and **5882**) contain moderate amounts of charcoal and all four samples from structure **5882** also contain small quantities of uncharred elderberry seeds. It is unclear whether these seeds are contemporary or modern contaminants. Numerous elderberry seeds occur in the lower fills of the Bronze Age ditches (ranging between 1 – 1.5m in depth), presumably due to preferential preservation of these woody seeds in deep, wet deposits. The depth of the post holes from structure **5882** varied between 0.08m and 0.14m which suggests the seeds are more likely to be modern.

B.3.28 Seven four-post structures were identified and sampled. Most of the post holes contain some charcoal and all but one structure (**6231**) contains occasional charred grains. Structure **6364** contains a significant assemblage of charred grains of barley and wheat along with chaff elements and occasional weed seeds. The small quantity of charcoal and lack of evidence of *in-situ* burning does not indicate that this structure burnt down and so the presence of charred grain within the post holes of the four-post structures does not provide evidence that they were used as granaries; the burnt grain could, however, have been included in packing material.

B.3.29 Pit **5898** contained a very large assemblage of finds and was constructed along the line of Middle Bronze Age field system ditches. Five samples from this feature were found to contain a substantial amount of charcoal along with occasional charred grains of barley. A smaller contemporary pit (**6433**) had the appearance of a storage pit, in which a cattle cranium had been placed in the base. It was found to contain only sparse charred plant remains in the form of a single charred grain and a little charcoal.

B.3.30 It would appear that the disposal of EIA settlement waste in ditches and pits within Area A was restricted to pottery, animal bone etc. and did not include hearth waste. Sample 20 was taken from fill 549 of isolated pit **593** within Area F and contains what appears to be an interesting assemblage of crop processing waste with charred cereal grains, spelt

chaff and crop weed seeds including rye-grass and grass seeds. It should be noted that this feature was close to Roman ditches in Area F that contained identical assemblages and it is probable that pit **593** has been contaminated with later material or was re-used.

B.3.31 The flots from the samples from two graves in Area A contained only a background scatter of charcoal. Five samples from Early Iron Age features have been selected for full archaeobotanical analysis (Table 101).

Sample Number	Context	Cut	Trench	Feature Type	Group	Prim/Sec/Tert
20	549	593	Area F	pit	0	1
592	6052	6053	Area A	pit	0	1
629	6365	6364	Area A	post hole	6364	1
630	6369	6368	Area A	post hole	6364	1
631	6371	6370	Area A	post hole	6364	1

Table 101: Early Iron Age samples selected for analysis. Prim/Sec/Tert = Primary fill (1), Secondary fill (2), Tertiary fill (3)

Middle Iron Age

B.3.32 One hundred and eleven samples were from features dated to the Middle Iron Age and are mostly from features within a settlement found on the higher ground in Area C, along with samples from several pits and a burial in Area A, and from elements of a field system in Area B. Preservation is predominantly by charring with a background scatter of cereal grains, chaff elements and occasional weed seeds. Occasional seeds of wet-land plants may indicate the use of rushes and sedges as fuel or for thatching or may represent damp ground.

Feature type	*ditches*	*Cremation*	*grave*	*gully*	*pit*	*Post hole*	*Ring ditch*
Total No of samples	35	2	11	14	26	7	16
Area A			4		4		
Area B	2			6		1	
Area C	33	2	7	8	22	6	16

Table 102: Middle Iron Age samples by feature type and by Area

B.3.33 The pits in Area A contained single specimens of charred cereal grains and chaff elements of no interpretative value. One of the ditches in Area B was more productive. Sample 407, fill 4171 of ditch **4172** contains occasional cereal grains, chaff and weed seeds including brome, rye-grass and grass seeds.

B.3.34 The settlement in Area C began with a series of small ditches, one of which was sampled (sample 746, fill 10409 cut **10407**, ditch **10076**) and found to contain waterlogged plant remains including spike rush and duck weed along with small amounts of charcoal. The presence of duckweed suggests this ditch contained standing or slow-flowing water, possibly seasonally.

B.3.35 The larger ditches forming the main enclosure of the settlement were found to contain very small amounts of charred grain, chaff and crop weed seeds presumably derived from cooking activities within roundhouse **10986**, samples from which show a similar assemblage of sparse crop plant remains. Samples from adjacent structure **11204** are also similar in content but included charred seeds of rushes, possible remnants of burnt thatch/fuel.

B.3.36 Samples were also taken from a series of at least three parallel ditches orientated west-north-west to east-south-east, extending across the whole of Area C. These ditches did not contain charred plant remains but sample 759, fill 10694, cut **10655** (ditch **10361**) contains waterlogged plant remains including seeds of sedges, water crowfoot and pond weed. This excavated section was in an area where the underlying clay was closer to the surface and therefore the water table was higher. Ten samples from Middle Iron Age features have been selected for full archaeobotanical analysis (Table 103).

Sample Number	Context	Cut	Trench	Feature Type	Group	Prim/Sec/Tert
400	4028	4027	Area B	gully	4027	1
407	4171	4172	Area B	ditch / pit / oven?	4172	1
494	5346	5346	Area B	ditch	4554	
827	11349	11348	Area C	pit	0	1
830	11432	11433	Area C	pit	11433	2
746	10409	10407	Area C	ditch	10076	2
753	10509	10510	Area C	ditch	10510	1
794	10982	10984	Area C	ditch	10812	2
817	11190	11191	Area C	pit	11187	1
819	11287	11286	Area C	ditch	11204	1

Table 103: Middle Iron Age samples selected for analysis. Prim/Sec/Tert = Primary fill (1), Secondary fill (2), Tertiary fill (3)

Late Iron Age

B.3.37 One hundred and fifteen samples were taken from Late Iron Age features, the majority of which are found in Area E. In Area B, samples were taken from field system ditches, a roundhouse, and associated features.

Feature type	*ditches*	*Animal burial*	*grave*	*Cremation*	*gully*	*pit*	*Hearth*	*Post hole*	*Waterholes*
Total No of samples	46	1	6	12	10	26	1	4	9

Area B	10				6	2		1	
Area C	3			12					
Area E	33	1	6		4	24	1	3	9

Table 104: Late Iron Age samples by feature type and by area

B.3.38 In Area B, the best preservation comes from sample 494, fill 5345 of ditch **4554**, which contains cereals and chaff and also charred seeds of wetland plants including rushes (*Juncus sp*.), clubrush (*Scirpus sp*.), sedges (*Carex sp*.) and spike rush (*Eleocharis sp*.) suggesting use of local wetland resources for thatching, fuel etc. Other ditch fills in Area B (4120 and 4157) contain a background scatter of occasional charred grains and chaff. Roundhouse **4793** contained only a background scatter of charcoal.

B.3.39 Samples from the Area C ditch fills were unproductive. Twelve samples were taken from a high status cremation pit **10909** in the south of Area C that was dated immediately prior to the Roman conquest. Samples included the contents of a wooden box (containing cremated bone), the contents of nine cremation vessels, and a general bulk sample of the fill of the cremation pit. There was no surviving evidence of any plant

remains that were included in a funerary feast, which is not surprising as they would only have survived if burnt or waterlogged. Charcoal is present in some of the samples.

B.3.40 Eighty-one samples were taken from features associated with the Late Iron Age settlement in Area E. The ditch samples contain background scatters of charred grain and chaff, none of them producing significant assemblages. An oval enclosure (**1843**) was extensively sampled but preservation was poor and the small quantities of charred grain recovered were too abraded and fragmented for identification

B.3.41 Samples from possible structures in Area E, **1633** and **3216**, also produced small quantities of scattered grain although sample 173, fill 1676 of cut **1677** (structure **1633**) did produce a small amount of crop processing waste which, along with the fired clay recovered from this feature may be significant as it could indicate the presence of a corn-drier or a hearth/oven in which crop processing waste was used as fuel. There was no evidence of burning *in-situ* to support this theory.

B.3.42 Other contemporary features included a number of pits and waterholes. Sample 316. fill 3593 of pit **3544** contains crop processing waste and Sample 322, fill 3653 of pit **3651** also contains crop processing waste along with charred seeds of wetland plants such as spike-rush and water plantain (*Alisma plantago-aquatica*). The majority of the fills of waterhole **364** contain charred plant remains in the form of charcoal and sparse charred grains. The original lower fill of the feature has remained waterlogged and contains sedges, brambles, insects and *cladoceran eppiphia*. The other two waterholes in this area, **1333** and **3258** had both completely dried out and contain charcoal only. Nine samples from Late Iron Age features have been selected for full archaeobotanical analysis (Table 105).

Sample Number	Context	Cut	Trench	Feature Type	Group	Prim/Sec/Tert
176	1773	1774	Area E	pit	0	1
314	3543	3544	Area E	pit	0	1
316	3593	3595	Area E	pit	0	1
322	3653	3651	Area E	pit	0	2
60	338	364	Area E	Watering hole	364	1
173	1676	1677	Area E	pit	1633	1
291	3214	3215	Area E	pit	3215	1
298	3223	3222	Area E	ring gully	3216	1
440	4550	4552	Area B	ditch	4120	1

Table 105: Late Iron Age samples selected for analysis. Prim/Sec/Tert = Primary fill (1), Secondary fill (2), Tertiary fill (3)

Early Roman

B.3.43 One hundred and ninety-five samples were taken from Early Roman features, predominantly from Areas C, D, E and F.

Feature type	*ditches*	*natural*	*grave*	*gully*	*pit*	*beamslot*	*Post hole*	*kiln*	*hedge-line*	*Sunken structure*	*Well/ w-hole*
Total No of samples	104	2	12	1	45	1	23	2	1	3	1

Area B	2										
Area C	23	1		1	11		13				
Area D	21		5		10	1	8		1	3	
Area E	38		4		17		2	2			1
Area F	20	1	3		7						

Table 106: Early Roman samples by feature type and by area

B.3.44 The system of enclosures ditches in Area C contain little or no plant remains. A single sample from roundhouse eaves drip gully **12459** contains sparse remains of wheat and barley grains. Pits in Area C were more productive. Two samples; 902 and 910, were taken from a central feature (fill 12476 of pit **12475**) within roundhouse **12459**. Both contain charred grains of wheat that were poorly preserved, possibly due to repeated burning if this feature was a central hearth.

B.3.45 Sample 849 was taken from primary fill 11736 of a pit or well **11732** and was found to contain waterlogged plant remains including sedges, elderberry and brambles.

B.3.46 Twenty-two samples were taken from features within Area C in an area that has been interpreted as a possible cemetery garden. Remains of garden plants are unlikely to be found unless preserved by waterlogging. Most of these samples contained little or none charred plant remains but sample 862, fill 11848 from rectangular post-built structure **11847** contains waterlogged remains of seeds of wetland plant species which requires further archaeobotanical study. Two samples from enclosing ditch (**11588**; sample 843, fill 11617 of ditch cut **11593** and sample 847, fill 11698 of ditch cut **11689**) also have potential for providing more information on this enigmatic area and will be included in the full analysis. Sample 843 contains a burnt conglomeration and sample 843 contains unidentified small charred seeds along with uncharred seeds of henbane (*Hyoscyamus niger*), initially thought to be modern contaminants but may be contemporary if waterlogged.

B.3.47 Sample 909 was taken from fill 12592 of ditch **12590** in Area D from which numerous finds have been recovered. It contains a number of small charred seeds which require identification.

B.3.48 Rectangular structure **12913** in Area D consisted of a group of post holes and a sunken rectangular pit which had a ramp-like feature leading into it accompanied by two beamslots. Several fragments of quern stone were recovered from this area. The samples from the sunken feature contain crop processing waste in the form of charred cereal grains, abundant chaff elements and crop weed seeds and the samples from the associated post holes and beam slots contain occasional charred crop remains. A possible function of the sunken pit is a corn drier.

B.3.49 Ditch samples in Area E taken from small enclosure ditches were found to contain charred plant remains in the form of crop processing waste (including sample 205, fill 1953, ditch **1278** and sample 158, fill 1648 of ditch **1647**) and small charred seeds of pasture plants such as grasses. These indicate that waste burnt material has been

disposed of in the ditches. Several pits also produced similar assemblages of crop processing waste mixed with small seeds of pasture plants including Sample 223, fill 2144 of pit **2254** and Sample 324, fill 3666 of pit **3667**.

B.3.50 The single sample from waterhole **932** (Sample 100, fill 930) contains both charred and waterlogged plant remains. Charred grain, chaff and crop weed seeds are evidence of further disposal of burnt crop processing waste and duckweed is evidence of the feature containing standing water.

B.3.51 Samples 230 (fill 2121) and 251 (fill 2543) were taken from a well preserved (although possibly unused) pottery kiln **2122**. The samples produced an interesting assemblage with the sample 251 from the upper fill containing charred chaff elements including glume bases and detached embryos (possibly suggesting malting activities) and sample 230 from the lower fill containing charred grain and a diverse seed assemblage including dock, vetch, grass seeds, goosefoot, peas (*Pisum sp*.) and wetland species including sedges and clubrushes. Amphibian bones were also noted.

B.3.52 Six cultivation strips in Area F (group **526**) did not contain any evidence of preserved plant remains. The cultivation strips were enclosed by ditches, one of which, ditch **223** contains substantial evidence of crop processing waste in the form of significant quantities of spelt chaff including glume bases, spikelet forks and rachis fragments along with charred grain and crop weed seeds including grass seeds, vetch, rye-grass, goosefoot, dock, knotgrass and fumitory (*Fumaria officinalis*). Samples 36 and 38, fill 1147 from adjacent pit **1148** contains similar assemblages, suggesting that this is an area where corn drying may have been taking place. Ditch **533**, to a lesser extent, also contains crop processing waste. That the cultivation strips did not contain any of this abundant burnt material suggest that they are not contemporary. Forty samples from Early Roman features have been selected for full archaeobotanical analysis (Table 107).

Sample Number	Context	Cut	Trench	Feature Type	Group	Prim/Sec/Tert
849	11736	11732	Area C	pit	0	1
888	12288	12291	Area D	pit	0	2
914	12687	12685	Area D	ditch	0	1
931	12903	12904	Area D	pit	0	1
959	13230	13229	Area D	post hole	0	2
141	1431	1432	Area E	pit	0	1
158	1648	1647	Area E	ditch	0	2
169	1742	1743	Area E	pit	0	1
223	2144	2254	Area E	pit	0	2
230	2121	2122	Area E	kiln	0	2
251	2543	2122	Area E	kiln	0	2
324	3666	3667	Area E	pit	0	1
26	687	690	Area F	pit	0	2
27	688	690	Area F	pit	0	2
36	1147	1148	Area F	pit	0	1
38	1147	1148	Area F	pit	0	1
22	553	552	Area F	ditch	223	1
29	1140	0	Area F	ditch	223	1

Sample Number	Context	Cut	Trench	Feature Type	Group	Prim/Sec/Tert
33	1144	0	Area F	ditch	223	1
34	1145	0	Area F	ditch	223	1
35	1146	0	Area F	ditch	223	1
40	1151	0	Area F	ditch	223	1
100	930	932	Area E	water hole	932	2
151	1559	1558	Area E	ditch	1233	1
205	1953	1955	Area E	ditch	1278	2
276	2985	2984	Area E	ditch	2806	1
300	3080	3079	Area E	ditch	3012	1
862	11848	11847	Area C	post hole	11847	1
869	11876	11875	Area C	post hole	11847	1
896	12429	12428	Area D	ditch	12372	1
909	12592	12590	Area D	ditch	12590	1
917	12707	12710	Area D	ditch	12625	3
915	12671	12626	Area D	boundary ditch	12626	1
928	12876	12875	Area D	ditch	12861	1
916	12693	12692	Area D	post hole?	12913	3
933	12910	12913	Area D	SFB / ramp	12913	2
954	13115	13113	Area D	ditch	12936	2
958	13147	13146	Area D	ditch	12936	1
936	12951	12948	Area D	pit	12942	3
960	13252	13251	Area D	ditch	13126	1

Table 107: Early Roman samples selected for analysis. Prim/Sec/Tert = Primary fill (1), Secondary fill (2), Tertiary fill (3)

Late Roman

B.3.53 Thirteen samples were taken from Late Roman features; ditches and a pit in Area D and a double ditched sub-circular monument in Area F.

Feature type	*ditches*	*pit*
Total No of samples	12	1
Area D	2	1
Area F	10	

Table 108: Late Roman samples by feature type and by area

B.3.54 Occasional single indeterminate grains were found in a few of the samples from each of these features but cannot be interpreted as significant. The lack of charred plant remains in the monument suggests that the feature is located away from any settlement. None of the samples were suitable for further archaeobotanical analysis.

Discussion

B.3.55 Assessment of environmental samples at Clay Farm has provided evidence of periods of change in land use and shows the relationship between agricultural developments

along with settlement and social change. The different methods of preservation of the environmental evidence encountered provides rich assemblages suitable for further archaeobotanical study. Charred plant remains provide evidence of domestic and agricultural activities whereas waterlogged plant remains are more likely to represent plants growing in the immediate vicinity. Pollen originates from a wide area and is an indicator of the type of local landscape and the broader environment. This evidence needs to be studied along with other evidence such as animal bones and insects analysis. Cattle are important in agricultural expansion because of the need for traction and manure and they will need pasture. Evidence of hay meadows was recovered in the form of grass seeds and grassland plants and may suggest managed hay meadows through crop rotation.

B.3.56 Settlement in the Bronze Age is defined by the deep, mainly waterlogged boundary ditches. The Iron Age sees a growth in settled population dependent on farming and in the Roman period there is evidence for agricultural expansion and intensification of agriculture to feed a growing population, possibly producing a surplus.

B.3.57 The waterlogged Middle Bronze Age ditch fills provide evidence for settlement and cultivation of the areas enclosed. The recovery of substantial lenses of uncharred elderberry seeds has provided a conundrum that was only solved by radiocarbon dating, which proved the seeds to be contemporary with the deposits, their survival accounted for by differential preservation (elder seeds are known to be extremely durable and contain toxins that make them more resistant to microbial decay). It is most likely that elder bushes were growing on the banks of the ditches and the berries fell into the ditches. The depth of the ditches suggest the banks would have been of substantial height and the addition of shrubs and possibly trees would have created further screening. Elderflowers and berries are both sources of food and flavourings and it highly likely that they would have been utilised as such. Elderberries provide a natural source of yeast on their surface and this could have been exploited for brewing activities. The later waterlogged features found in the Iron Age often contain waterlogged and charred plant remains. Where both are found together it is most likely that the waterlogged remains represent plant species growing around and/or within the feature whereas the charred plant remains are more likely to be derived from settlement waste and may provide information on cultivation and consumption.

B.3.58 Evidence of cereal cultivation at Clay Farm is first encountered in the Middle Bronze Age. Emmer is the principal wheat grown along with barley which is consistent with other evidence of Bronze Age cultivation in Britain (Greig 1991). Wheat would have been used as flour (a number of quern stones show that flour was produced) and barley would have been used in soups, stews, brewing and as animal feed. Spelt wheat is also seen in the Bronze Age samples and further study may be able to determine exactly when this wheat variety is first introduced at Clay Farm. Spelt wheat has been recorded as early as *c.* 3240BP in Godmanchester (Brown and Murphy 1997). There is an increase in spelt cultivation during the Iron Age in which it becomes the main wheat crop along with some emmer and bread wheat. Emmer and spelt wheat are both hulled wheats in which the grain is tightly enclosed in spikelets. The process of dehusking cereal grains involves several stages including parching, pounding, threshing, winnowing and sieving, each stage producing characteristic products that can be identified as crop processing waste. If this waste material has been accidentally or deliberately burnt, examining the proportions and ratios of the grains, chaff and crop weeds can be used to interpret the stages involved in the processing of the crops (cf Hillman 1981, Stevens 2003). Parching of the spikelets often resulted in some of the grain becoming accidentally charred in the process and the fine chaff provides excellent

tinder for fires. Several such assemblages have been recovered from the majority of the periods of occupation at Clay Farm. Most notable are the rich assemblages from the Early Roman features in Areas E and F. In Area F there is evidence of a corn drier and numerous shallow ditches into which charred crop processing waste has become incorporated. The pottery kiln in Area E may also have been used as a malting oven. The presence of cleaned grain in the post holes of the Iron Age four-post structures has been interpreted as evidence that these structures were used for grain storage. The prehistoric cereals (emmer and spelt) were usually stored as spikelets for protection against frost, moisture and insect damage. The water table in the area is too high for underground pit storage and raised granaries would have been more suitable as they would be high enough to deter pests.

B.3.59 The weed seeds recovered provide additional information. The weed plant assemblage remains generally consistent throughout the periods of occupation at Clay Farm although further analysis may refute this. Weeds commonly found in cultivated soils and harvested with the crop can vary depending on cultivation conditions and harvesting methods. For example, cleavers are autumn germinating weeds suggesting that the wheat crop was sown in autumn. Brome grass seeds are often found in charred grain assemblages as they grow to the same height as the cereal crop and are a similar size to the cereal grain. They could have been tolerated as a crop contaminant as they are unlikely to greatly affect quality of flour. Vetch seeds are present from the Bronze Age onwards and are leguminous weeds that could be crop contaminants or were possibly grown as a fodder or nitrogen-fixing crop to improve soil conditions. Also seen starting in the Bronze Age are grassland plants that include grasses and clover and indicate pasture and may have been brought in with hay as animal fodder or bedding.

B.3.60 The waterlogged samples provide additional information on the types of plants growing around the site and suggest a scrubby environment can be found throughout although this may have been localised to the areas around the waterlogged features. Nettles are common suggesting nitrogen-enriched soils possibly due to animals grazing nearby and sedges and rushes are plants that grow in wet conditions such as in ditches although they could also have been found growing in damp areas of cultivated fields.

Statement of potential

B.3.61 Assessment of plant remains from Clay Farm, Trumpington has indicated that there is excellent potential for further archaeobotanical study. The two types of preservation encountered, namely carbonisation and waterlogging, provide a comprehensive representation of plant remains with potential for interpretive analysis with the aim to answer regional, local and and site specific research objectives. The waterlogged assemblage in particular has the potential to characterise the local environment and its changes over time. The charred plant assemblage has the potential to provide information on diet, cereal crops, cultivation techniques and economy especially through analysis of the abundant crop processing waste recovered from Early Roman and, to a lesser extent, Iron Age features. Of particular interest is the recovery of substantial quantities of uncharred elderberry seeds from the Middle Bronze Age. These seeds have the potential for investigation into the differential preservation that ensured their survival and for dating other deposits.

B.3.62 Further study of the selected environmental samples from Clay Farm will tie in with recent discoveries from other sites in the region. The Middle Bronze Age is of particular interest in the Anglian region due to the shifts and changes in settlement patterns in response to rising levels of groundwater. Waterlogged remains at Clay Farm were

recovered from a number of locations within the Middle Bronze Age field system, particularly in Area B and over several hectares. Comparisons could be made with the plant remains recovered from the MBA field system and wooden platform at Fengate (Pryor 1992), excavations at Thorney, Peterborough (Huckerby, in Pickstone and Mortimer 2011) and current analysis of the Bradley Fen field systems and the Must Farm post-alignments.

Further Work and Methods Statement

B.3.63 The extensive sampling programme at Clay Farm, Trumpington has demonstrated that many of the features contain plant remains preserved by carbonisation and waterlogging. Assessment of these samples has highlighted those with the potential for further archaeobotanical study. The initial stage of the analytical process of selected samples will involve identification of plant species and charcoal in the selected samples.

B.4 Pollen

By Elizabeth Huckerby and Mairead Rutherford

Methodology

B.4.1 Seven monolith samples collected from two pits, three ditches, a waterhole and a well were cleaned, and 27 sub-samples taken for the assessment of pollen and non-pollen palynomoprhs. The samples were prepared using a standard chemical procedure (method B of Berglund & Ralska-Jasiewiczowa 1986), using HCl, NaOH, sieving, HF and Erdman's acetolysis, to remove carbonates, humic acids, particles >170 microns, silicates and cellulose, respectively. The samples were then stained with safranin, dehydrated in tertiary butyl alcohol and the residues mounted in 2000 cs silicone oil. Slides were examined at a magnification of 400x by five traverses across each of two cover slips per slide or until a count of 100 total land pollen grains (trees, shrubs, herbs and ferns) had been attained. Non-pollen palynomorphs including fungal spores and other non-pollen types were counted using the same method.

Results

B.4.2 With the exception of two sub-samples from sample 532 (well **5657**, Area B), most of the samples proved productive for pollen, fungal spores and microscopic charcoal. Preservation of pollen was good to mixed. A summary of the results is presented in the table below. The data are briefly discussed by area.

Location and Feature	Sample No.	Depth of sub-sample (m)	Context No.	Tree and Shrub pollen	Herb pollen	Fern spores	Fungal spores	Charcoal	Preser-vation	Potential
Area A	585	0.07-0.08	6001	18	29	3	4	++	Good	Poss.
Cut **5988**		0.15-0.16	6004	8	28	5	37	+	Good	Poss.
Ditch **5815**		0.23-0.24	6004	4	12	3	11	+	Good	No
MBA		0.27-0.28	6004	3	6	-	7	+	Mixed	No
Area B	512	0.03-0.04	5551	53	58	18	6	++	Good	Yes
Pit **5547**		0.07-0.08	5550	29	32	13	8	++	Mixed	Yes
EBA/MBA		0.19-0.20	5549	23	8	10	6	+	Poor	Poss.
		0.27-0.28	5549	33	61	17	35	+	Mixed	Yes
Area B	431	0.03-0.04	4456	37	52	17	0	++	Good	Yes
Cut **4460**		0.11-0.12	4457	53	47	11	5	++	Good	Yes
Ditch **4250**		0.23-0.24	4459	9	37	12	10	++	Mixed	No
MBA		0.27-0.28	4459	3	19	1	6	++	Poor	No
Area B	490	0.05-0.06	5259	40	64	0	6	+++	Mixed	Yes
Cut **5260**		0.11-0.12	5259	59	42	6	5	++	Good	Yes
Ditch **5228**		0.19-0.20	5259	50	58	1	4	++	Good	Yes
MBA		0.27-0.28	5270	47	64	3	2	+	Good	Yes
Area B	541	0.03-0.04	5793	14	10	6	6	+	Mixed	No
Pit **5792**		0.11-0.12	5793	13	13	10	25	+	Good	No
MBA		0.15-0.16	5793	24	10	6	13	+	Good	No
		0.23-0.24	5793	23	18	6	17	+	Mixed	No
Area B	532	0.05-0.06	5659	0	0	0	1	+	-	No
Well **5657**		0.09-0.10	5660	0	0	0	0	0	-	No
MBA		0.27-0.28	5661	5	8	3	0	+	Mixed	No
Area C	741	0.03-0.04	10355	2	9	5	1	+	Mixed	No
Waterhole		0.11-0.12	10436	2	13	9	1	++	Mixed	No
10356		0.19-0.20	10438	5	53	22	1	++	Mixed	Yes
MBA		0.27-0.28	10439	2	14	11	0	++	Mixed	No

Table 109: Summary of pollen results. Raw counts of pollen grains, fern spores, non-pollen palynomorphs and microscopic charcoal are presented

Discussion and Recommendations

B.4.3 Area A, Ditch **5988**, sample 585 (MBA): Although pollen is present, recovery is not very rich. The upper fill and uppermost part of the lower fill indicate possible grassland / damp meadow environments supporting relatively diverse herb assemblages. Non-pollen palynomorphs indicate that shallow, stagnant water deposits may have been preserved within the ditch fill. Fungal spore species suggesting possible soil erosion and the presence of man and/or animals are also recorded.

B.4.4 Recommendation: analysis of upper fill and uppermost part of lower fill possible to further environmental understanding.

B.4.5 Area B, Pit **5547**, sample 512 (EBA/MBA): Three of the four sub-samples yielded good, rich pollen assemblages. The results suggest open grassland throughout and some possible cereal cultivation in the lower fill 5549. Tree pollen is consistently present and includes predominantly alder (Alnus), oak (Quercus), lime (Tilia) and hazel (Corylus). Rich fungal spore assemblages are recorded, especially in the lowermost fill 5549 - these include taxa that are obligate coprophilous fungi and only occur on present day surface samples where grazing herbivores are locally abundant (Davis, 1987).

B.4.6 Recommendation: analysis recommended to detail environments and possible land use.

B.4.7 Area B, Ditch **4460,** sample 431 (MBA): The upper fills 4456 and 4457 yielded good rich pollen assemblages. These assemblages are dominated by grasses (Poaceae) and willow (Salix) as well as a diversity of herb pollen suggesting possible open, damp grassland environments with local stands of willow and possibly elder. Very little other tree/shrub pollen is recorded. Fungal spores suggest areas of possible soil erosion, and the presence of man and /or animals in the locality. Non-pollen palynomorphs indicate that shallow, stagnant water deposits may have been preserved within the ditch fill.

B.4.8 Recommendation: analysis of upper fills possible to further environmental information.

B.4.9 Area B, Ditch **5260**, sample 490 (MBA): All the sub-samples from this ditch yielded good rich pollen assemblages. Little difference was seen from the lower to the upper fills, apart from an increase in charcoal abundance. The dominant herb communities support open grassland environments with possible evidence for cereal cultivation. Abundant elder pollen suggests elder was growing locally, perhaps on or near the ditch. There is evidence for much reduced woodland including low numbers of pollen grains of alder, lime and oak. Fungal spores indicate the presence of man and/or animals and possible soil erosion. The upper fill (5259) has been carbon dated to the Middle Bronze Age (1420 – 1200 cal. BC, 95% probability).

B.4.10 Recommendation: analysis is recommended to further investigate the extent of possible cultivation and tree clearance.

B.4.11 Area B, Ditch **5792**, sample 541 (MBA): Pollen is present in each of the sub-samples assessed but is never very rich. Tree pollen includes grains of alder, oak, lime and hazel. Herb communities are dominated by grasses with a poorly diverse range of other herbs. Fungal spores indicate soil erosion and non-pollen palynomorphs indicate that shallow, stagnant water deposits may have been preserved within the ditch fill.

B.4.12 Recommendation: analysis not recommended.

B.4.13 Area B, Well **5657**, sample 532 (MBA): Poor recovery of pollen - only the lowest fill (5561) yielded a few tree pollen grains (including alder and lime) and a few herbs (including grass).

B.4.14 Recommendation: no further work is recommended.

B.4.15 Area C, Waterhole **10356**, sample 741 (MBA): Although pollen is preserved in all the sub-samples, only the assemblage from fill 10438 yielded a relatively rich pollen assemblage. Pollen within this fill suggests an open grassland environment supporting a relatively diverse herb community including daisies (Aster-type), buttercups (Ranunculaceae) and dandelions (Taraxacum-type). Low numbers of alder and oak pollen suggest much reduced tree cover. There are no fungal spores or aquatic pollen to suggest a wet environment, perhaps the waterhole was kept clean of encroaching vegetation.

B.4.16 Recommendation: analysis would be possible for fill 10438 to further detail environmental conditions and possible land use.

Statement of Potential

B.4.17 The results of the pollen assessment show that six contexts definitely have the potential for full analysis and that a further two are slightly less rich in pollen but may potentially yield sufficient pollen at analysis. These came from ditch **5988** in Area A, and ditches **5260** and **4460** and pit **5547**, all from Area B. The samples from these features, which were assessed as having the potential for further analysis, are distributed spatially across the two sites.

Recommendations for further work

B.4.18 Full pollen analysis is recommended on those features and contexts highlighted as having potential. It is recommended that pollen analysis is concentrated on the upper two fills from ditch **4460** and ditch **5988**, on the two fills from ditch **5260** and all four fills recorded in pit **5547**. Additional sub-samples will be taken and processed, and, initially, pollen will be counted from samples taken at 0.04m intervals in the contexts highlighted as having potential. Ideally, further sub-samples will be taken and counted at closer intervals were significant changes are recorded.

Acknowledgements

B.4.19 Oxford Archaeology North would like to thank the Geography Department of the University of Lancaster for the use of their laboratory. The sub-samples were processed by Sandra Bonsall and assessed by Mairead Rutherford. The report was written by Mairead Rutherford.

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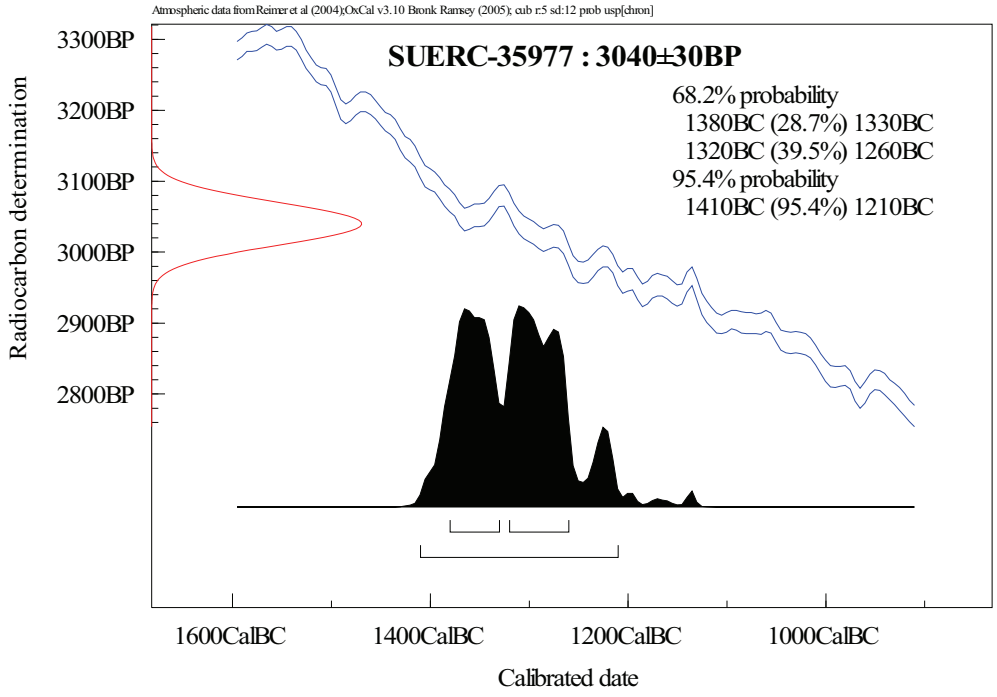
RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35977 (GU-24815)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	457
Sample Reference	76
Material	Seed : Uncharred sambucus
$\delta^{13}C$ relative to VPDB	-29.1 ‰
Radiocarbon Age BP	3040 ± 30

Calibration Plot

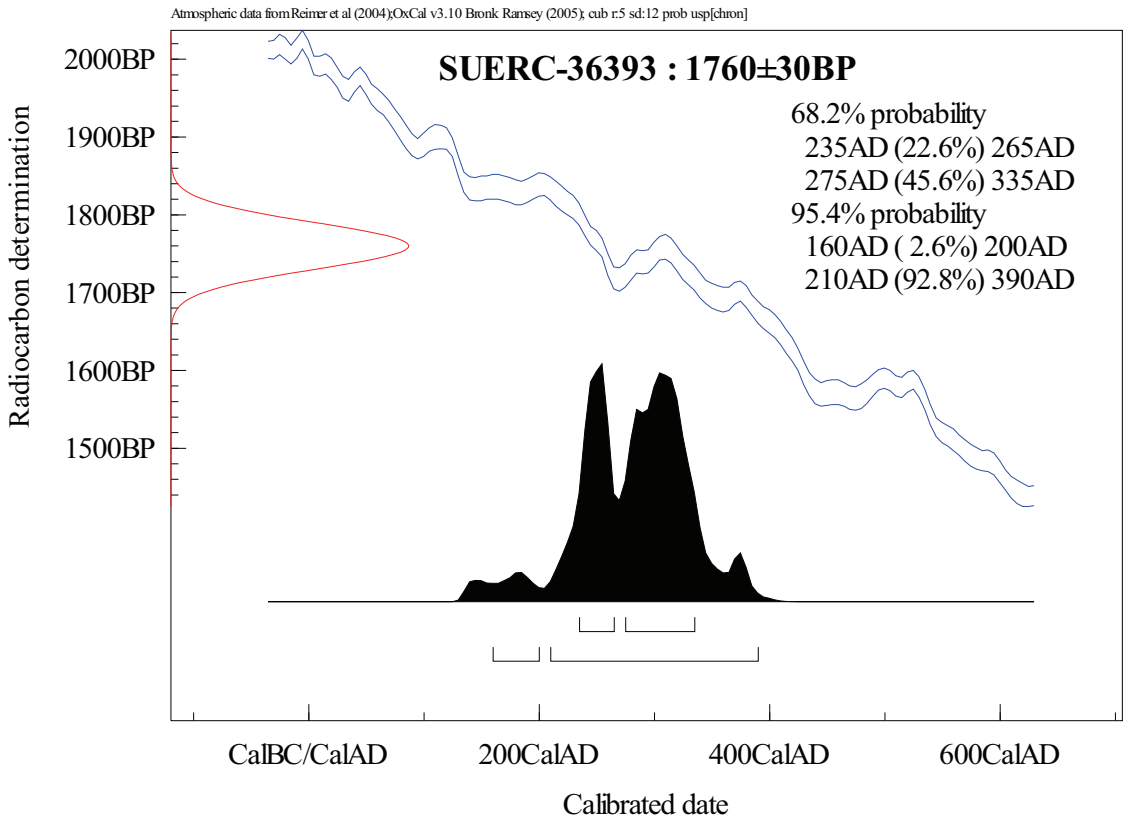


RADIOCARBON DATING CERTIFICATE

24 October 2011

Laboratory Code	SUERC-36393 (GU-24820)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	659
Sample Reference	
Material	Bone : Cattle
$\delta^{13}C$ relative to VPDB	-21.7 ‰
$\delta^{15}N$ relative to air	8.3‰
C/N ratio(Molar)	3.1
Radiocarbon Age BP	1760 ± 30

Calibration Plot

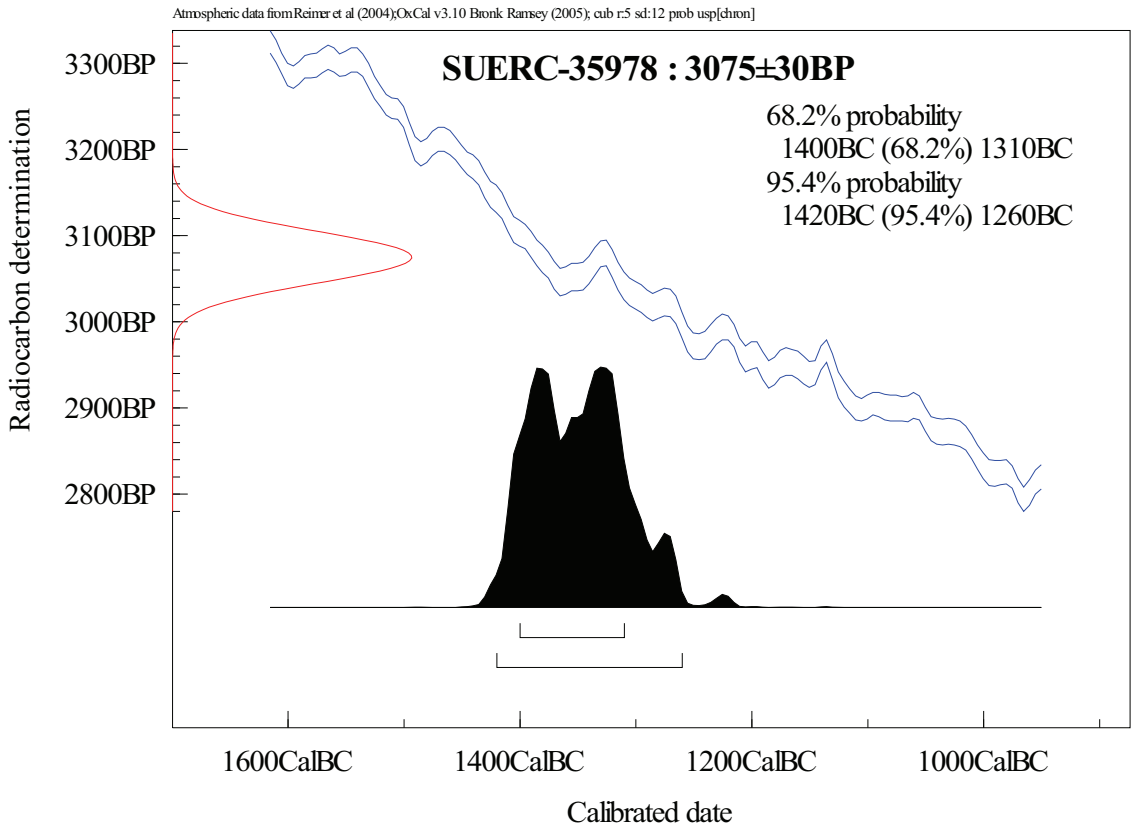


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35978 (GU-24816)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	906
Sample Reference	98
Material	Seed : Uncharred sambucus
$\delta^{13}C$ relative to VPDB	-28.3 ‰
Radiocarbon Age BP	3075 ± 30

Calibration Plot

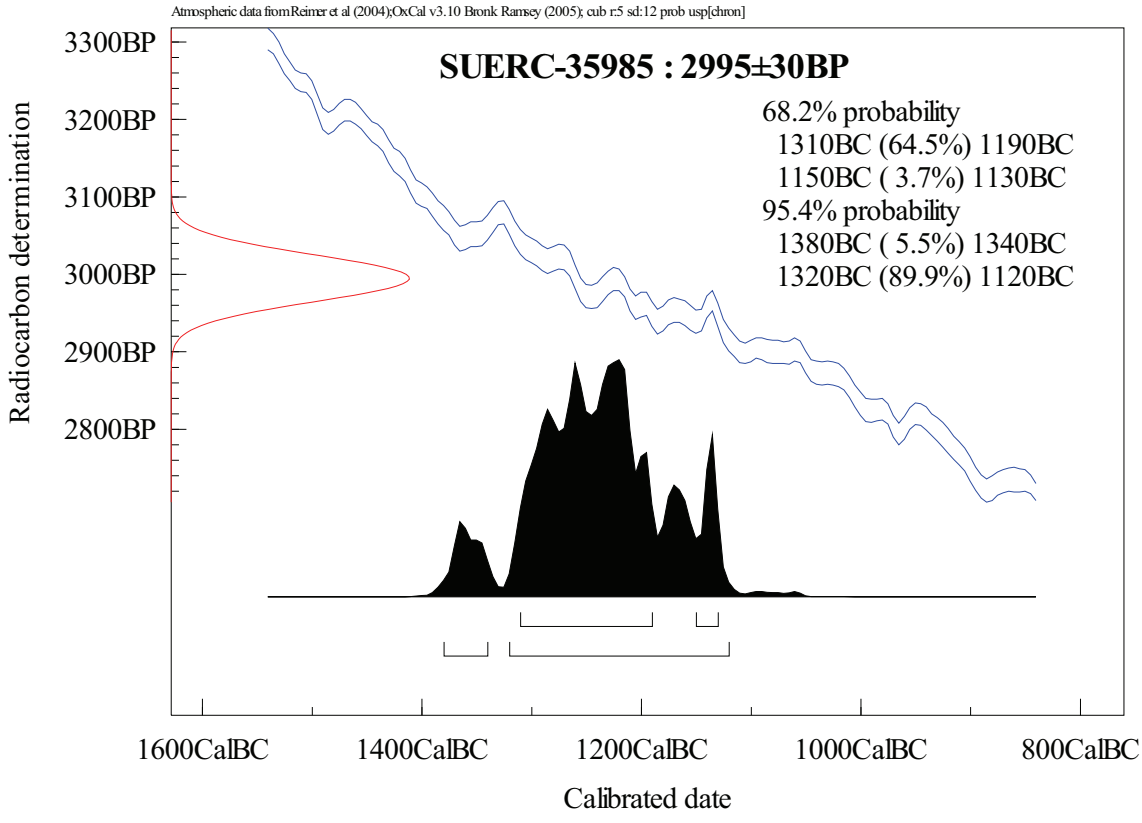


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35985 (GU-24821)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	1655
Sample Reference	
Material	Bone : Cattle
$\delta^{13}C$ relative to VPDB	-22.3 ‰
$\delta^{15}N$ relative to air	7.2 ‰
C/N ratio(Molar)	3.5
Radiocarbon Age BP	2995 ± 30

Calibration Plot

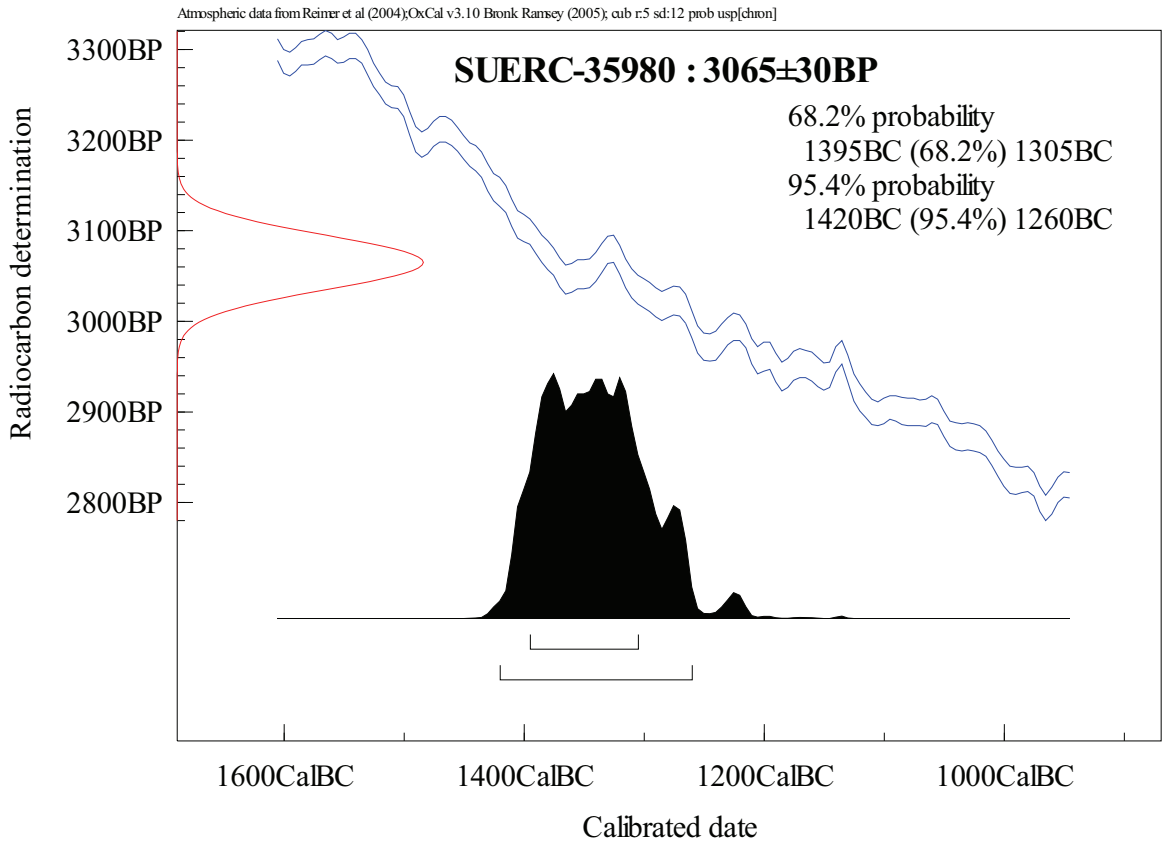


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35980 (GU-24818)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	1759
Sample Reference	172
Material	Seed : Uncharred sambucus
$\delta^{13}C$ relative to VPDB	-24.9 ‰
Radiocarbon Age BP	3065 ± 30

Calibration Plot

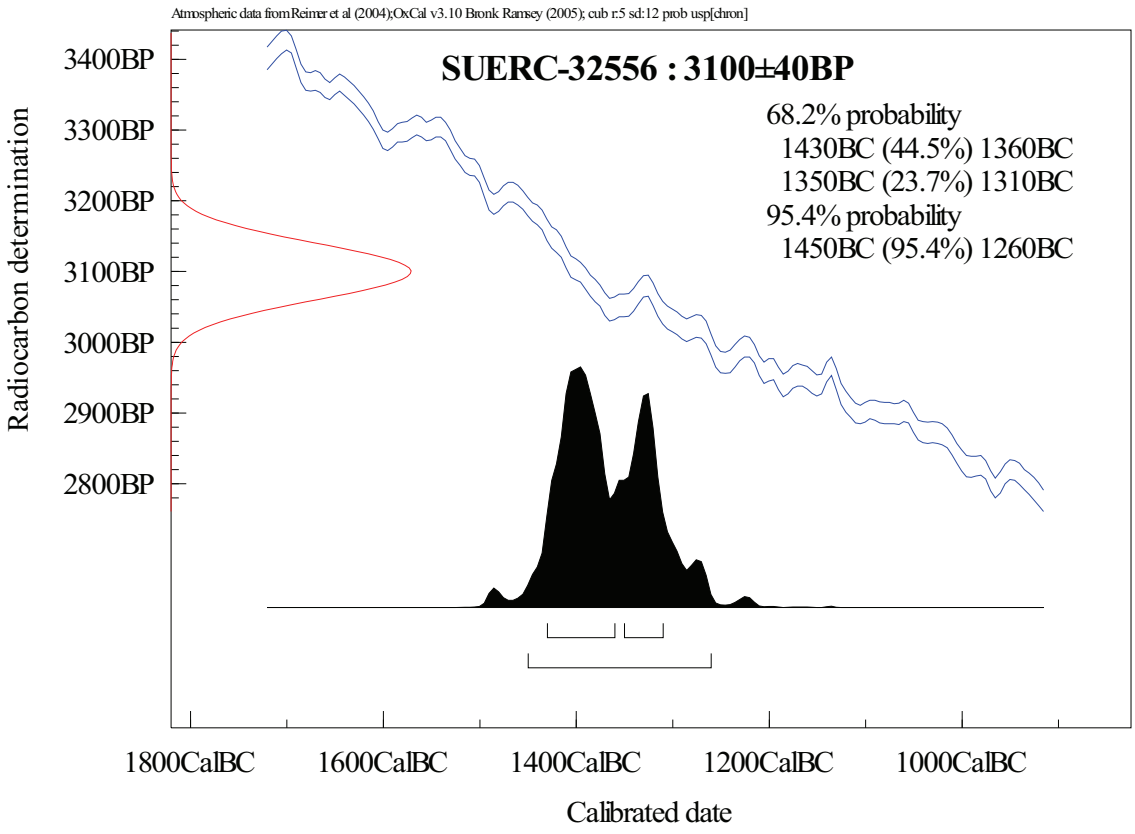


RADIOCARBON DATING CERTIFICATE

15 December 2010

Laboratory Code	SUERC-32556 (GU-23045)
Submitter	Rachel Fosberry Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambs CB23 8SQ
Site Reference	Clay Farm, Trumpington
Context Reference	2684
Sample Reference	263
Material	Sambucus sp. Seeds
$\delta^{13}C$ relative to VPDB	-26.8 ‰
Radiocarbon Age BP	3100 ± 40

Calibration Plot

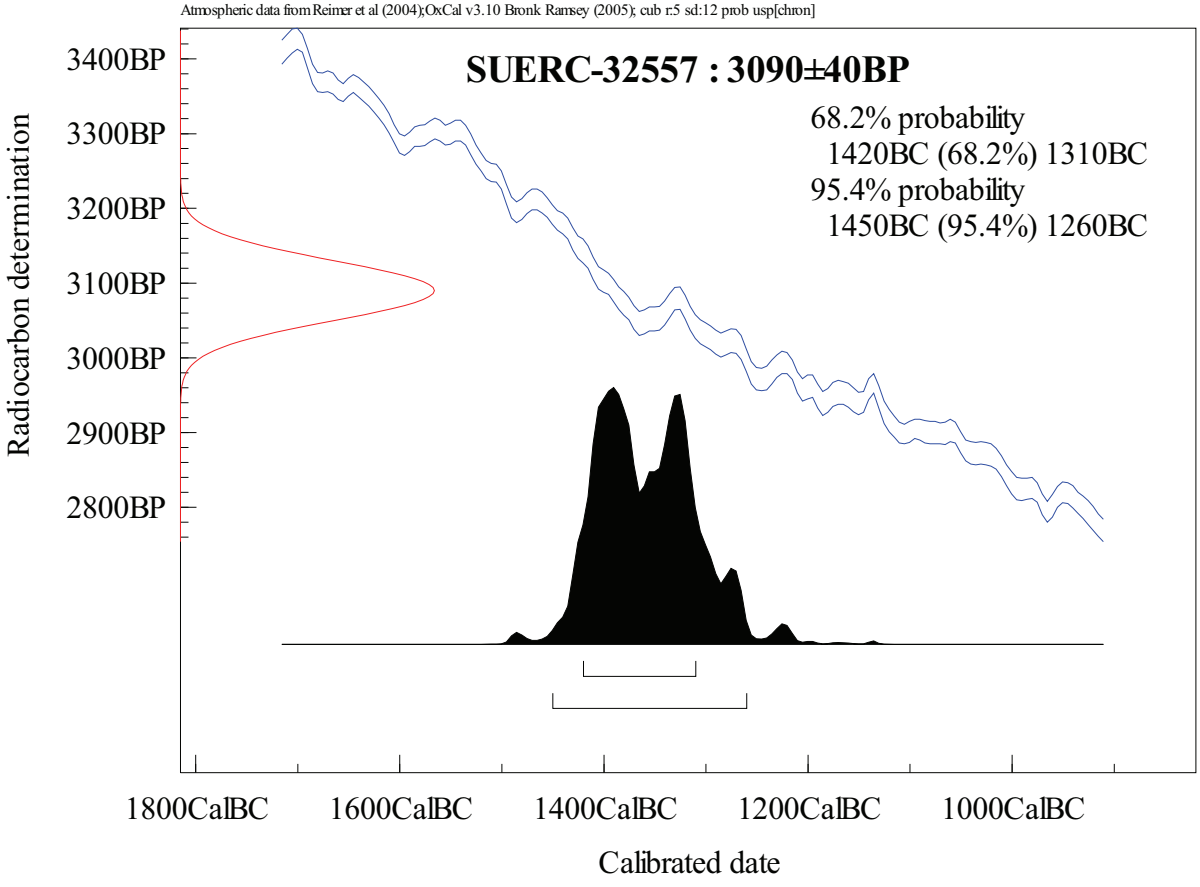


RADIOCARBON DATING CERTIFICATE

15 December 2010

Laboratory Code	SUERC-32557 (GU-23046)
Submitter	Rachel Fosberry Oxford Archaeology East 16 Trafalgar Way Bar Hill Cambs CB23 8SQ
Site Reference	Clay Farm, Trumpington
Context Reference	2684
Sample Reference	263
Material	Hordeum sp.
$\delta^{13}C$ relative to VPDB	-23.8 ‰
Radiocarbon Age BP	3090 ± 40

Calibration Plot

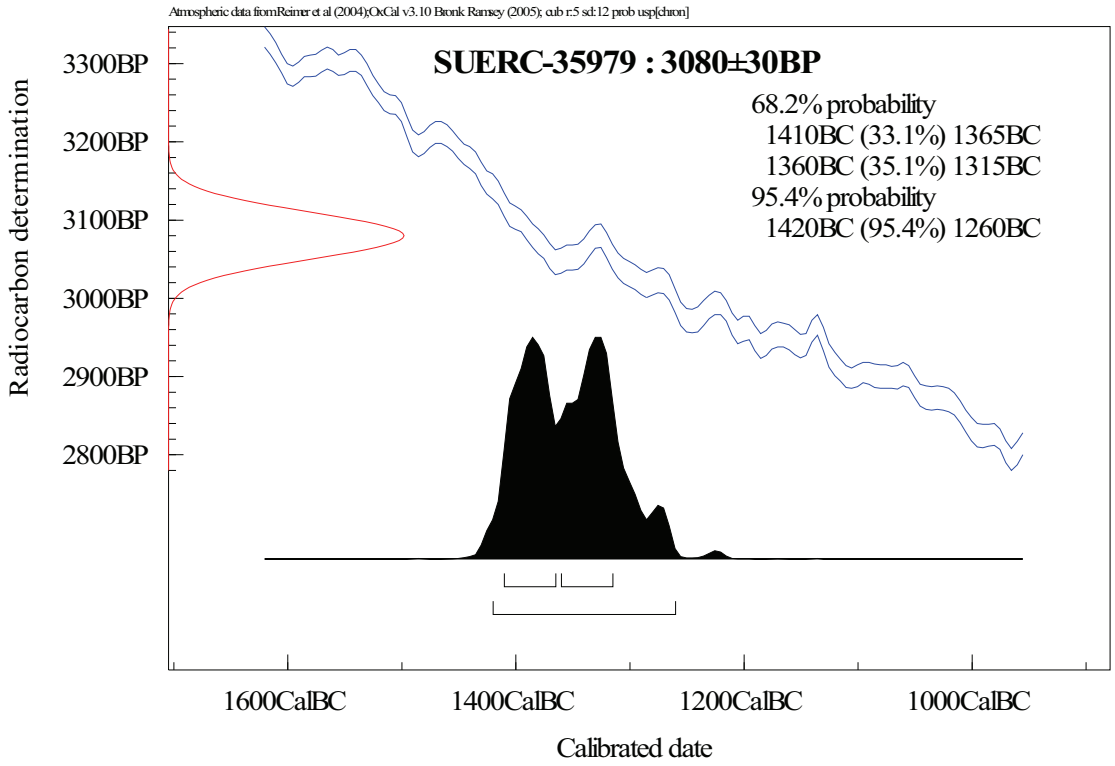


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35979 (GU-24817)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	2912
Sample Reference	136
Material	Bone : dog
$\delta^{13}C$ relative to VPDB	-20.7 ‰
$\delta^{15}N$ relative to air	9.2 ‰
C/N ratio(Molar)	3.2
Radiocarbon Age BP	3080 ± 30

Calibration Plot

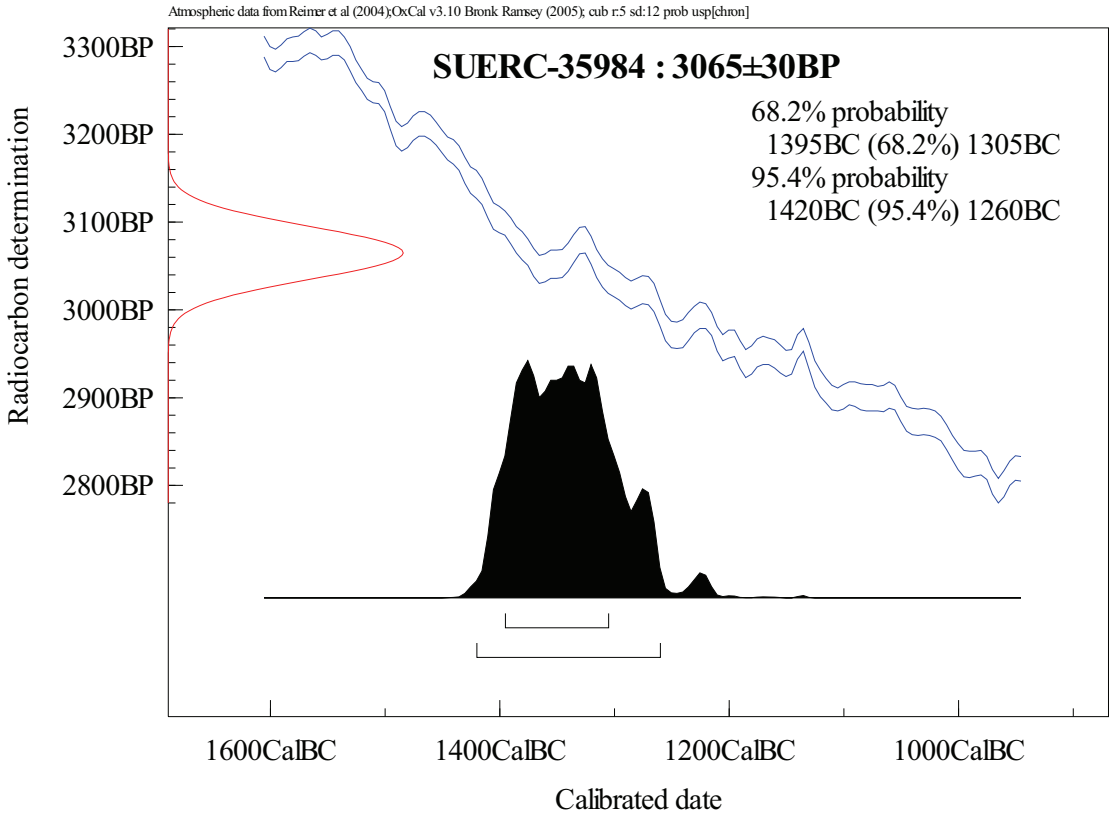


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35984 (GU-24819)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	3364
Sample Reference	
Material	Bone : Cattle/pig
$\delta^{13}C$ relative to VPDB	-21.7 ‰
$\delta^{15}N$ relative to air	4.8 ‰
C/N ratio(Molar)	3.2
Radiocarbon Age BP	3065 ± 30

Calibration Plot

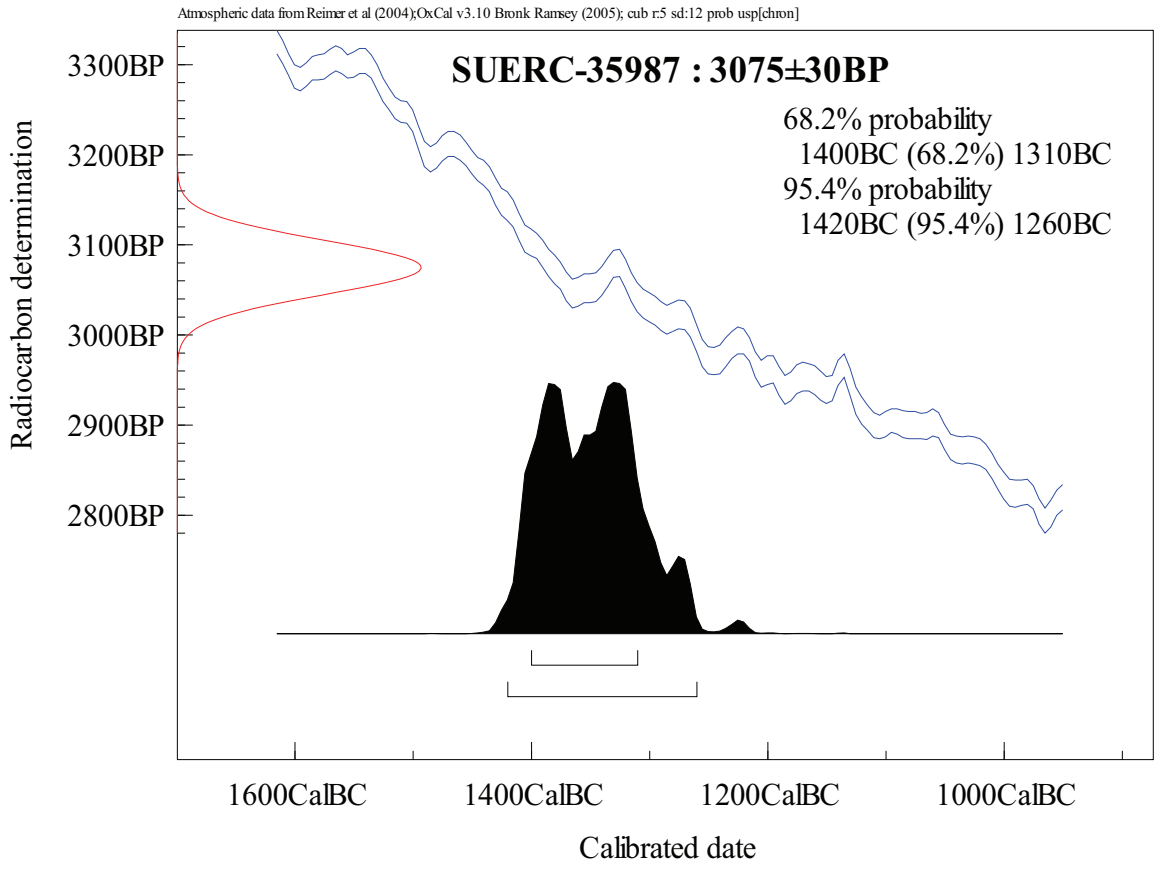


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35987 (GU-24823)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	4827
Sample Reference	448
Material	Seed : Uncharred sambucus
$\delta^{13}C$ relative to VPDB	-26.4 ‰
Radiocarbon Age BP	3075 ± 30

Calibration Plot

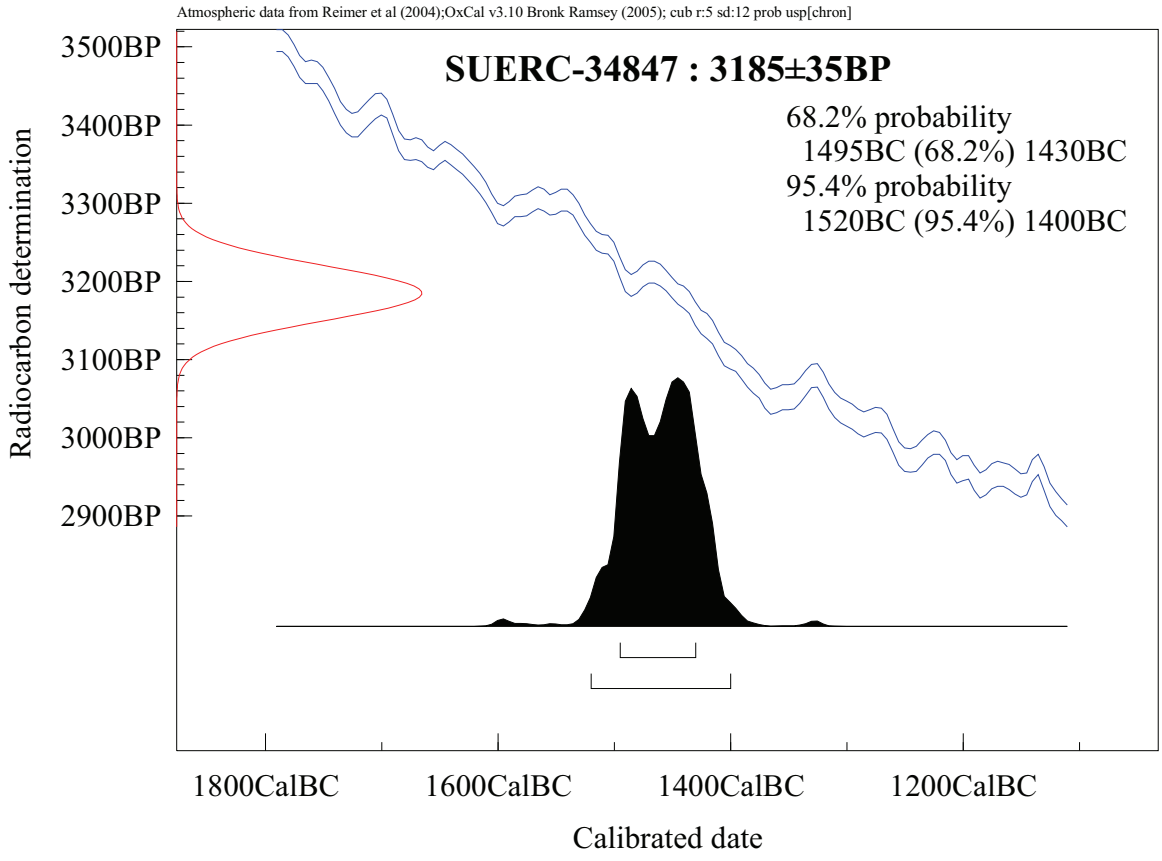


RADIOCARBON DATING CERTIFICATE

28 June 2011

Laboratory Code	SUERC-34847 (GU-24178)
Submitter	Rachel Fosberry Oxford Archaeology East 15 Trafalgar Way Bar Hill Cambs CB23 8SQ
Site Reference	CAMCFT 10
Sample Reference	5143
Material	Carbon residue from pottery
$\delta^{13}C$ relative to VPDB	-27.8 ‰
Radiocarbon Age BP	3185 ± 35

Calibration Plot

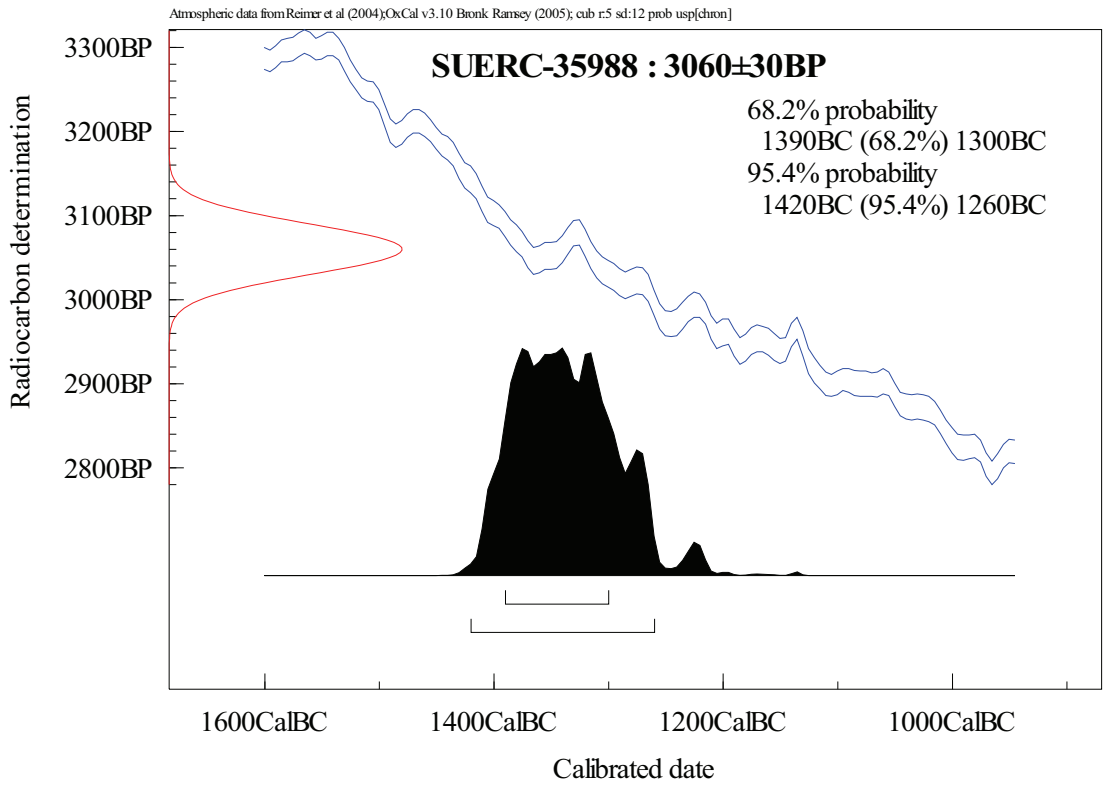


RADIOCARBON DATING CERTIFICATE

20 September 2011

Laboratory Code	SUERC-35988 (GU-24824)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	5154
Sample Reference	
Material	Bone : Sheep/cattle
$\delta^{13}C$ relative to VPDB	-22.2 ‰
$\delta^{15}N$ relative to air	7.5 ‰
C/N ratio(Molar)	3.3
Radiocarbon Age BP	3060 ± 30

Calibration Plot

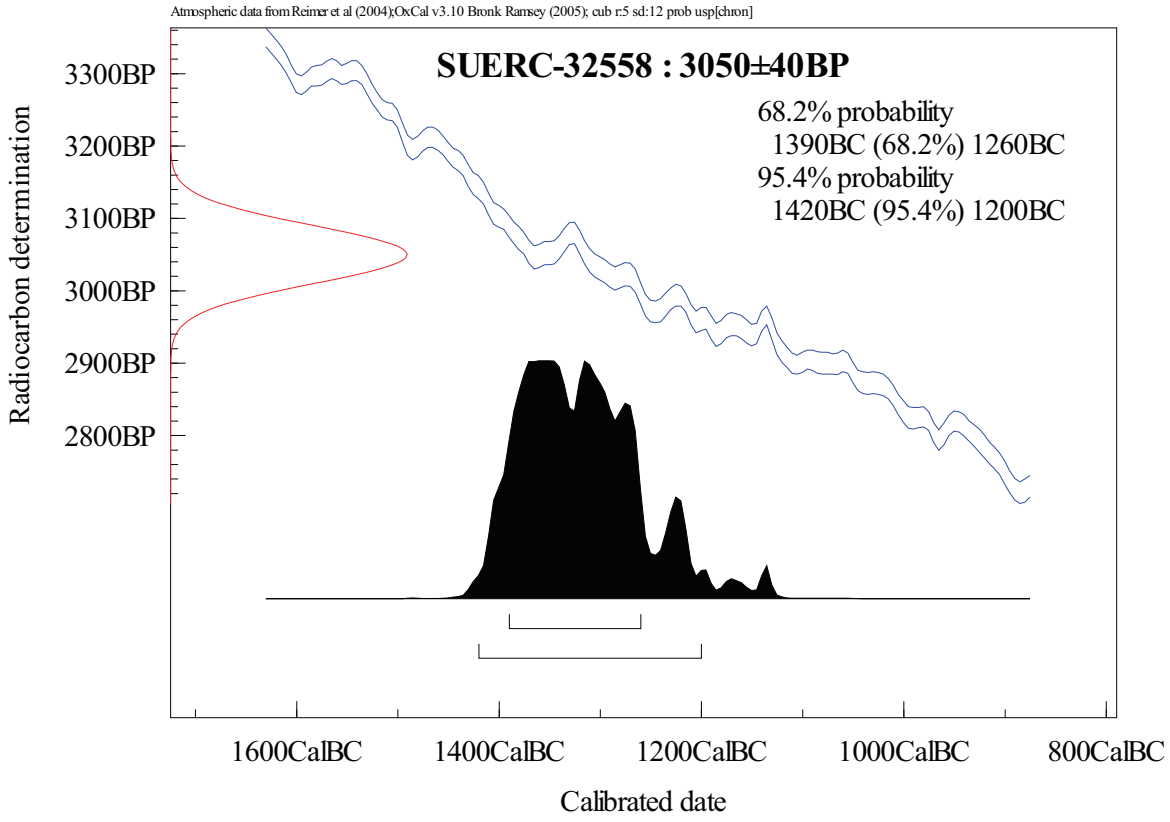


RADIOCARBON DATING CERTIFICATE

15 December 2010

Laboratory Code	SUERC-32558 (GU-23047)
Submitter	Rachel Fosberry Oxford Archaeology East 17 Trafalgar Way Bar Hill Cambs CB23 8SQ
Site Reference	Clay Farm, Trumpington
Context Reference **Sample Reference**	5259
Material	wood
$\delta^{13}C$ relative to VPDB	-26.5 ‰
Radiocarbon Age BP	3050 ± 40

Calibration Plot

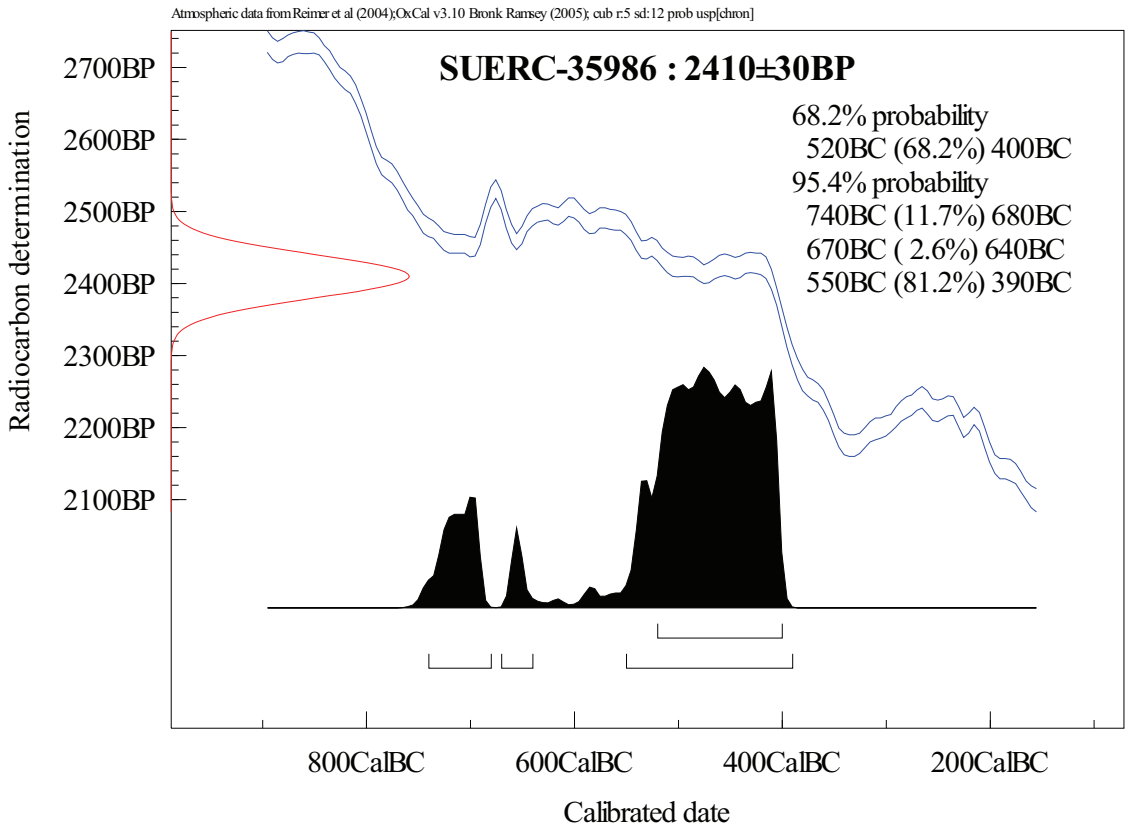


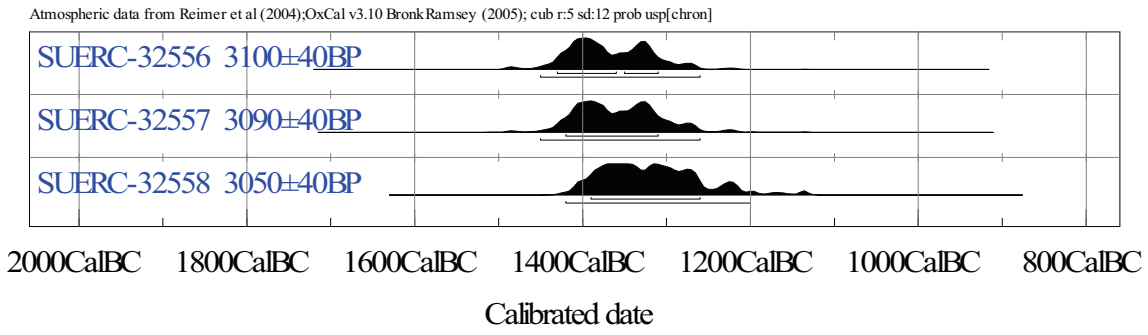
RADIOCARBON DATING CERTIFICATE

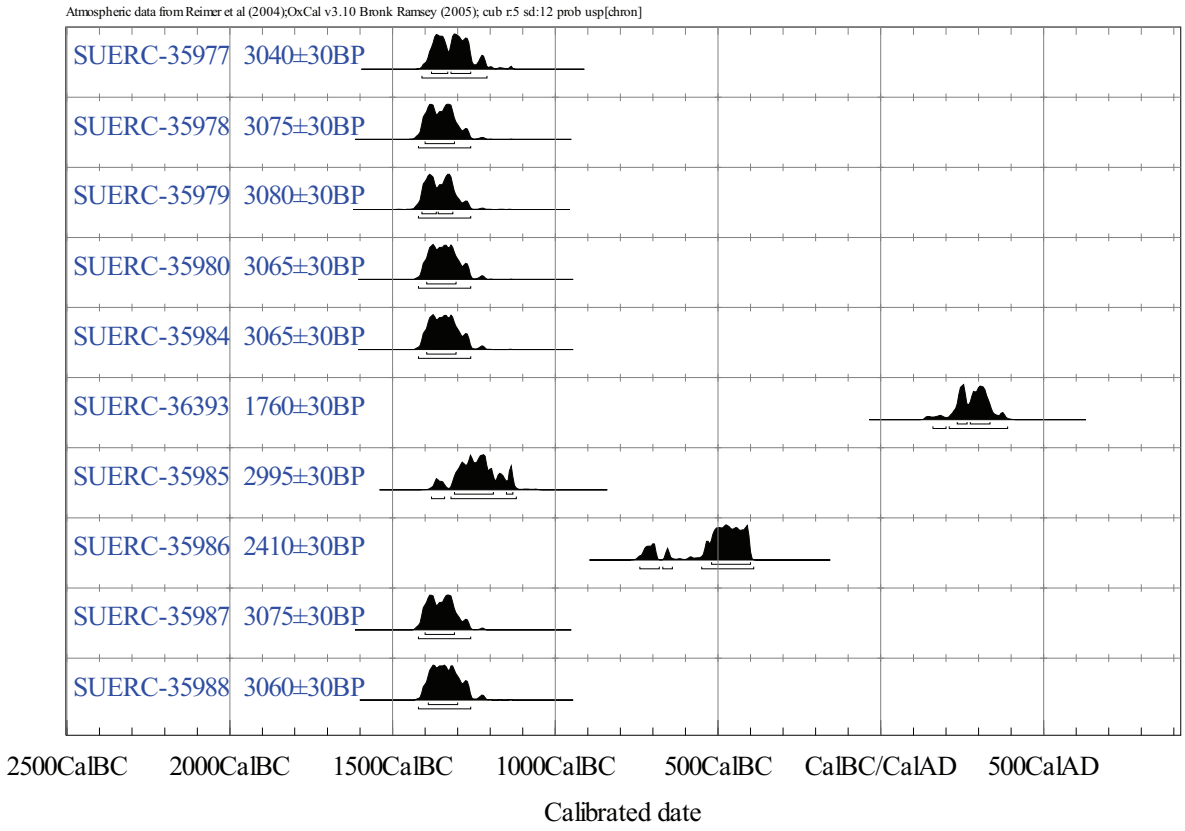
20 September 2011

Laboratory Code	SUERC-35986 (GU-24822)
Submitter	Rachel Fosberry OAE 15 Trafalgar Way, Bar Hill. Cambs. CB23 8SQ
Site Reference	CAMCFT10
Context Reference	6032
Sample Reference	
Material	Bone : Cattle
$\delta^{13}C$ relative to VPDB	-22.5 ‰
$\delta^{15}N$ relative to air	7.0 ‰
C/N ratio(Molar)	3.3
Radiocarbon Age BP	2410 ± 30

Calibration Plot







N.B. 1 The above ^{14}C age is quoted in conventional years BP (before 1950 AD). The error, which is expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

2 The calibrated age ranges are determined from the University of Oxford Radiocarbon Accelerator Unit calibration program (OxCal3).

3 Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Facility and should be quoted as such in any reports within the scientific literature. Any questions directed to the Radiocarbon Laboratory should also quote the GU coding given in parentheses after the SUERC code. The contact details for the laboratory are email g.cook@suerc.gla.ac.uk or Telephone 01355 270136 direct line.

Appendix D. Product Description

Product number: 1
Product title: Full Report (Analysis and Publication)
Purpose of the Product: To analyse the site and address the research aims and objectives stated in this report and to disseminate to the local community.
Composition: Published report, in accordance with the relevant journal and EH guidelines
Derived from: Analysis of site records, specialist reports and data and background research
Format and Presentation: Monograph
Allocated to: TP, RM
Quality criteria and method: Checked and edited by EP
Person responsible for quality assurance: EP
Person responsible for approval: EP
Planned completion date: 2013

Product number: 2
Product title: Archive completion
Purpose of the Product: To collate all elements of the physical and paper archive and deposit with the appropriate body
Composition: Paper records, artefacts, ecofacts
Derived from: Original site records, artefacts and ecofacts collected on site
Format and Presentation: Appropriately packaged
Allocated to: TP
Quality criteria and method: ?
Person responsible for quality assurance: ?
Person responsible for approval: ?
Planned completion date: 2013

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APPENDIX F. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-112386		
Project Name	Excavation at Clay Farm, Trumpington		
Project Dates (fieldwork) Start	14-05-2010	Finish	14-05-2011
Previous Work (by OA East)	No	Future Work	No

Project Reference Codes

Site Code	CAMCFT10	Planning App. No.	06/0797/OUT
HER No.	ECB 3686	Related HER/OASIS No.	ECB 2912 (Eval)

Type of Project/Techniques Used

Prompt: Direction from Local Planning Authority - PPG16

Please select all techniques used:

☐ 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 Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Field systems	Bronze Age -2.5k to -700	pot, bone, lithics	Bronze Age -2.5k to -700
Settlement	Iron Age -800 to 43	pot, bone, metalwork	Iron Age -800 to 43
Settlement	Roman 43 to 410	pot, bone, metalwork	Roman 43 to 410

Project Location

County	Cambridgeshire	Site Address (including postcode if possible)	
District	Cambridge		
Parish	Trumpington		
HER	Cambridgeshire		
Study Area	18ha	National Grid Reference	TL 4520 5500

Project Originators

Organisation	OA EAST
Project Brief Originator	Andy Thomas
Project Design Originator	Annie Calder (URS Scott Wilson Ltd)
Project Manager	Richard Mortimer
Supervisor	Tom Phillips

Project Archives

Physical Archive	Digital Archive	Paper Archive
Cambs. County Store	OA East	Cambs. County Store
CAMCFT 10	CAMCFT 10	CAMCFT 10

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☒	☒
Ceramics	☒	☒	☒
Environmental	☒	☒	☒
Glass	☒	☐	☒
Human Bones	☒	☒	☒
Industrial	☒	☐	☐
Leather	☐	☐	☐
Metal	☒	☒	☒
Stratigraphic		☐	☒
Survey		☐	☐
Textiles	☐	☐	☐
Wood	☐	☒	☒
Worked Bone	☒	☒	☒
Worked Stone/Lithic	☒	☒	☒
None	☐	☐	☐
Other	☒	☒	☒

Digital Media	Paper Media
☒ Database	☒ Aerial Photos
☐ GIS	☒ Context Sheet
☐ Geophysics	☒ Correspondence
☒ Images	☐ Diary
☒ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☒ Spreadsheets	☒ Map
☒ Survey	☐ Matrices
☒ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☐ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☒ Survey

Notes:

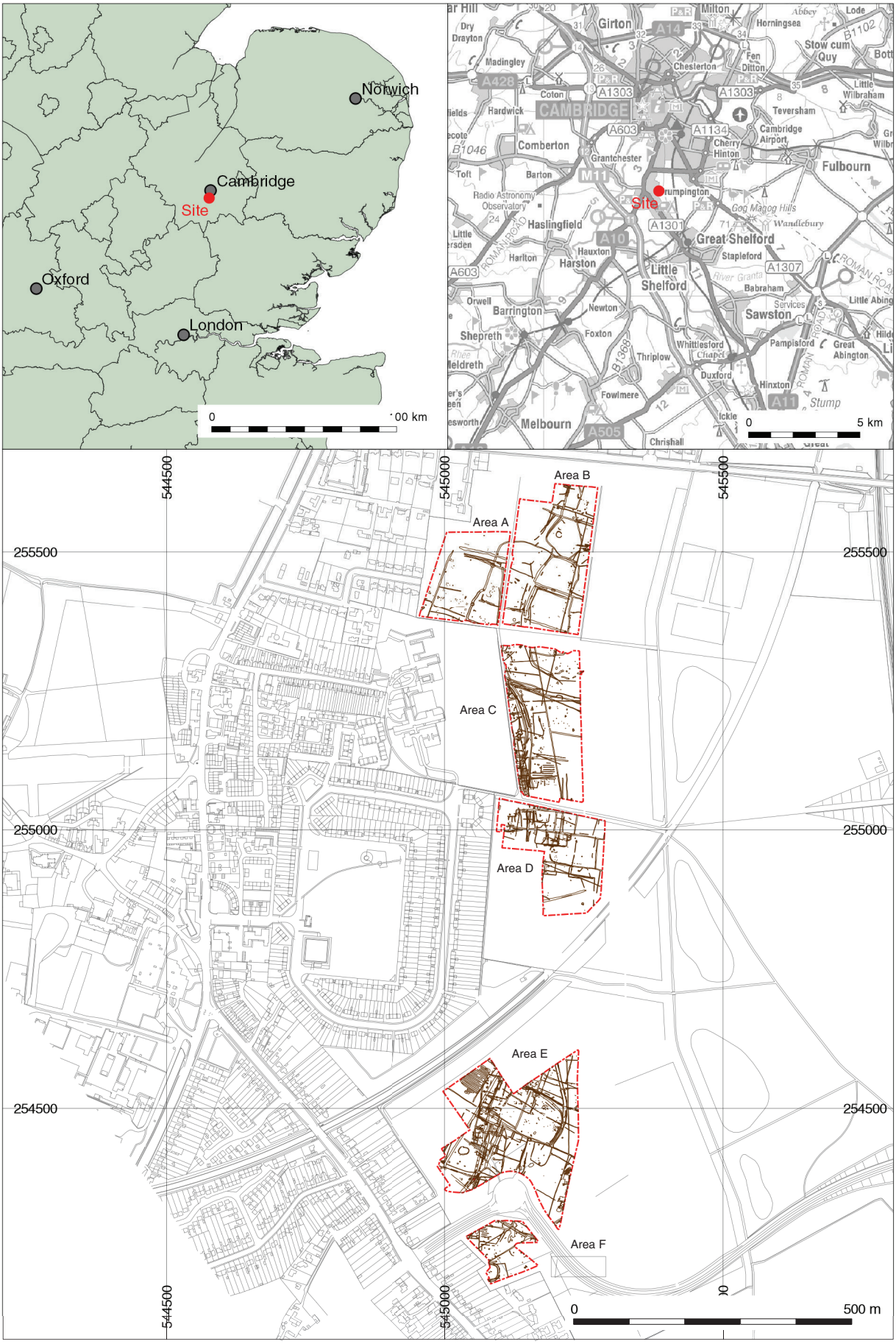

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Figure 1: Site location showing excavation areas (red) and archaeology (brown)

Figure 2: Cambridgeshire HER entries. Scale 1:7500

Figure 3: All Archaeological features shown with contour mapping.

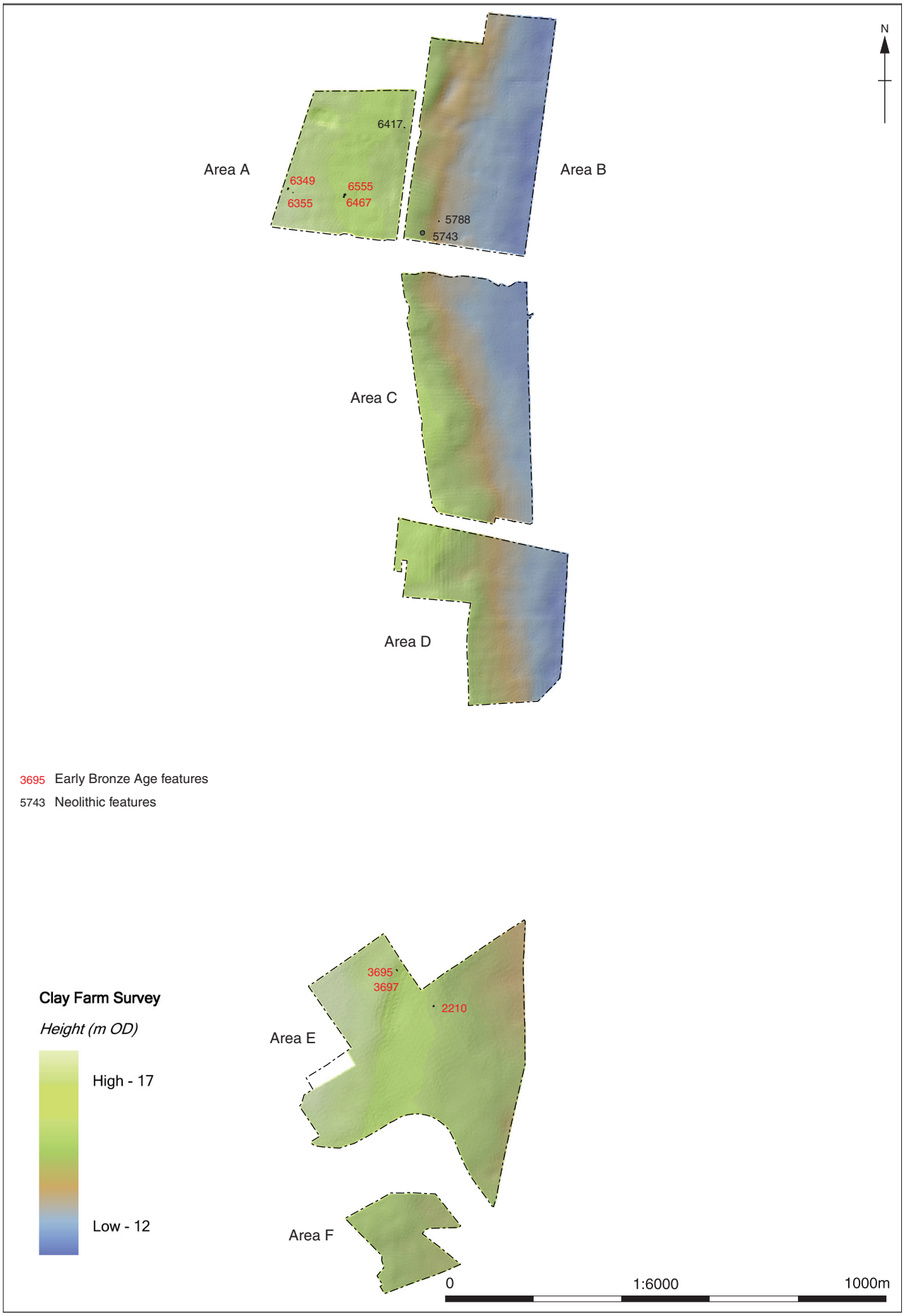


Figure 4: Periods 1 and 2, Neolithic and Earlier Bronze Age features

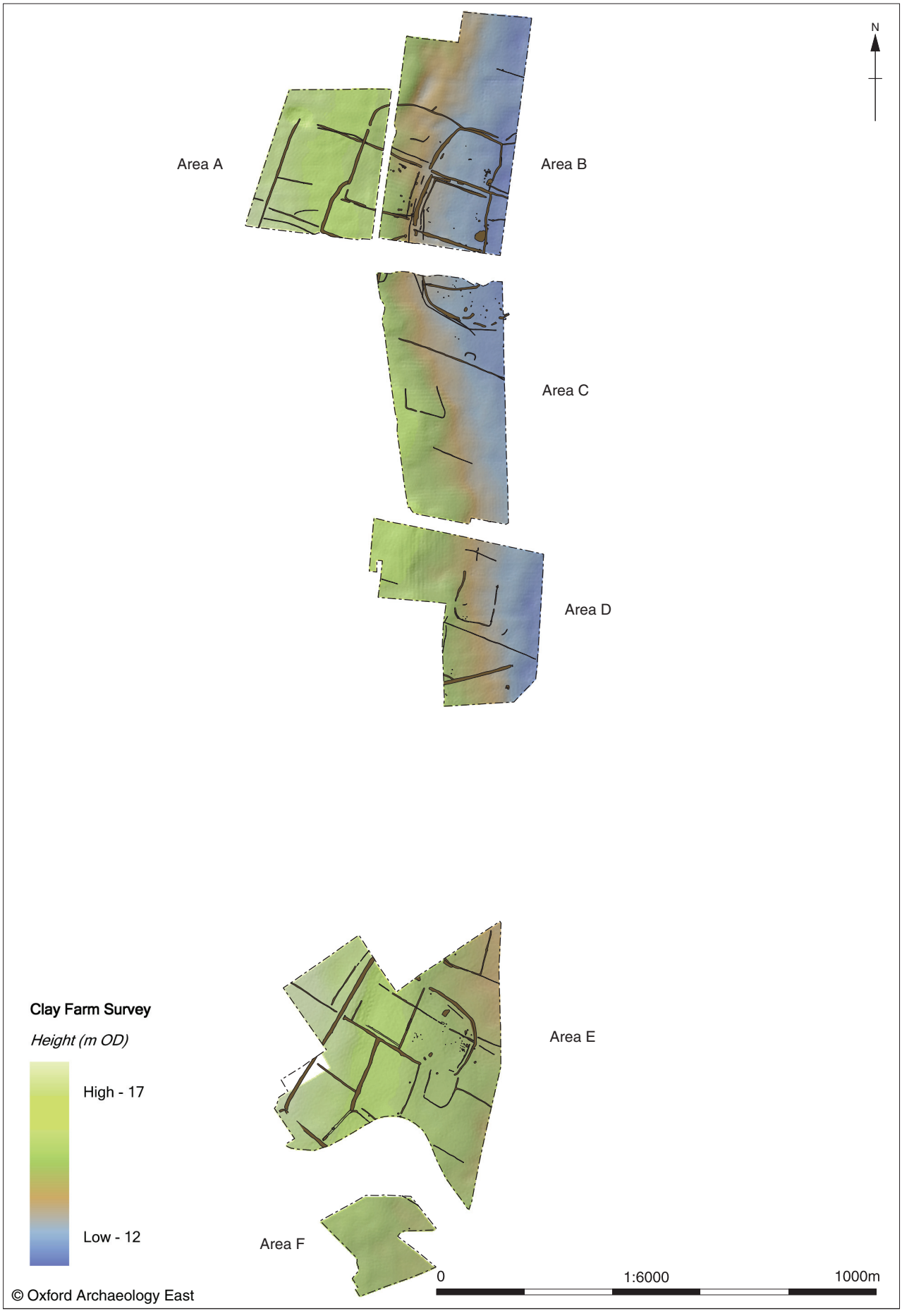


Figure 5: Period 3, All Middle - Late Bronze Age features with contours. Scale 1:6000

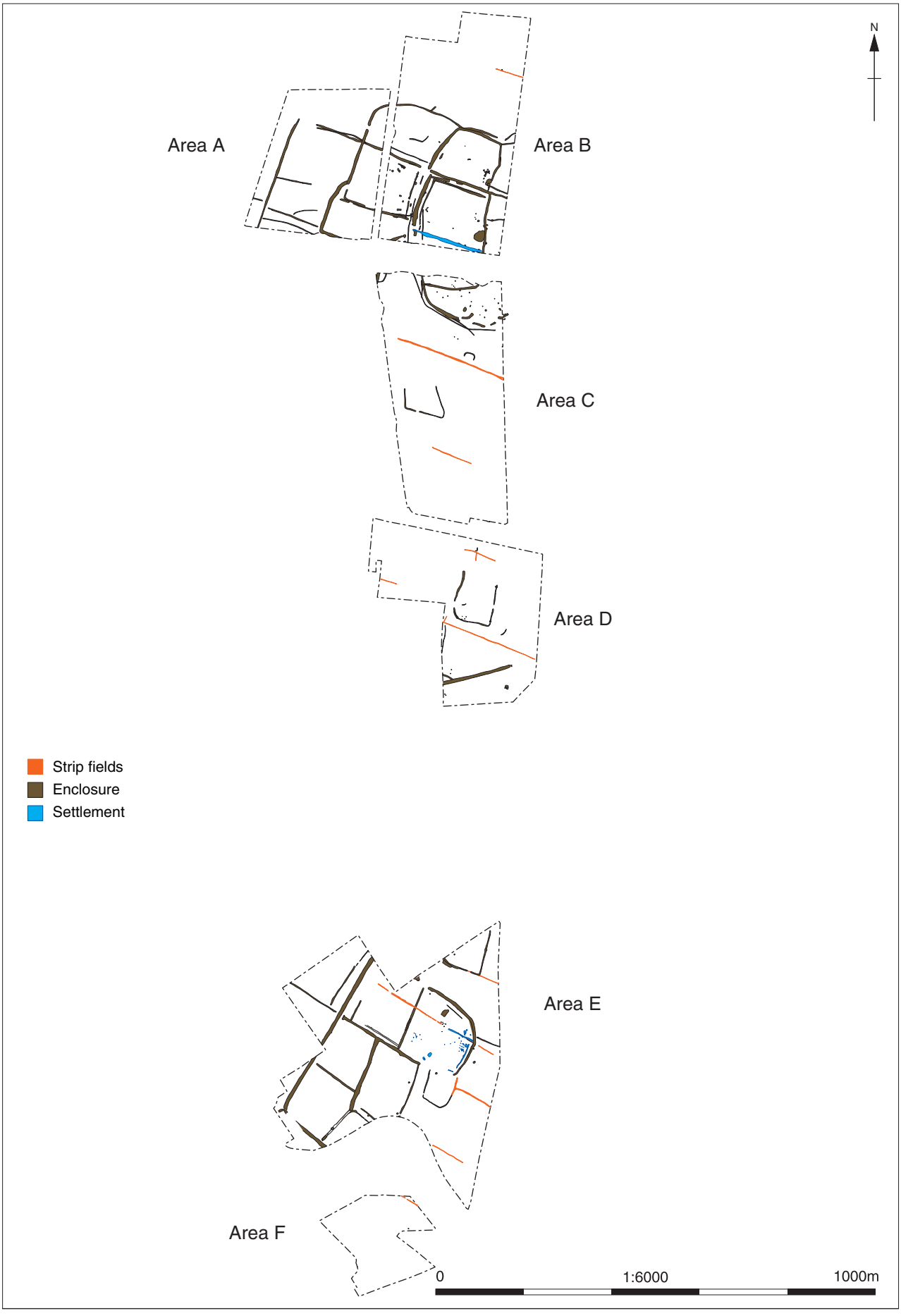
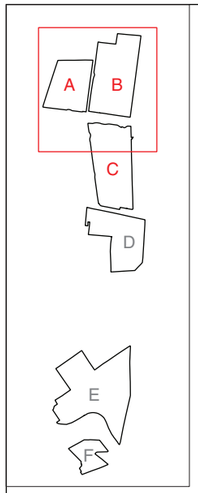
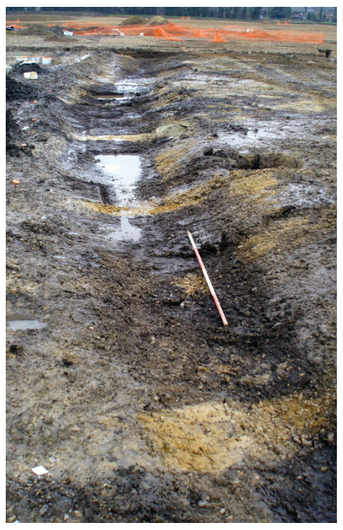


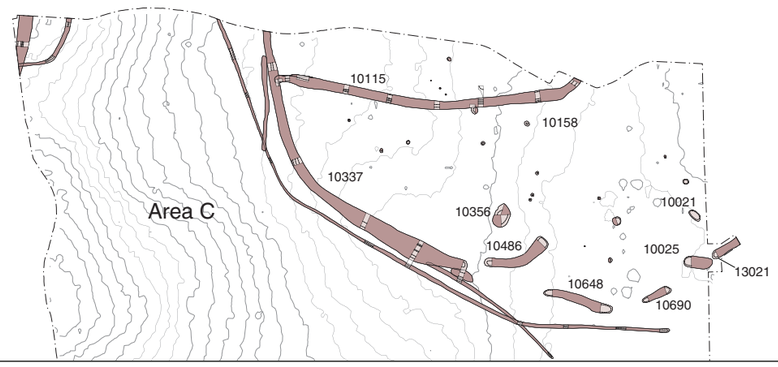
Figure 6: Period 3, Development of Middle Bronze Age field systems. Scale 1:6000



Segmented, waterlogged ditch 5228, Area B from the south



Northern terminal of ditch 5228 cutting ditch 4910, Area B (2m scale)



0 1:1250 50 m

Figure 7: Period 3, Middle - Late Bronze Age in Areas A, B and north of C. Scale 1:1250

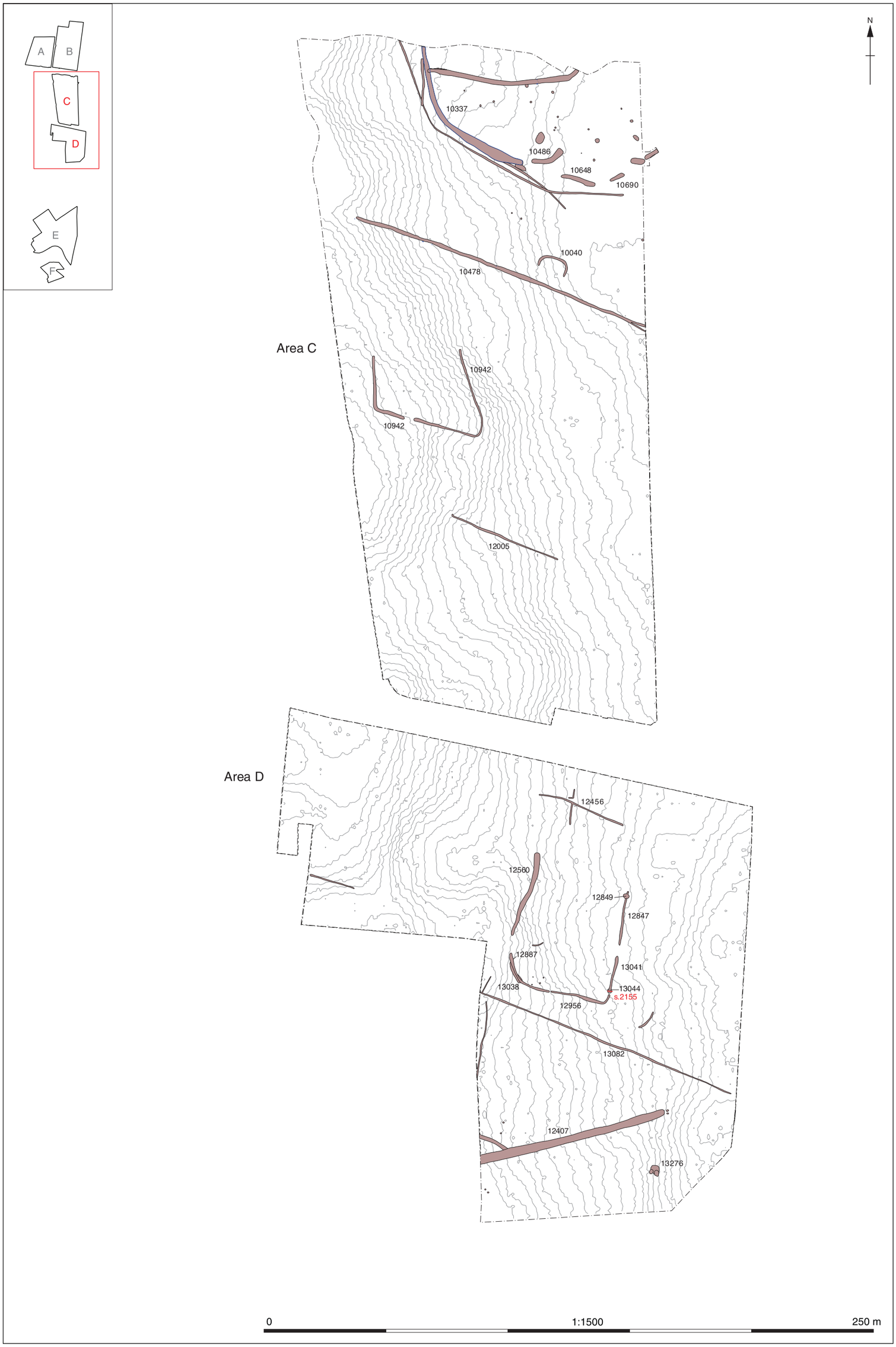
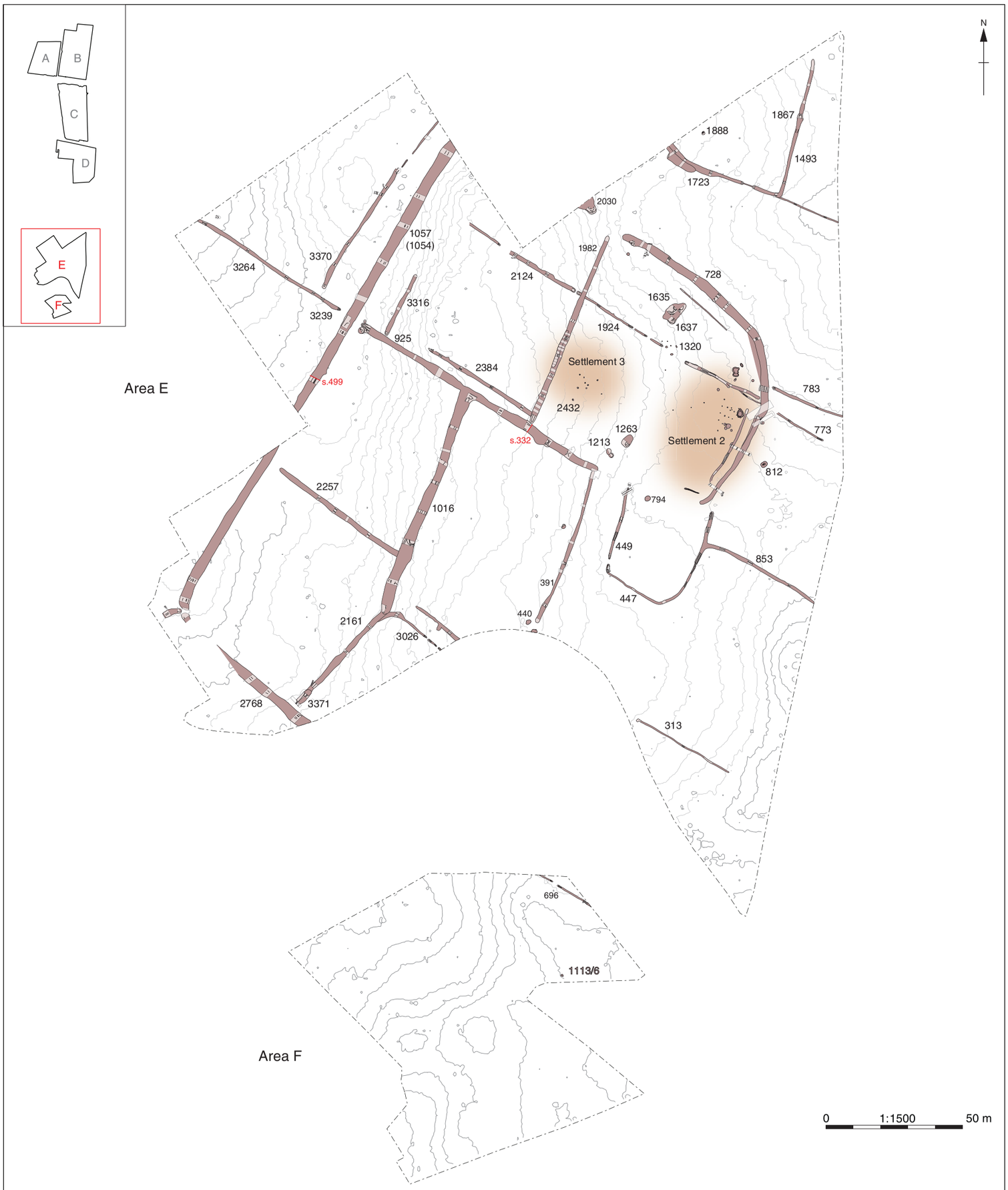


Figure 8: Period 3, Middle - Late Bronze Age features in the south of Area C and D. Scale 1:1500



Cut 2528, Ditch 1057, Area E, 2 m scale

Selection of Deverel-Rimbury pottery found in Area E

Figure 9: Period 3, Middle - Late Bronze Age in Areas E and F. Scale 1:1500

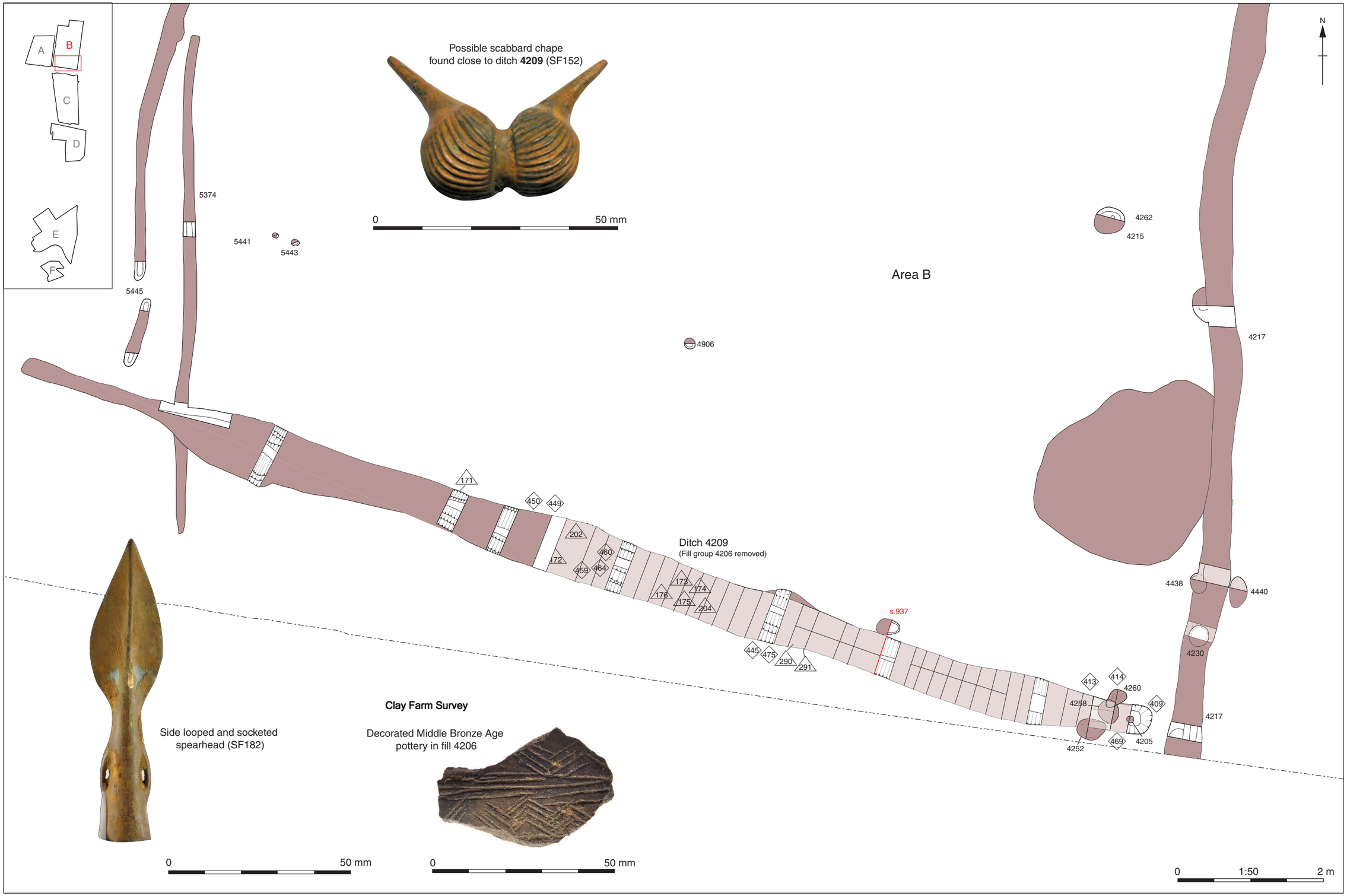
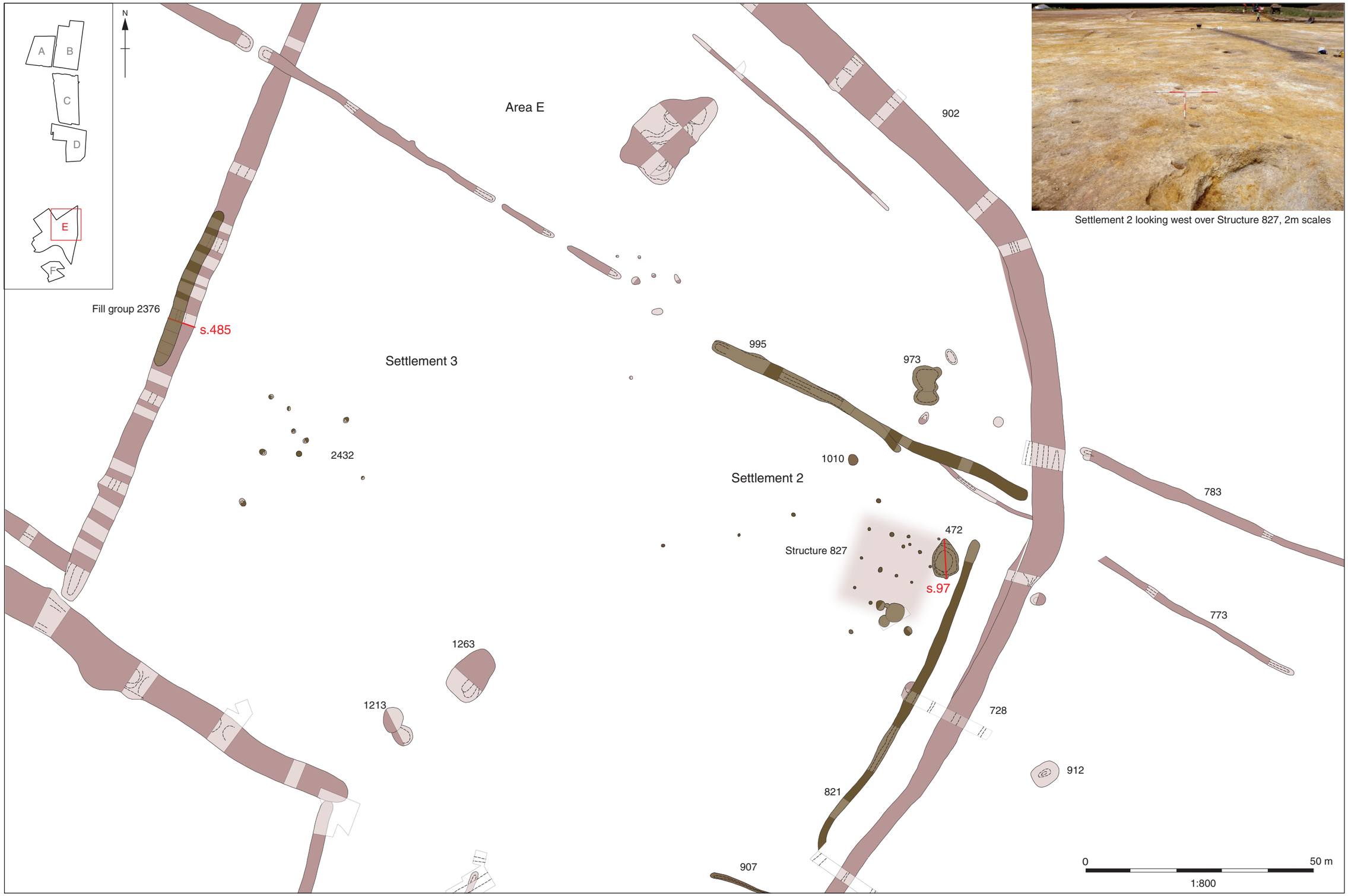
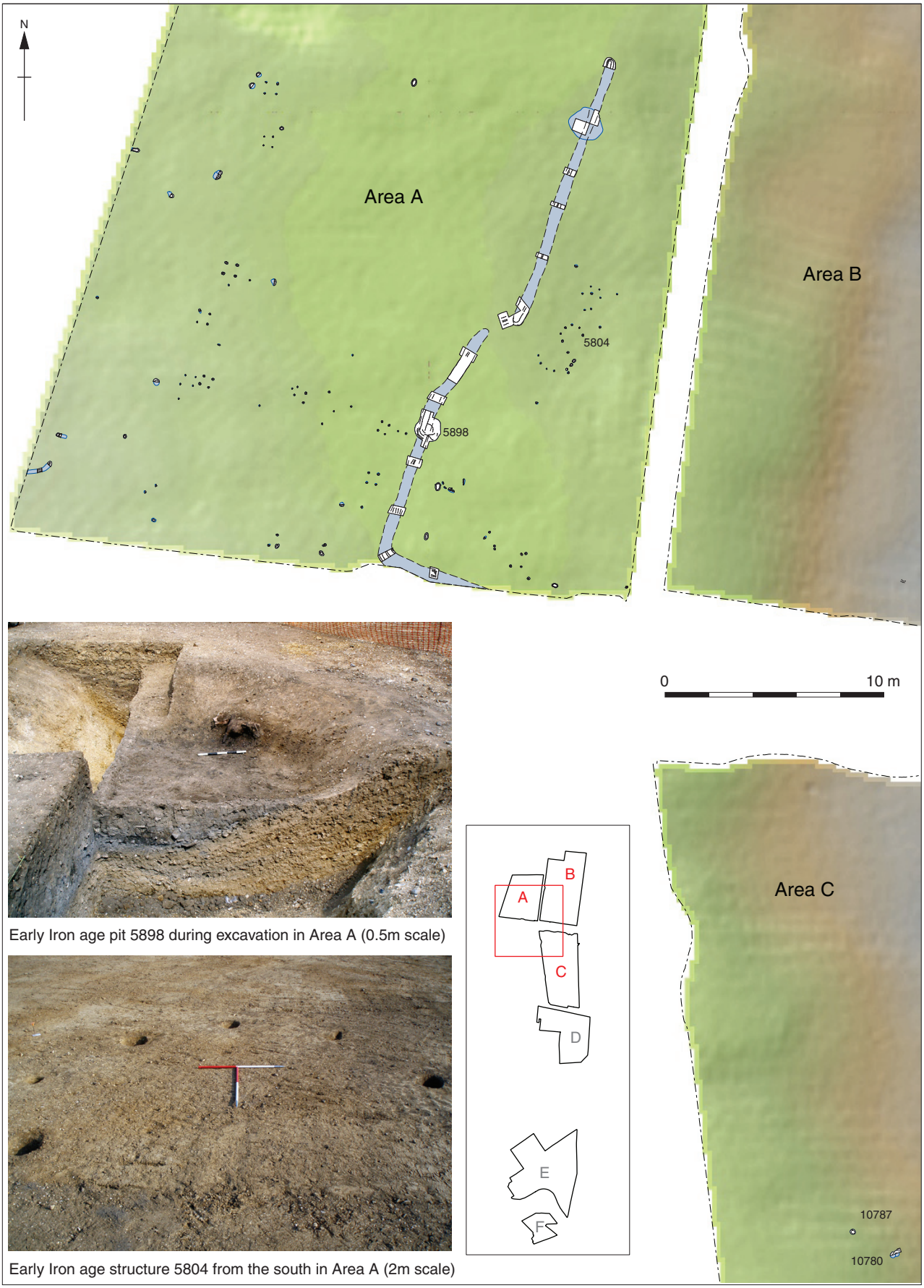


Figure 10: Period 3, Middle Bronze Age Settlement 1 in Area B, extent of fill group 4206 in top of ditch **4209.** Scale 1:50



Settlement 2 looking west over Structure 827, 2m scales

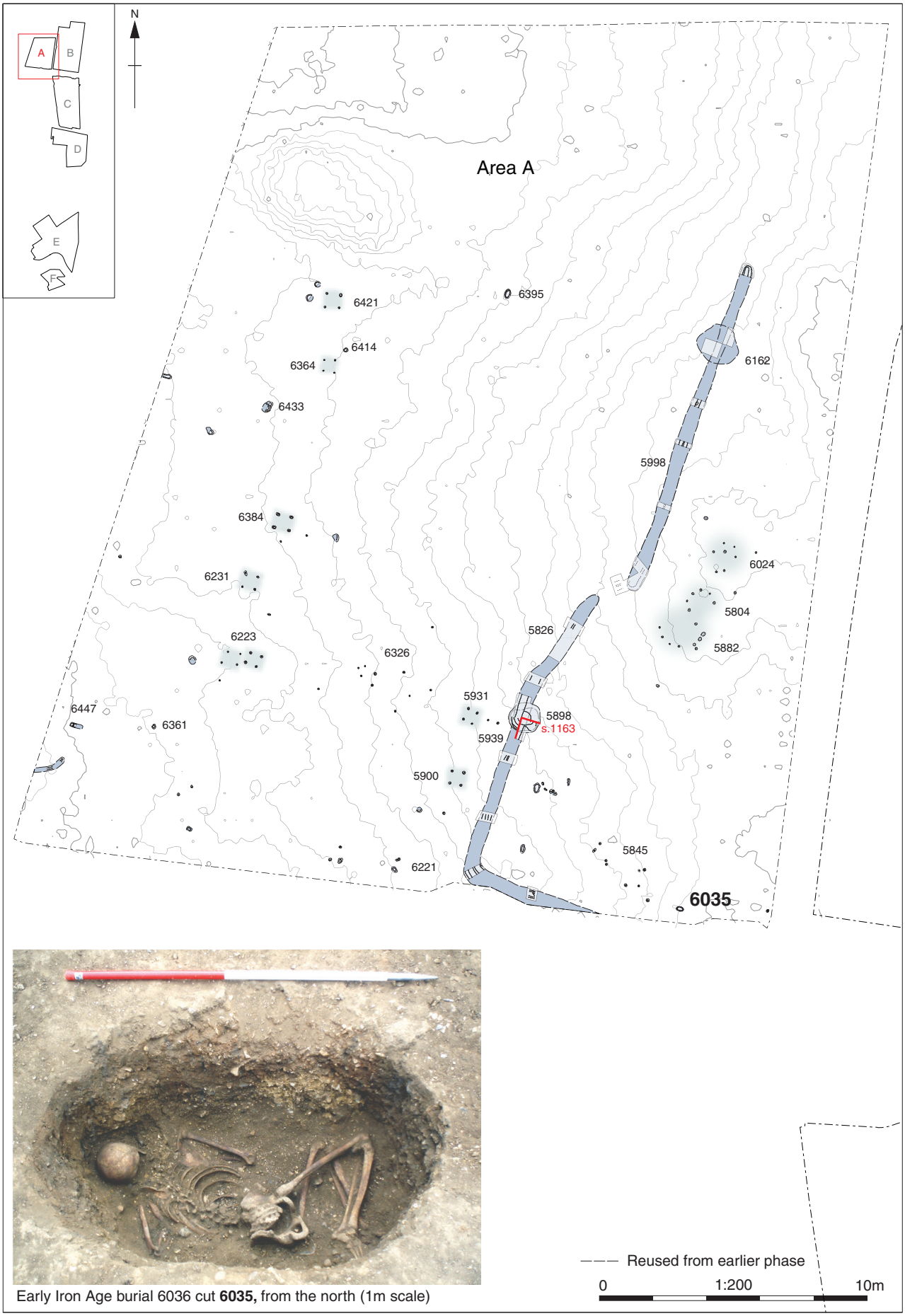
Figure 11: Period 3, Middle Bronze Age Settlement 2 and 3 in Area E. Scale 1:800



Early Iron age pit 5898 during excavation in Area A (0.5m scale)

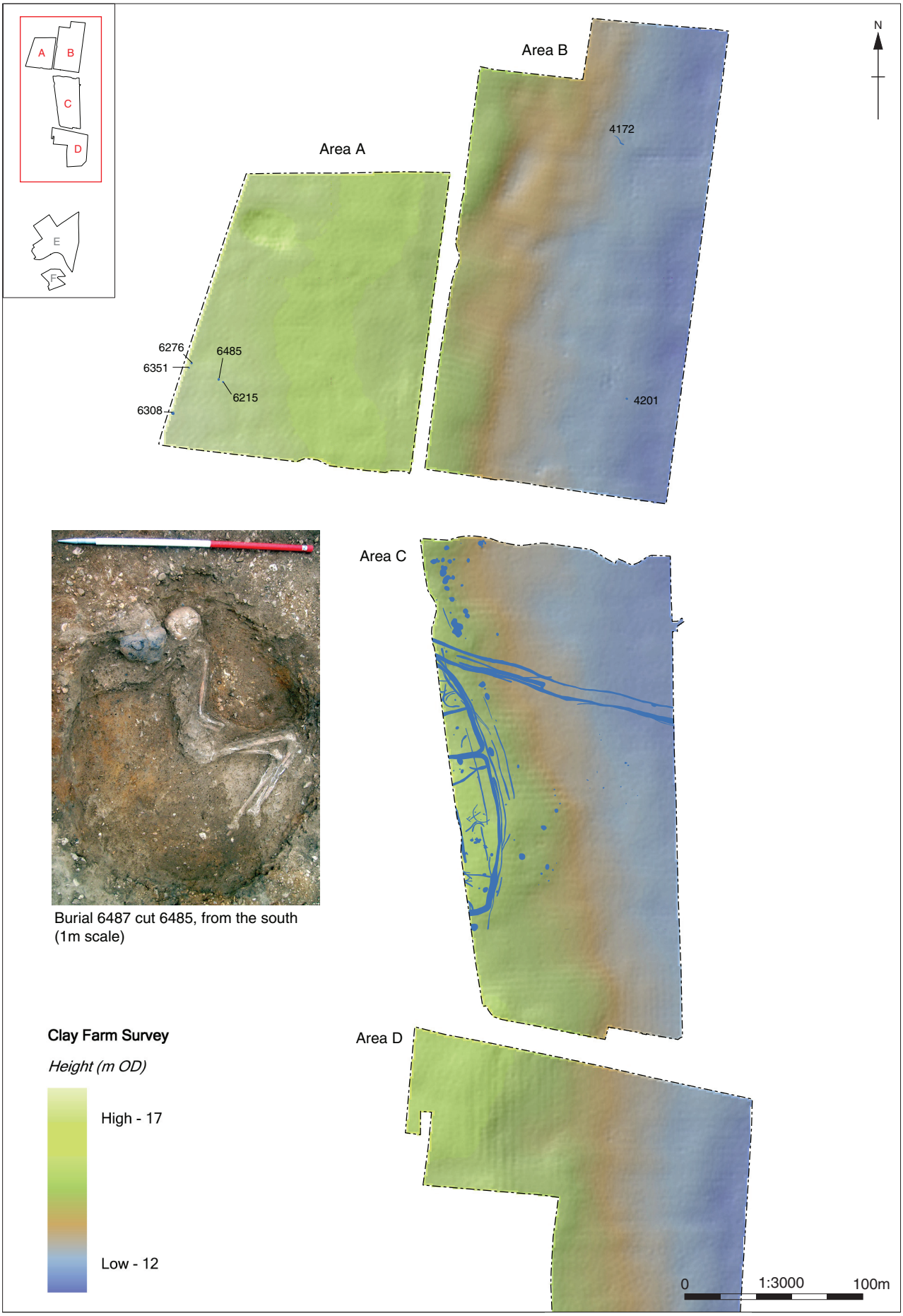
Early Iron age structure 5804 from the south in Area A (2m scale)

Figure 12: Period 4, All Early Iron Age features with contours. Scale 1:1250



Early Iron Age burial 6036 cut **6035,** from the north (1m scale)

Figure 13: Period 4, Early Iron Age Settlement in Area A. Scale 1:200



Burial 6487 cut 6485, from the south (1m scale)

Figure 14: Period 5, All Middle Iron Age features shown with contours. Scale 1:3000

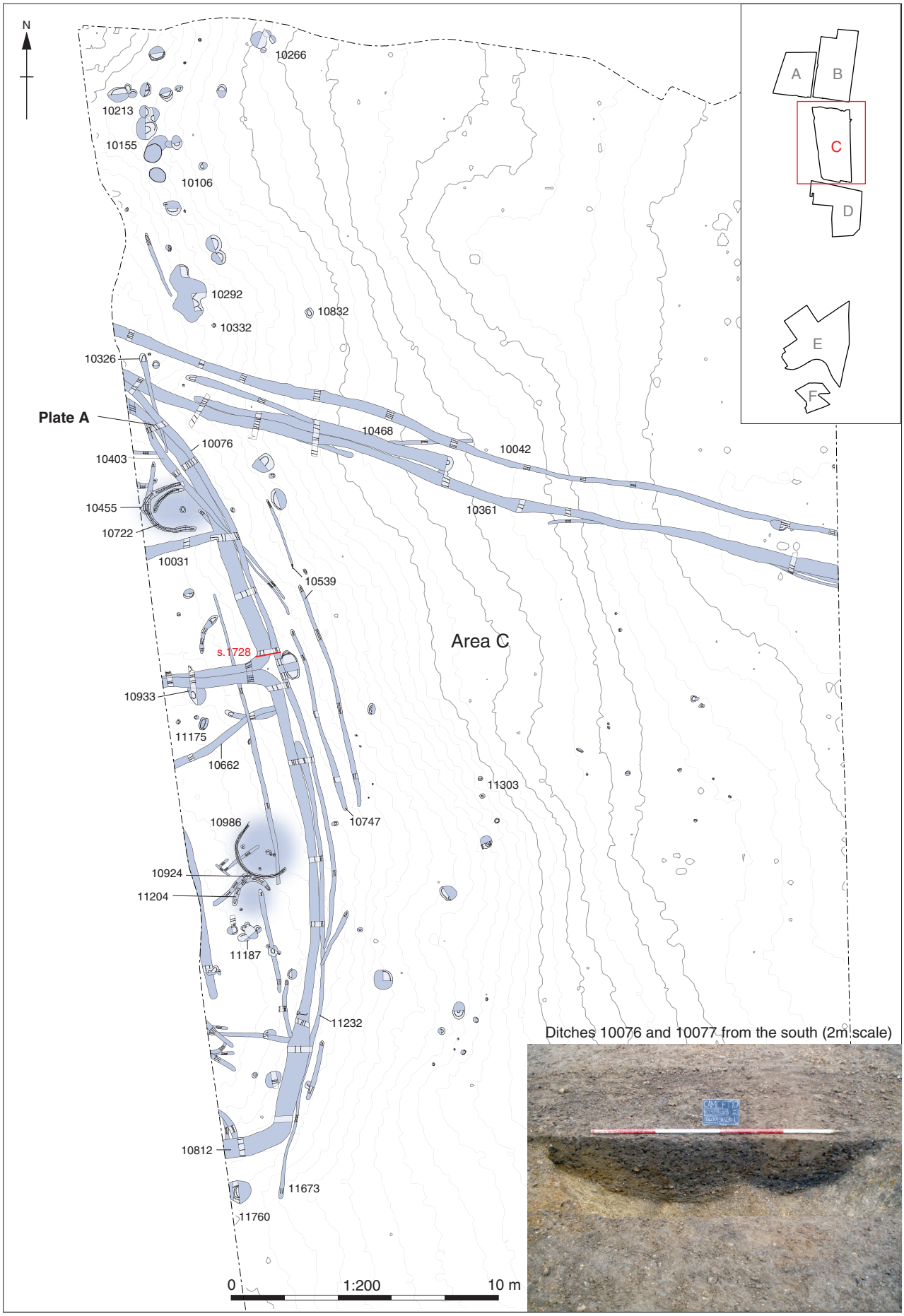


Figure 15: Period 5, Middle Iron Age settlement Area C. Scale 1:200

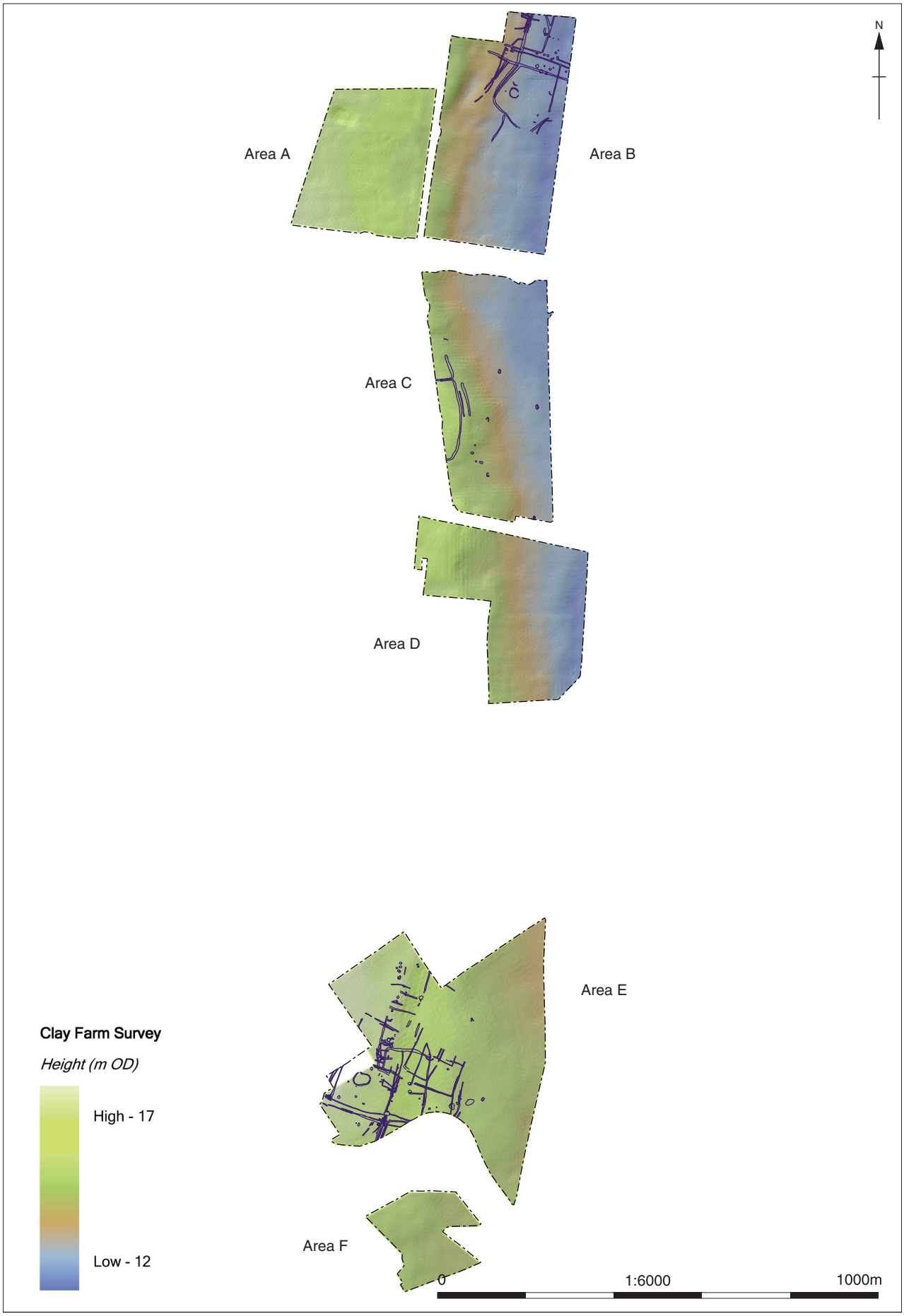
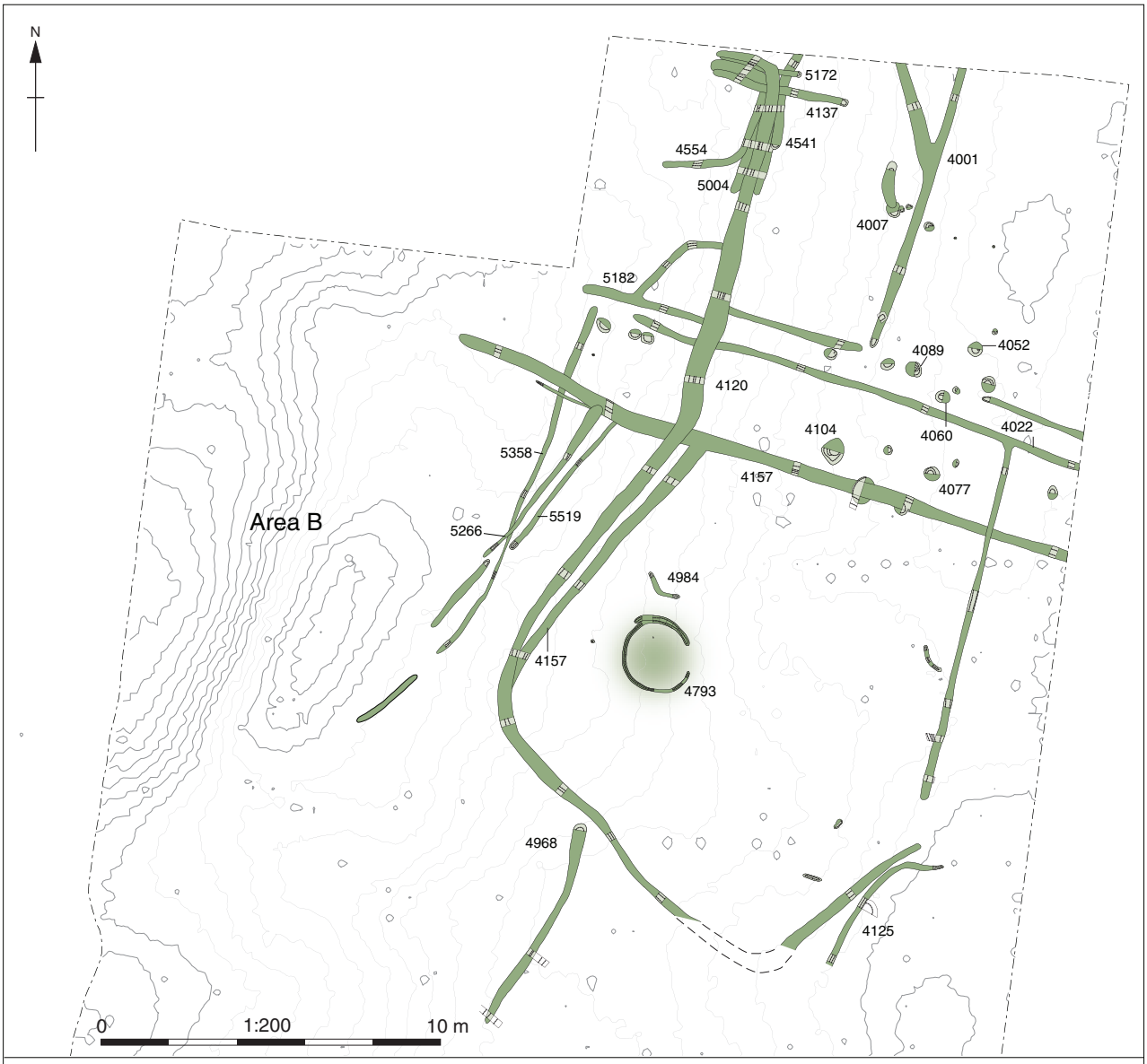
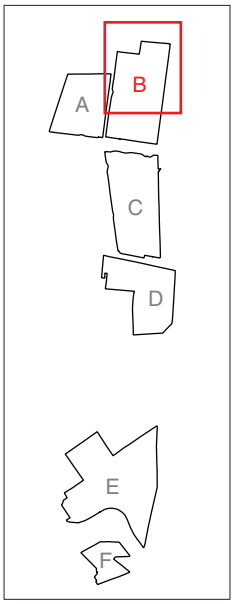


Figure 16: Period 6, All Late Iron Age features shown with contours. Scale 1:6000





Roundhouse 4793 from the south (2m scale)

Figure 17: Period 6, Late Iron Age field system in Area B. Scale 1:200

Structure 10833 from the west

Area C

10322
10287
10314
10077
10833
10624
10887
11460
11159
11469
11590
10909
Evaluation cremation
11684
12065

A
B
C
D
E
F

Cremation pit 10909 during excavation

0 1:250 10 m

Figure 18: Period 6, Late Iron Age features in Area C. Scale 1:250

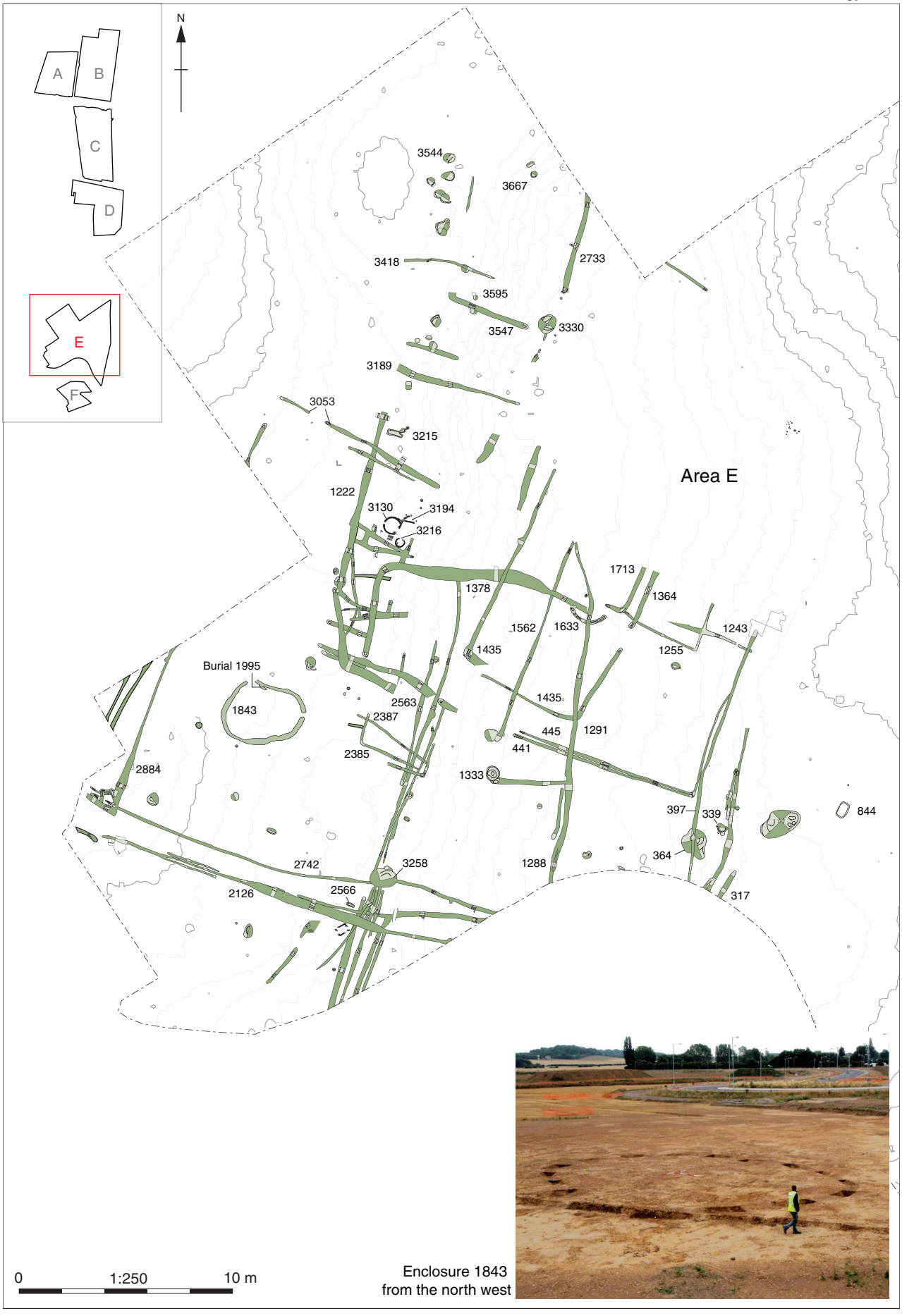
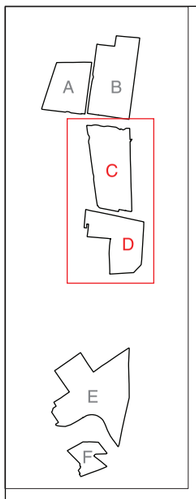


Figure 19: Period 6, Late Iron Age features in Area E. Scale 1:250

Figure 20: Period 7, Early Roman features shown with contours. Scale 1:6000



N

Area C

10029
10966
11634
11556
11588
See Fig 21a
12459
11739
11724
11673
11748
11561
11705
11684
11680
11650
11601
11917
11837
11811
12299
Building 11847
12076
11636

Roundhouse 12459 during excavation from the east (2m scale)

Area D

12244
11996
12261
11976
12721
12291
12525
12242
12417
12626
12605
12726
Structure 12913
11981
12777
12590
12861
12602
12625
See Fig 21b
12896

Burial 13057, cut 13058 from the south. 1m scale

13058
13229
12996
12936
13126

0 1:1000 50 m

Figure 21: Period 7, Early Roman Settlement in Areas C and D, Scale 1:1000

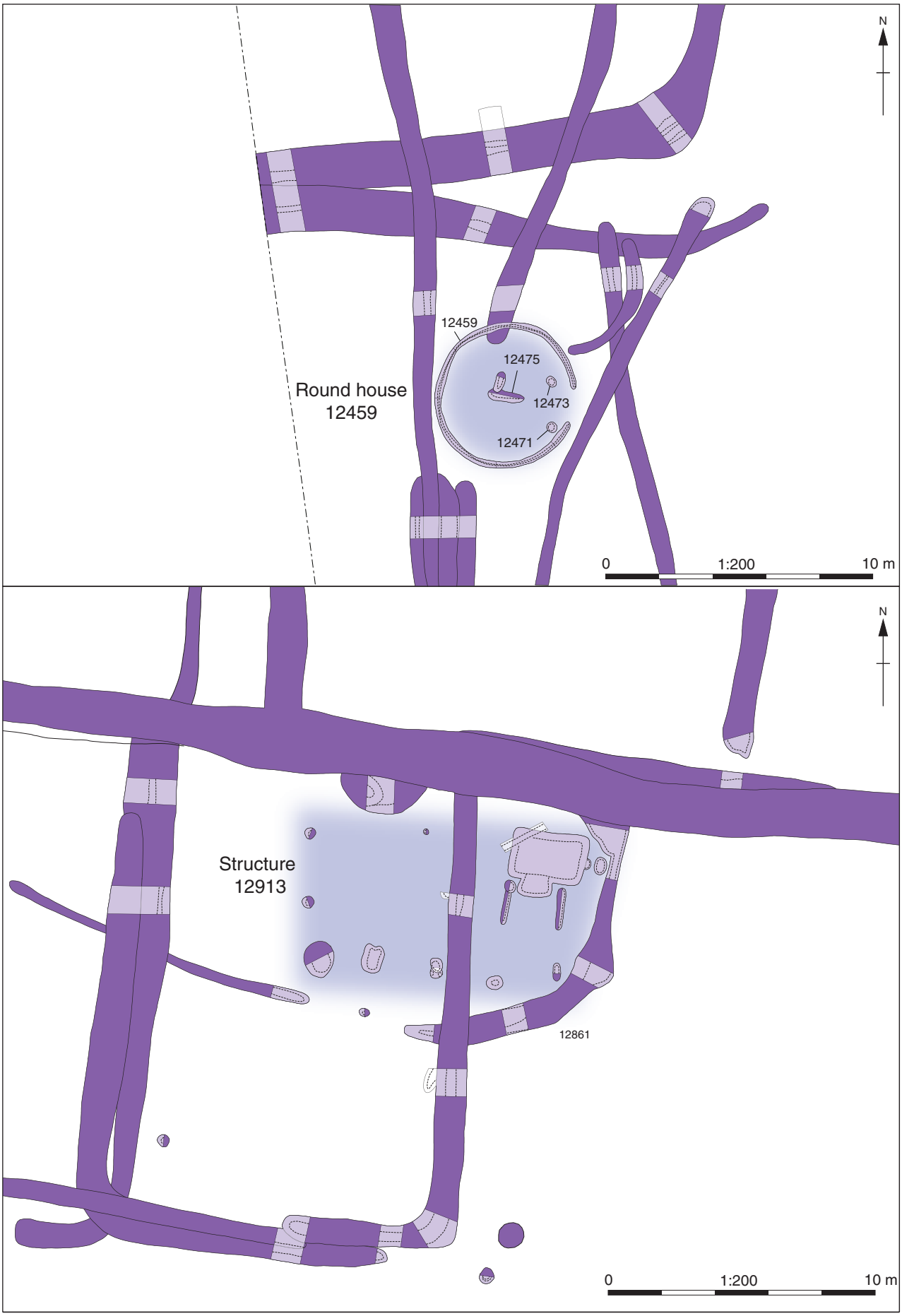


Figure 21a-b: Period 7, Detail of Roundhouse 12459, Area C (Scale 1:200) and detail of Structure 1291, Area D (Scale 1:200)

Building 11847 from the west (2m scale)

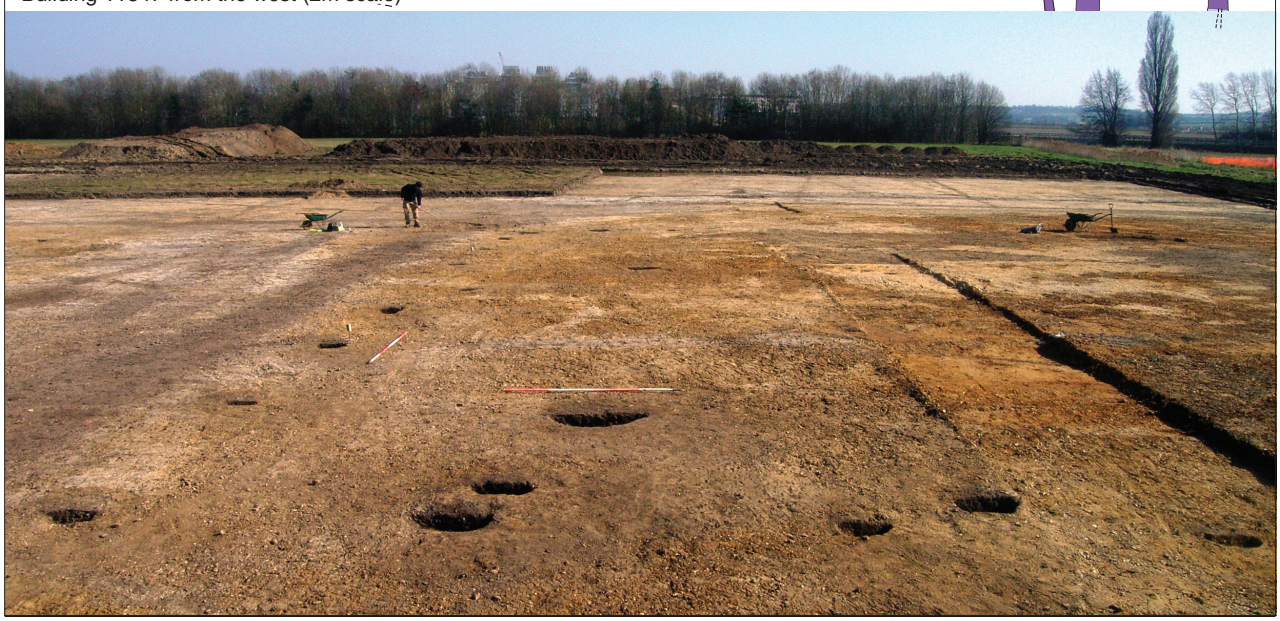


Figure 22: Period 7, Early Roman 'cemetery garden' in Area C. Scale 1:500

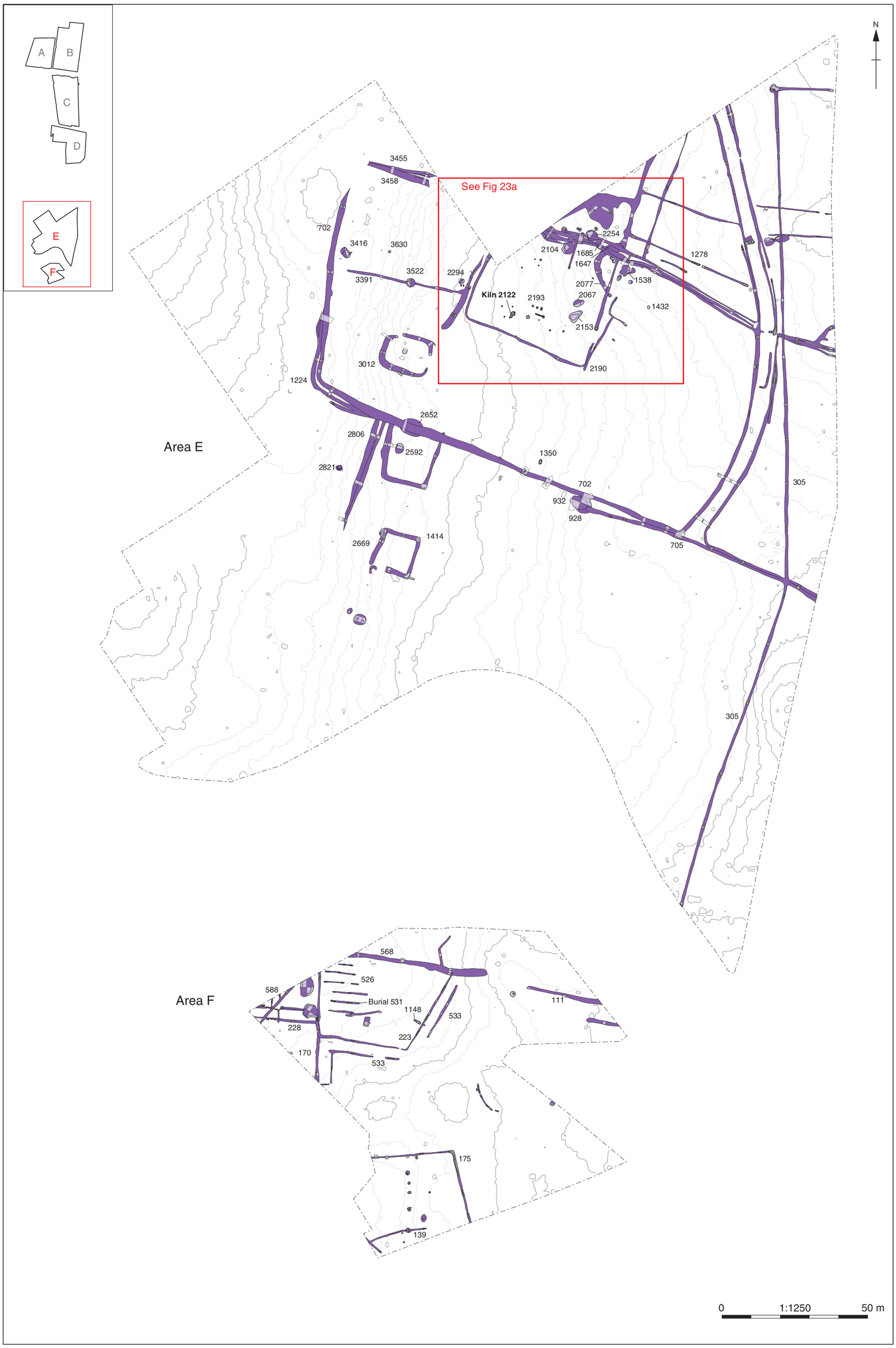


Figure 23: Period 7, Early Roman Settlement and field system in Areas E and F. Scale 1: 1250

Pottery kiln 2122 during excavation

Figure 23a: Period 7, Detail plan of Settlement in Area E, Scale 1:500

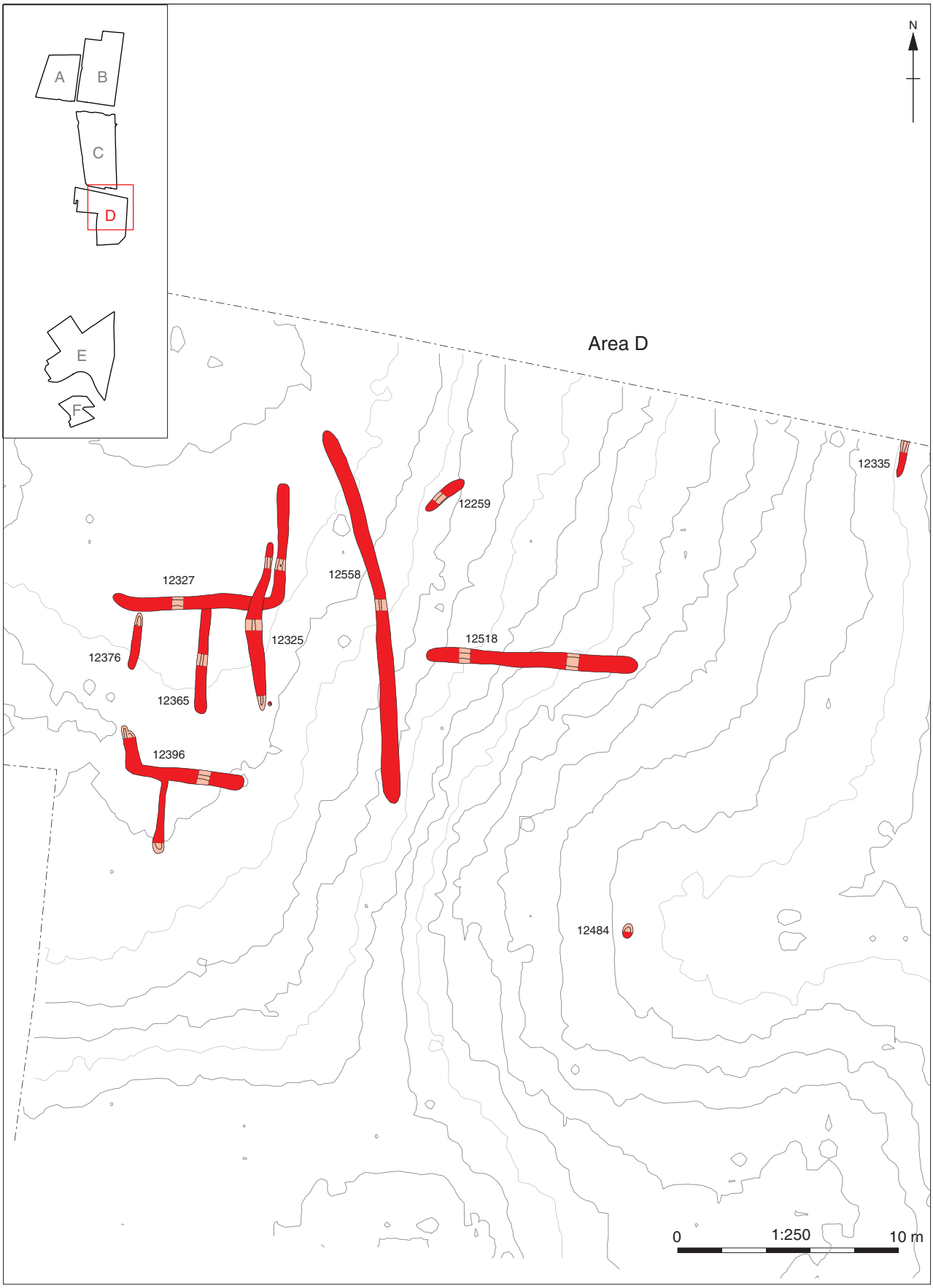


Figure 24: Period 8, Late Roman features in Area D, Scale 1:250

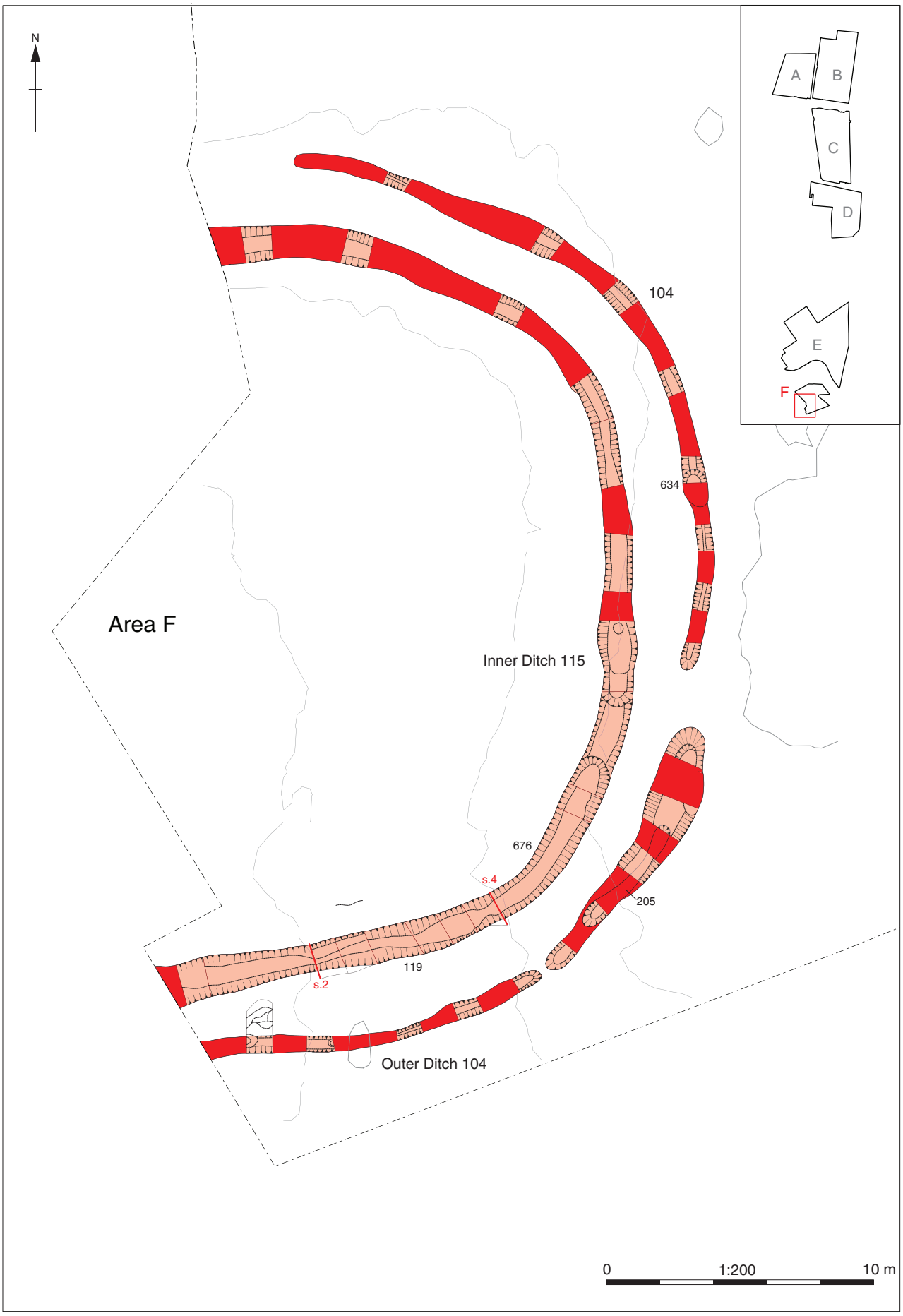


Figure 25: Period 8, Late Roman double ditched 'monument' in Area F, Scale 1:200

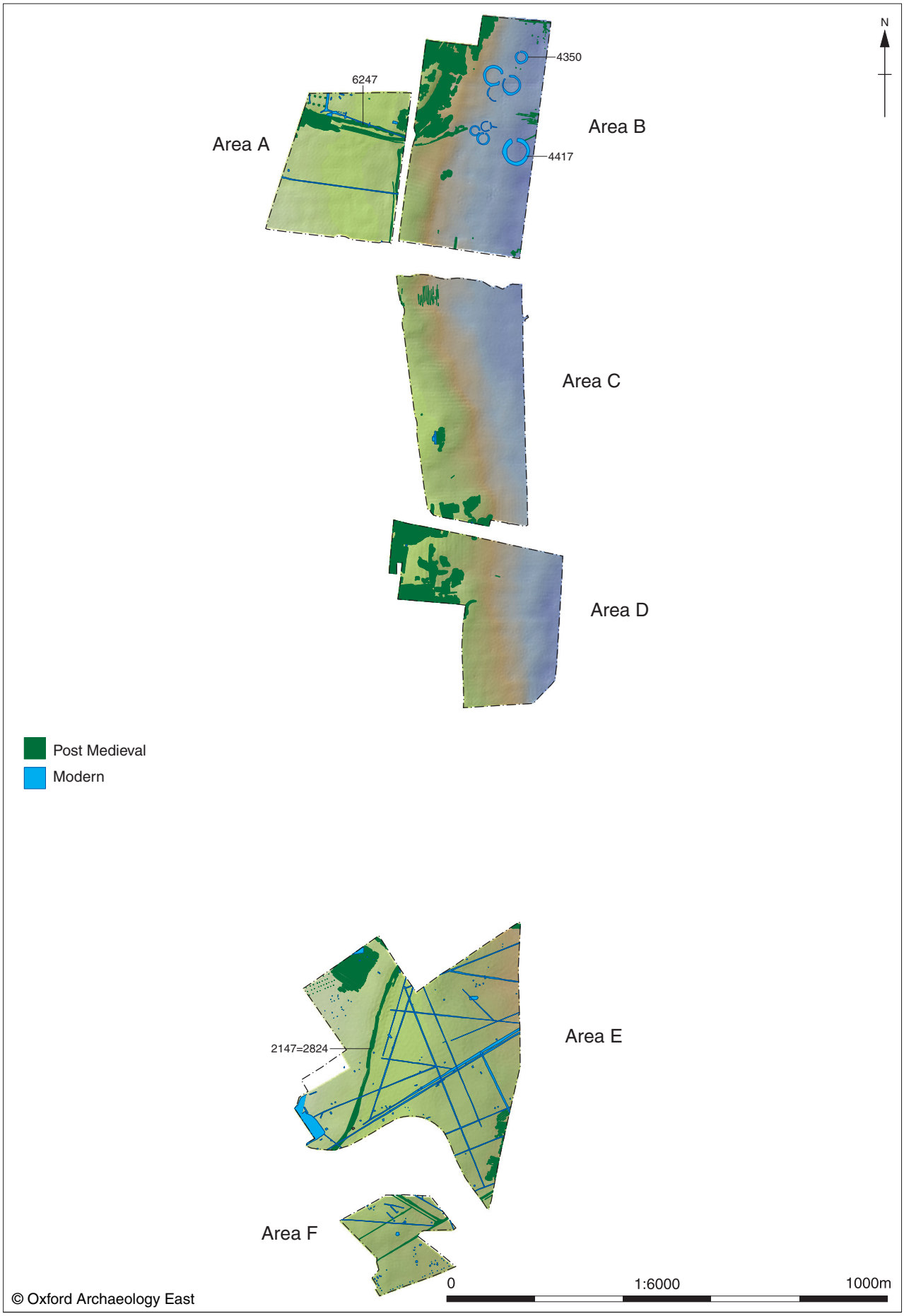


Figure 26: Periods 11-12, post-medieval and modern features with contours. Scale 1:6000

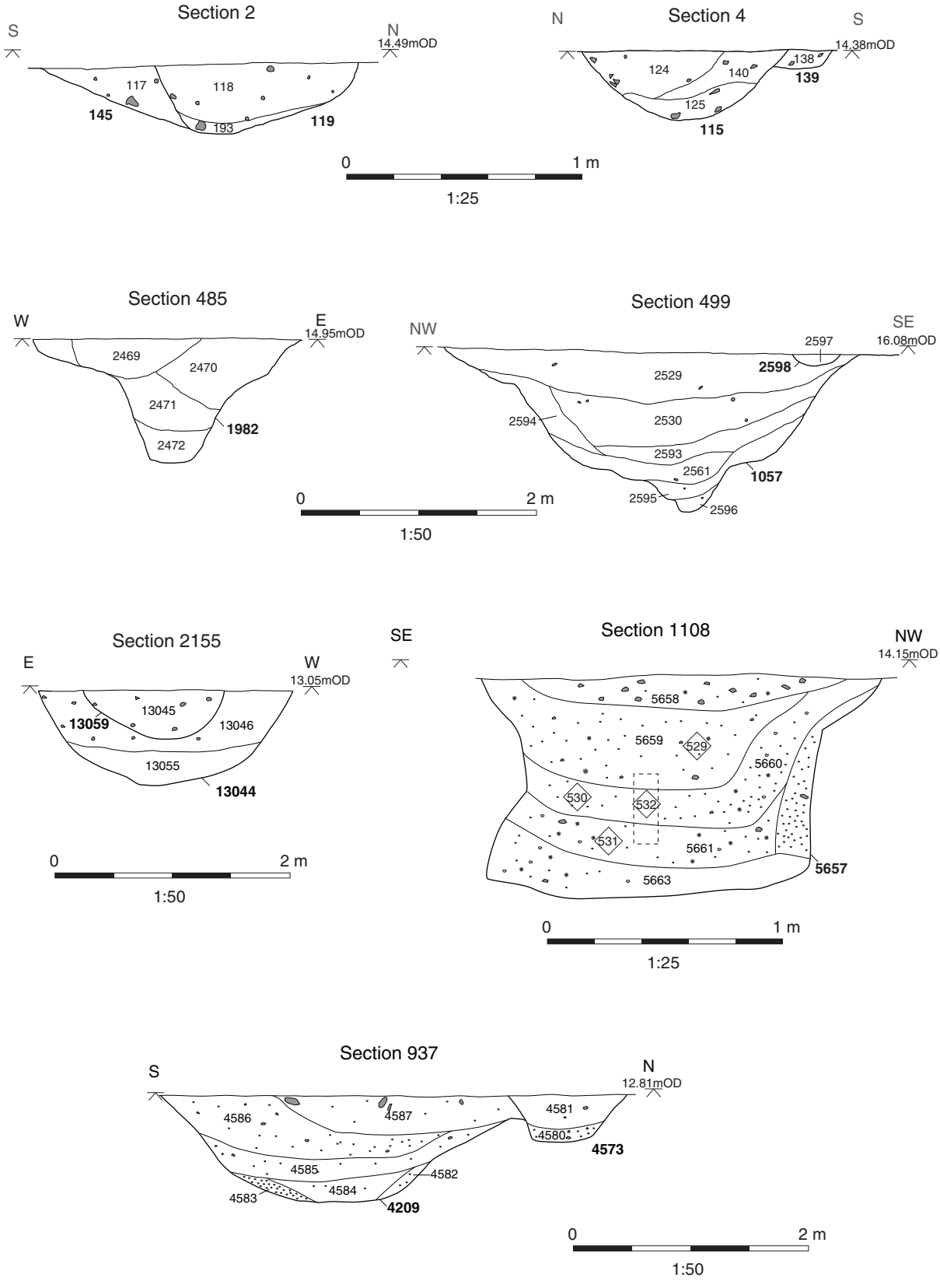


Figure 27: Sections Scale 1:25 and 1:50

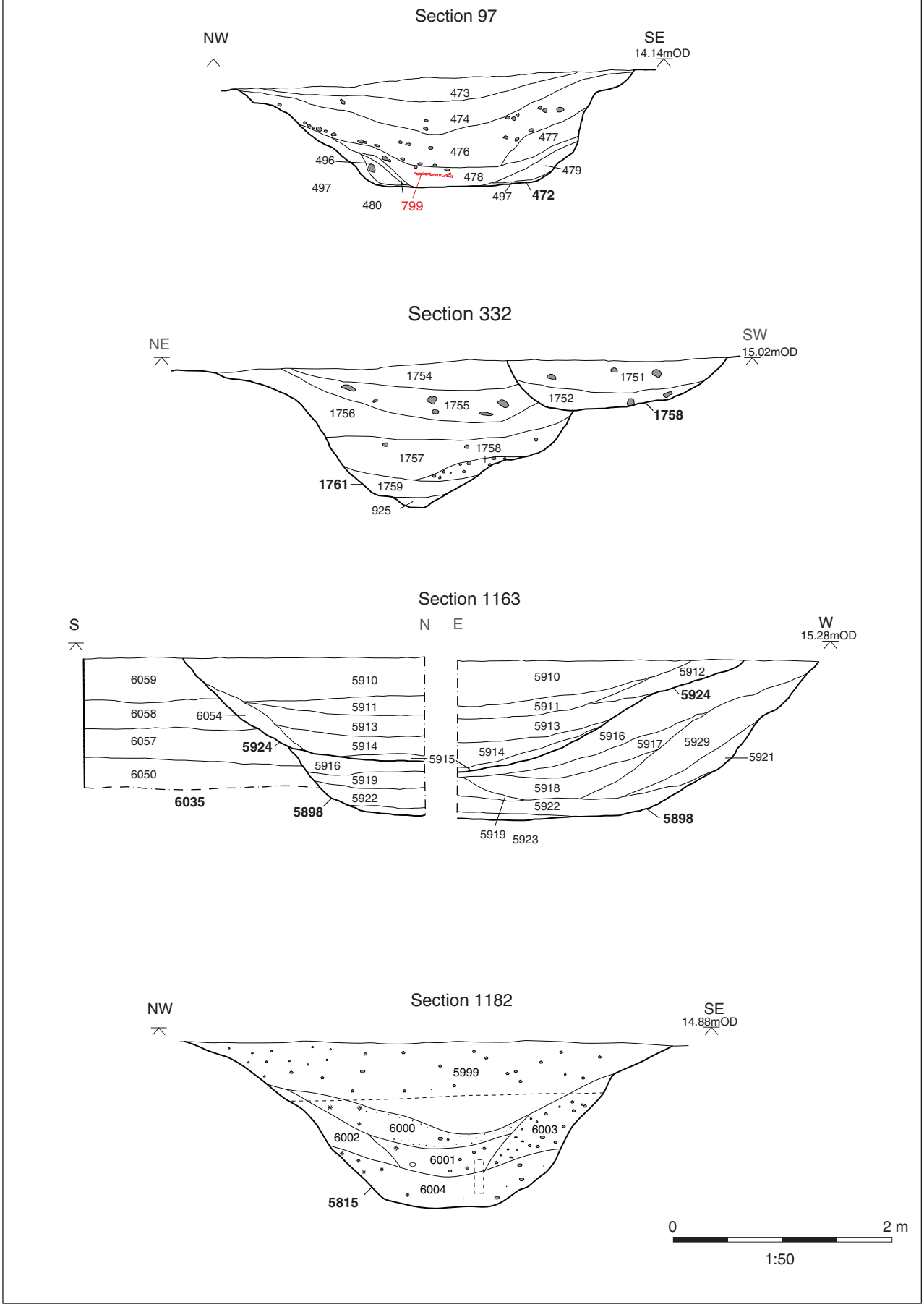


Figure 28: Sections. Scale 1:50

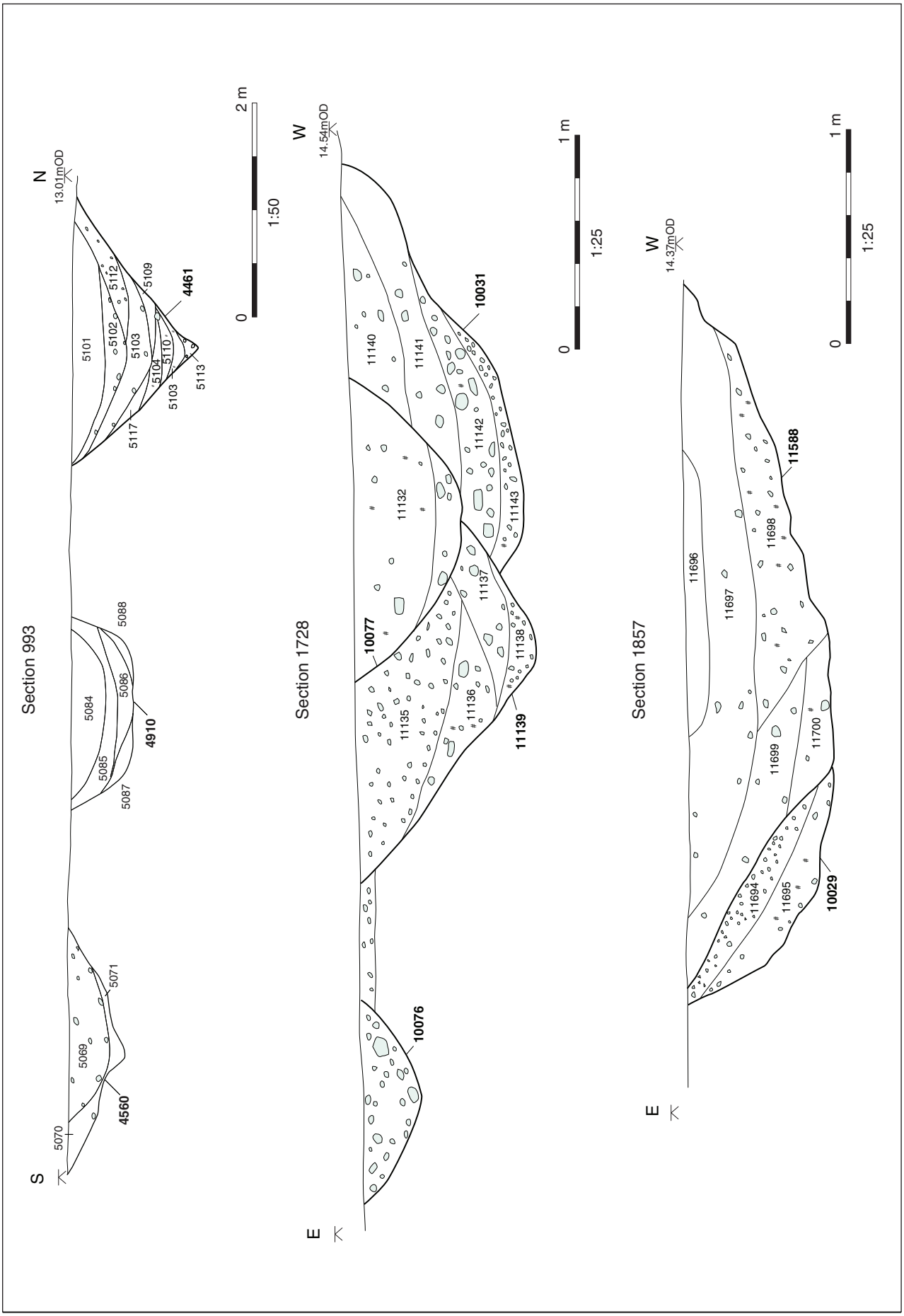


Figure 29: Sections. Scale 1:25 and 1:50

Plate 1: Areas A-D from the west

Plate 2: Areas E and F from the south west

Plate 3: Middle Bronze Age ditch 5815, Area A from the south. (2m scale)

Plate 4: Middle Iron Age settlement viewed from NW corner of Area C

Plate 5: Pre-Conquest cremation 10909, Area C. (1m scale)

Plate 6: Detail of ceramics in cremation pit 10909 Area C. (0.2 m scale)

Plate 7: Late Roman Monument Area F from the east. (2m scales)

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