East Cambs District Leisure Centre, Downham Road, Ely

Post - Excavation Assessment

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EAST CAMBS DISTRICT LEISURE VILLAGE, DOWNHAM ROAD, ELY, CAMBRIDGESHIRE (AREAS 3 & 4)

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Summary

Archaeological investigations were undertaken by the Cambridge Archaeological Unit (CAU) at the East Cambs District Leisure Village site situated on Downham Road, Ely. The work was carried out over the course of four months between May 2016 and September 2016, and was a continuation of excavations undertaken previously by the CAU at this site. The investigation area, comprising excavations in two almost contiguous areas (Area 3 and Area 4) and totalling 2.26ha, was machine stripped revealing archaeology ranging in date from the Late Bronze Age through to the Post-Medieval period, including Iron Age pit clusters, Early Roman planting beds and a multi-phase enclosure system with several post- and beam-slot built ancillary structures dating to the Middle Saxon period.

INTRODUCTION

Work was carried out between May 2016 and September 2016, with two areas excavated (Areas 3 & 4) separated by a small area of vegetation containing a large drainage ditch. An area centred on TL 53132 81323 (see Figure 1) and totalling 2.26ha was machine stripped revealing archaeology ranging in date from the Late Bronze Age/Early Iron Age to the Post-Medieval period. Particularly of interest was a multi-phase Middle Saxon field system and several post- and beam-slot built structures probably relating to the contemporary religious institution and settlement on the Isle of Ely.

The work was commissioned by East Cambridgeshire District Council and project managed by Emma Beadsmoore (CAU). It was undertaken in accordance with a Written Scheme of Investigation (WSI) produced by the CAU in response to a brief by Andy Thomas of the Cambridgeshire Historic Environment Team (CHET). The site code for the excavations was DRE16.

Location, geology and topography

The development area is located on former agricultural land on the margins of open fen and the "island" on which the city of Ely is located and is situated between *c.* 3.5m AOD and *c*. 5.5m AOD on a geology comprising Kimmeridge Clay bedrock formation and superficial alluvial deposits of clay, silt, sand and gravel (British Geological Society website accessed July 2017). The investigation was located immediately to the west of the A10 and approximately 400m south of Downham Road, *c.* 2km to the north-west of the historic centre of Ely and c.1km to the east of the peat fen surrounding Coveney (Figure 1).

Within this development area, Area 3 was contiguous to the southernmost excavations undertaken in 2015 (Wright 2016), while Area 4 lay further to the south. Area 3 was bounded by the previous excavations to the west and north and by the A10 to the east. To the south a modern drainage ditch and narrow area of undergrowth separated Area 3 from Area 4. As with Area 3, the A10 bounded Area 4 to the east, with open pastures surrounding the site to the south and west. While Area 4 was relatively flat, Area 3 demonstrated a slight gradient sloping approximately northeast-southwest. The deepest area was approximately 3.5m AOD (after overburden removal) in the southwestern part of Area 3, where a strip of alluvial silt was situated oriented approximately east –west indicating the possibility of an old river channel situated on the line of the modern drainage ditch.

Archaeological background

The area to the west of Ely's historic centre is a rich archaeological landscape, which has been subject to extensive archaeological investigation. The majority of the work has taken place in recent years ahead of planned city expansion and housing developments. The results of major investigations undertaken on the western side of the Isle of Ely are listed below in Table 1 and shown in Figure 2. The extensive Saxon

and Medieval remains outlined and discussed in Mortimer *et al.* (2005) and Mudd & Webster (2011), are specifically pertinent to this site as the current investigations are likely the western extent of the same Middle Saxon activity found at the West Fen Road excavations, all of which are likely related to the monastic double house at Ely. The sites at Hurst Lane (Evans *et al* 2007) and West Fen Road (Masser 2001; Mudd & Webster 2011) are the closest excavated Iron Age sites and indicate fairly continuous occupation of the area from the Middle Iron Age through to the end of the Roman period.

Project	Date of excavation	Main archaeological phases/features recorded	Reference
West Fen Road: Pipeline	1995	Middle – Late Iron Age settlement.	Gibson 1995
Hurst Lane	1999	Major Middle-Late Iron Age settlement complex. Roman agricultural use.	Evans *et al* 2007
36b St. John's Road (Evaluation)	2000	Late Iron Age settlement.	Abrams 2000
West Fen Road, Ashwell Site (Cotmist and Cornwell Fields)	1999/2000	Romano-British settlement and field system. Middle Saxon enclosures, Later Saxon field system and Medieval ditches.	Regan 2001 and Mortimer *et al*. 2005
West Fen Road: The Consortium Site	1999/2000	Later Iron Age settlement. Middle Saxon settlement.	Mudd & Webster 2011
West Fen Road: Trinity and Runciman Lands	2000/2001	Middle – Late Iron Age settlement. Roman fields and planting beds.	Masser 2001
Dunstan Street	2003	Iron Age boundary ditches. Saxon/Medieval ditches.	Saunders 2004
Westfield Farm	2006	Early Saxon (late C7th) cemetery.	Newman 2007
Walsingham Way	2010	Slight Roman presence. Middle Saxon boundary ditches and droveway. Late Saxon, Medieval and Post-Medieval ditches.	Slater 2011
East Cambs Leisure Village, Downham Road (Areas 1 and 2)	2015	Early Iron Age pit, Early Roman planting beds, Middle Saxon enclosures.	Wright 2016

Table 1: Major archaeological investigations in the environs of East Cambs District Leisure Village.

The current work is the final part of the development and follows a geophysical survey of the area in 2009 (Bartlett 2010), archaeological evaluation in the same year (Hutton 2010), and a previous phase of excavation during 2015 (Wright 2016). The geophysical survey findings were limited but indicated linear cultivation features likely to be the remains of ridge and furrow, and a few possible areas of magnetic anomalies that could indicate archaeological activity. Trial trenching confirmed the presence of the aforementioned furrows and found both linear and discrete archaeological features not indicated by the geophysical survey consisting largely of Middle Saxon field boundaries with a smaller Iron Age and Roman presence as well as an undated agricultural system pre-dating the furrows. Archaeological activity was found to be more concentrated in the southern part of the site (areas A and B in Hutton 2010). Subsequent archaeological investigations ahead of the development of individual building plots and infrastructure within the Development Area (DA) had already identified an Early Iron Age pit, Early Roman planting beds and field systems,

and an area of Middle Saxon activity in the areas indicated by the evaluation (Wright 2016).

Earlier Prehistoric

A scarcity of evidence for earlier prehistoric activity in the immediate vicinity indicates that the area was only sparsely or temporarily occupied before the wetting of the landscape made large areas of fen uninhabitable. In a similar pattern to other fen-edge sites during the Bronze Age, settlement retreated from the fen edge as the wetlands expanded (Evans *et al.* 2007) until the Iron Age when settlement became concentrated in the relatively small areas of higher dry land, for example at Wardy Hill (Evans 2003) 6km to the west and Hurst Lane (Evans *et al* 2007), 0.6km to the northwest.

Pre-Iron Age activity in the immediate vicinity is limited to a paucity of features and finds: residual Mid-Late Bronze Age flint found at West Fen Road pipeline excavations (Gibson 1995); a single pre-Iron Age pit containing earlier prehistoric flint at Cotmist Field West Fen Road (Regan 2001); a number of flints and a sherd of Bronze Age pottery from the evaluation of the current site (Hutton 2010); Bronze Age pits and scattered Bronze Age sherds at excavations for the Ely Bypass (Robinson & Bray 1998); flint tools and debitage found via field walking on the route of the Ely Bypass (A10) (Young 1984); worked flint, including diagnostic pieces dating to Mesolithic/earlier Neolithic, Late Neolithic and Later Bronze Age, and several sherds of Bronze Age ceramic at Hurst lane (Evans *et al*. 2007).

Background amounts of earlier prehistoric material attest to several phases of short-lived activity on the western slope of the Isle of Ely. For example at the Ashwell Site on the West Fen Road development (Mortimer *et al*. 2005), small amounts of later Mesolithic-Early Neolithic flint and two small pits containing sherds of Early Neolithic pottery indicate the earliest phase, larger amounts of flint including knives and a barbed and tanged arrowhead suggest slightly more substantial later Neolithic-Early Bronze age activity and a scraper and partial hilt of a late Bronze Age rapier show that temporary use of the site continued through to the end of the Bronze Age (ibid). Similarly, a small percentage of features and finds at the Trinity Site at West Fen Road have been attributed to the Bronze Age or earlier.

Later Prehistoric

Iron Age activity on the Isle of Ely has been well explored elsewhere (see Evans 2003) and an overview only will be given here. A minority of Iron Age remains date specifically to the earlier part of the period. For example, a single pit containing Early Iron Age pottery is recorded on the previous phase of archaeology at East Cambs District Leisure Village (Wright 2016).

Middle Iron Age remains suggest a more permanent settlement at the Consortium Site on West Fen Road (Mudd & Webster 2011) and occupation at Prickwillow Road begun in the Middle Iron Age continued throughout the period and into the Romano-British era (Atkins & Mudd 2003). Substantial later Iron Age occupation has also

been documented in the environs. At Hurst Lane, approximately 0.6km to the northwest, archaeological rescue operations found two settlement foci, the first consisting of four definite and eight possible roundhouses within an enclosure system, the second an enclosure system with twelve complete and four partial roundhouses with pottery dating to not before the Middle Iron Age (Evans *et al*. 2007). This site has been compared to the defended settlement at Wardy Hill (*ibid*), which lies 6km to the west and is dated to Middle-Late Iron Age (Evans 2003). Late Iron Age remains have also been recorded at Trinity and Runciman lands at West Fen Road (Masser 2001), approximately 1.1km to the south, and St John's Road (Abrams 2000) situated at a higher elevation to the east, nearer to the present city centre.

The lower-lying claylands have mostly been eschewed by prehistoric populations in favour of terrace gravels and other well-draining geologies (though recent discoveries by Oxford Archaeology East at land adjacent to Cam Drive indicate Middle Bronze Age use of clayland to the north of Ely, see Phillips & Morgan 2015). However, as the fen surrounds the higher ground creating the Isle of Ely, usable agricultural and settlement land becomes scarcer and marginal land at the fen edge sees increased use. Available well-draining sites become the focus of settlement and 'special use' (Evans *et al*. 2007).

Roman

Though Roman remains are sparse some of the excavations within the immediate environs of the current site exhibit a Roman presence. For example, Romano-British continuation of Late Iron Age sites is recorded at the Ashwell Site, West Fen Road (Mortimer *et al.* 2005). Features here indicated a trackway and field system with farmstead settlement which was continued throughout the Roman period with only slight intensification of activity during the later 3rd century AD (*ibid*). Remains at Dunstan Street, adjacent to the eastern edge of the Ashwell Site found only two residual sherds of Roman pottery to indicate a similar pattern of sparse Roman remains in this area (Saunders 2004). Similarly at Walsingham Way a very small assemblage of residual ceramics and a single coin probably derive from the Roman settlement to the west at the Ashwell Site (Slater 2011).

Parallel linear features thought to represent 'planting beds' or 'agricultural beds' were encountered at Trinity and Runciman Lands on the West Fen Road development (Masser 2001) and on the previous phase of work at East Cambs District Leisure Village.

Sites at St John's Road (Abrams 2000), Chief's Street (Kenney 2002), 2 West End (Abrams 2003), St Mary's Lodge (Robinson 2000) exhibited almost no Roman features but a few Roman artefacts, mostly early Roman ceramic sherds, were recorded in both earlier and later features. Fieldwalking along the route of the A10 bypass also found artefact scatters possibly indicating nearby settlement (Holton-Krayenbuhl & Young 2000).

A more extensive and higher status Roman settlement may have existed at the present city centre and be masked/truncated by the subsequent Saxon and Medieval use of the high ground. The theory that a *mansio* or other higher status building not yet found

may have been installed to control the local agricultural/industrial production has been postulated for Littleport *c*. 6.5km to the north (Macauley 2002), a similar hypothesis for Ely is not unfeasible.

Saxon

Historical sources attest to the importance of Ely in this period, which focused on the monastic double house founded on the Isle by Ætheldreda in *c*. AD 673 (see Blake 1962). Although the exact location of the house is unknown, recent excavations on the Isle of Ely have confirmed considerable settlement and land use during the Saxon period (5th – 11th century AD). During the Early Saxon period (AD 400-650) remains are seemingly scarcer and more dispersed. Two cemeteries found in 1948 and 1959 respectively at Witchford Aerodrome, *c*. 2.5km to the south, and at Newbarns Road housing estate, *c*. 2km to the east, have recorded probable 6th century inhumations and grave-goods including saucer brooches, spearheads and a sword. A small number of possible early Saxon sherds were also found at 2 West End (Abrams 2003) but little else from the period has been recorded.

The Middle Saxon period (AD 650-850), however, seems to have seen a flourishing of settlement and land use no doubt fuelled by the foundation of the monastic house. For all of the sites to the east of Ely's present city centre the Middle Saxon period is the dominant phase. Nearer the centre, at Chief's Street, Middle Saxon features such as pits wells and ovens hint at possible small scale industrial production (Kenney 2002) and, at St Mary's Lodge, Ipswich Ware associated with a beam slot suggests settlement (Robinson 2000). Scarce Middle Saxon artefacts have also been found in the area around the cathedral (see Cessford *et al.* 2006; Cessford & Dickens 2007).

The sites in the West Fen Road Development are dominated by dense Saxon remains beginning in the Middle Saxon period and demonstrating that agricultural and settlement activity was prominent on the western slopes of the Isle of Ely at this time. At the Ashwell Site, for example, features dated to this period include eight enclosures and both domestic and non-domestic structures suggesting an area used for food production (Mortimer *et al*. 2005). Due to the predominance of Ipswich ware pottery, introduced in AD 725, it is suggested that the Saxon settlement on the site was not begun before the second quarter of the 8th century (*ibid*.). Excavations at the Consortium site, immediately to the north, and Walsingham Way to the east found similar enclosure systems and finds assemblages (Mudd & Webster 2011: Slater 2011) further supporting a hypothesis of the West Fen Road sites as part of a rural producer zone supplying the occupation and religious focus centred on Ely's monastic house (see e.g. Mortimer *et al*. 2005; Wright 2015). A cemetery, excavated more recently at Westfield Farm 1.5km to the south, contained 15 inhumations and was dated to the mid 6th century (Newman 2007).

This pattern of land use for food production supplying a settlement centre continues into the Later Saxon period (AD 850-1066) on the western slope of the Isle of Ely. At the Ashwell site, for example, enclosures were expanded and reorganised but otherwise identical land use continued (Mortimer *et al*. 2005). Nearer the centre of Ely, the occurrence of features and finds increases in the Late Saxon Period perhaps suggesting that settlement at the centre was expanding possibly due to the re-founding of the monastery in AD 970. For example, Late Saxon domestic finds and features are

found at 2 West End (Abrams 2003), St Mary's Street (Hogan *et al*. 2007) Chief's Street (Kenney 2002) and St Mary's Lodge (Robinson 2000).

Later Medieval to present

Settlement and agricultural land use of the western slope of the Isle of Ely continues into the latter end of the Medieval period. Small numbers of finds and features dating to the 12th, 13th and 14th centuries have been found at Ashwell site (Mortimer *et al* 2005), for example. The major focus of settlement and activity, however, is found at the central area of the present city with the construction of the cathedral and surrounding buildings begun in the 11th century. An overview of archaeological investigations in this area is provided elsewhere (see Cessford *et al.* 2006; Cessford & Dickens 2007) and will not be reproduced here.

The site appears to have been agricultural land throughout the Medieval and Post-Medieval period. Post-Medieval features typically include field boundaries, remains of ridge and furrow and 20th century field drainage. A Post-Medieval smock mill was situated 0.7km to the north (Smith 1975). The city of Ely has expanded slowly in the Post-Medieval period restricted by the surrounding wetlands. It has expanded considerably to the west since the drainage of the fens, during the 17th century, reclaimed much land for agriculture and settlement, eventually leading to the modern housing development now situated c. 500m to the east of the site and the most recent development plans of this current work.

The land is likely to have been wet and marginal due to its proximity to the fen and seems to have been meadow pasture until the current developments began.

METHODOLOGY

All archaeological work was conducted in accordance with the approved Written Scheme of Investigation (Beadsmoore 2015). The excavation area was stripped of topsoil and sub-soil using a 360° tracked excavator fitted with a toothless bucket operating under the supervision of an experienced archaeologist. For the most part, soils were stored on-site meaning the plot was stripped in accordance with the spatial needs of the works and partially backfilled in several stages after appropriate supervision, discussion and approval from the Cambridgeshire Historic Environment Team (CHET).

The site was located using an advanced Global Positioning System (GPS) with Ordnance Datum (OD) heights obtained. Potential archaeological features were digitally planned following the stripping of the site and subsequently sample excavated. Potential features were all hand excavated and slots digitally planned. A metal detector survey was undertaken of all exposed features. All archaeological finds were retained for analysis. Environmental bulk soil samples and pollen tins were taken from selected features. A written record of archaeological features was created using the CAU recording system and sections were drawn at an appropriate scale. A digital photographic record of the excavation was maintained throughout.

RESEARCH AIMS

The project aims that underpin the project were set out in the WSI document as follows:

The overarching objectives of the project are to:

- mitigate impact upon archaeological remains by means of "preservation by record" and to enhance our understanding of archaeological activity on the western side of Ely
- investigate 'sites' and attempt to determine the relationship of those sites with the broader archaeological landscape around them.

Research Aims for archaeological fieldwork in the Eastern Counties of England have been set out (Brown & Glazebrook 2000) following on from an earlier Resource Assessment (Glazebrook 1997). These documents have been updated more recently by 'Research and Archaeology Revisited: a revised framework for the East of England' (Medlycott 2011).

The periods of greatest academic interest in the Ely environs as presently understood on the basis of the adjacent sites are the Iron Age, Roman and Saxon periods. The revised framework (Medlycott 2011) contains the following themes which may be advanced by further work in the area.

Iron Age:

- the establishment of chronological frameworks, particularly in relation to ceramics
- greater understanding of settlement patterns, morphology and hierarchy
- the development of the agrarian economy
- evidence for ritual and religion
- 'regionality' and social organisation/change as understood via Iron Age material culture, economic indicators (e.g. evidence for specialisation) and settlement morphology

Romano-British:

- nature of the late Iron Age/Roman transition, particularly in relation to continuity or change in respect to the tribal polities
- Romanisation of material culture, architecture (e.g. rectangular structures against survival of roundhouses regionally), infrastructure, rural economy etc
- nature of the agrarian economy, consumption and production and associations with markets
- identification of specific forms of rural settlement
- regional variation and 'tribal distinctions'
- evidence for ritual and religion

Anglo-Saxon:

- nature of the Late Roman Anglo-Saxon transition – evidence for continuity verses discontinuity, new populations of colonists versus continuity of occupation or of mixed demography
- landscape use and settlement distribution patterns
- an emphasis on burial grounds with more work required on settlement sites,
- economy, social organisation, culture and religion
- population studies and regional variations
- Danish influence

RESULTS

Machine stripping of Areas 3 and 4 of the development area exposed features and artefacts ranging in date from the Late Bronze Age/Early Iron Age to the Post-Medieval period, with the majority of activity dating to three broad phases of occupation from the Early Iron Age period to the Middle Saxon period. A total of 992 interventions were excavated with 600 features recorded. Feature descriptions and intervention records can be found in the Appendix A. The site plan with excavated slots/interventions is shown in Figures 3 to 5.

Late Bronze Age and Iron Age

Potentially the earliest features on this site were a selection of discrete pits and post holes dated via pottery typology to the Late Bronze Age/Early Iron Age (Figure 6). Later prehistoric features comprised 35 discrete features – split into well/watering holes, medium pits small pits and post holes – and three linear features attributable to the period covering the end of the Bronze Age until the Middle Iron Age. Dateable Iron Age material in the form of loomweights and pottery were also found outside of these features. In particular, a concentration of residual later prehistoric domestic refuse was found in Saxon ditch F.441 near the southern limit of excavation though no Iron Age features could be identified nearby. The concentration of material suggests further evidence of Iron Age activity may be found to the south of the development area.

Pits, wells and watering holes

A total of 36 discrete features have been dated to the Iron Age. Of these five were wells/watering holes, 28 are small- or medium-sized rubbish pits and three were post holes. All of the well/watering hole features were dated by later prehistoric ceramic recovered from within them. All of the post holes and some pits also contained Iron Age ceramic sherds. Other features were dated by association to an approximate pit alignment or to the well/watering holes. The remainder of the later prehistoric features were dated via their relationships with Early Roman planting bed features.

Wells/watering holes

Ten features form a complex of intercutting pits, watering holes and wells near the eastern limit of Area 4. The well/watering hole features were significantly larger and deeper than other prehistoric features on this site (see Table 2).

F. No.	F. Type	Shape	Length (m)	Width (m)	Depth (m)	Finds
F.624	Watering Hole	Sub-circular	4.00	3.51	2.11	FL, BN, PT, WD
F.629	Watering hole	Sub-oval	>4.6	>4.90	~1.71	FL, BN, PT
F.653	Pit	Sub-oval	>0.55	>0.70	>0.30	PT
F.668	Watering hole	Sub-circular	~5.25	>4.5	>1.65	FL, BN, PT, WD
F.708	Pit	Sub-oval	~2.20	1.65	0.85	BN, PT
F.710	Pit	Sub-oval	~2.70	2.35	0.54	PT, FL
F.711	Pit	Irregular	>1.10	>0.25	>0.25	-
F.712	Pit	Sub-oval	0.85	>0.57	0.13	-
F.716	Pit	Irregular	>0.80	>0.9	0.30	-
F.725	Well	Sub-circular	>0.70	>0.12	>1.84	FL, BN, PT

Table 2: Features forming well complex. BN = animal bone, FL = flint, PT = pottery, WD = wood.

Of the seven features that contained pottery, four contained sherds of Late Bronze Age/Early Iron Age pottery which suggests a possible Late Bronze Age origin for the well complex. The earliest identified feature of the complex, though, is F.725 which did not contain Late Bronze Age sherds, although a single sherd of possibly intrusive Middle Iron Age pottery was recovered. F.725 was one of the deepest features at over 1.84m in depth and positioned relatively centrally (Figure 7). It had steep sides which suggest that this feature was a well. It also contained 3g of flint and 34g of animal bone.

Following at least one silting episode this well was cut by two other large watering hole or well features, F.629 and F.668, of which F.668 is the earliest. F.668 contained a high density of pottery in comparison to both the general scarcity of pottery across all of the features on site and also the higher density found in features of this well complex (Table 3). Sherds recovered dated to the Late Bronze Age and Early Iron Age and date this feature to this approximate period of prehistory. Similar silting fills and additional slumped deposits within F.668 were cut by F.629 situated over the southern part of both this feature and the central well feature F.725. Only Middle Iron Age pottery was recovered from this feature. Again, silting and slumping deposits partially or wholly filled this feature before a final well/watering hole, F.624, was dug.

With dimensions of 4m by >3.5m and a depth of 2.11m, F.624 was the latest large well/watering hole ascribed to the later prehistoric period. Similar to the other watering hole features in this complex, this feature was filled with silting and slumping deposits after a period of disuse. Artefacts found in this feature included 37 Iron Age pottery sherds (367g) and several waterlogged wooden artefacts (see Robinson Zeki below). Two log ladders and a trimmed post were found (Figure 7), one log ladder (WD5) with kerf marks from sawing. The kerf marks indicate sawing

technology which, though recognised as available during the Iron Age (Cunliffe 2009), hints at a possible later date for the log ladder and therefore radiocarbon dating is therefore required to corroborate or refute the proposed phasing.

Feature	LBA/EIA (wt)	EIA (wt)	MIA (wt)	Total sherds (wt)
F.624		10 (138g)	27 (196g)	37 (367g)
F.629			3 (33g)	3 (33g)
F.653	1 (12g)			1 (12g)
F.668	26 (330g)	11 (52g)		37 (382g)
F.708	8 (27g)			8 (27g)
F.710	1 (9g)			1(9g)
F.725			1 (4g)	1 (4g)
Total	**36 (378g)**	**11 (52g)**	**4 (37g)**	**51 (467g)**

Table 3: Pottery sherds found in well complex features. LBA = Late Bronze Age, EIA = Early Iron Age, MIA = Middle Iron Age

Organic components and pollen remains in the lower deposits of all of these features survived relatively well (see Fryer and Boreham below). Two waterlogged wood objects were also recovered from F.668. These were a piece of woodworking debris and a portion of unworked roundwood (see Robinson Zeki below).

The smaller and shallower pits situated to the northeast of the well/watering hole complex were, in general, slightly irregular ovoid features containing a single silting fill. The cutting relationships between the watering hole features and these pits show that they mostly pre-date F.668 and Late Bronze Age/Early Iron Age pottery recovered from F.653, F.708 and F.710, suggests that they date to the earlier part of the well/watering hole complex.

At a distance of *c*. 35m to the north-west, F.655 was a separate well feature. It had smaller dimensions (3.5m in length, 3.1m in width and 1.4m in depth) than the previously mentioned well or watering holes. However, it contained similar silting deposits with preserved organic components and 72 sherds (2042g) of Early/Middle Iron Age pottery, as well as 1549g of animal bone.

Alignment of pits

On a northwest/southeast orientation linking the well complex with the separate well feature F.655 was a loose alignment of ten small/medium-sized later prehistoric pits. This loose alignment may have continued to both the northwest and southeast. All of these features ranged between 0.42m and 2.5m in length, 0.36m and 2.4m in width and 0.11m and 1.1m in depth. Of these ten pits, seven contained later prehistoric ceramic (see Table 4) ranging from Late Bronze Age/Early Iron Age wares to Middle Iron Age pottery. F.593 also contained half of a moulded spindlewhorl and a fragment of triangular loomweight (see Timberlake below).

F. No.	F. Type	Shape	Length (m)	Width (m)	Depth (m)	Finds				
						BN (wt)	BS wt	BC wt	FL Wt	PT wt
F.516	Pit	Sub-oval	0.42	0.36	0.11	-	4 (373g)	-	-	3 (11g)
F.522	Pit	Sub-oval	0.83	0.75	0.27	27 (60g)	-	-	5 (192g)	18 (134g)
F.593	Pit	Sub-oval	1.14	0.63	0.27	7 (11g)	2 (198g)	3 (82g)	-	15 (271g)
F.594	Pit	Sub-oval	2.5	2.4	1.1	147 (845g)	2 (90g)	6 (80g)	-	57 (859g)
F.656	Pit	Sub-oval	>1.40	1.80	0.18	-	-	-	-	4 (15g)
F.687	Pit	Sub-oval	>1.20	0.92	0.15	-	-	-	-	-
F.689	Pit	Sub-oval	1.35	1.50	0.26	-	-	-	-	-
F.704	Pit	Sub-circular	1.12	1.10	0.70	1 (1g)	-	-	-	-
F.713	Pit	Sub-circular	1.26	>0.67	0.15	-	-	3 (6g)	-	3 (8g)
F.714	Pit	Sub-circular	1.81	>1.70	0.40	4 (17g)	-	4 (27g)	-	5 (66g)
					Total	186 (934g)	8 (661g)	16 (121g)	5 (192g)	105 (1093g)

Table 4: Prehistoric pit features in the pit alignment. BN = bone, BS = burnt stone, BC = burnt/worked clay, FL = flint, PT = pot

Associated with this pit alignment, a further five small or medium-sized pits can be attributed to the later prehistoric period (Table 5). F.523, F.562 and F.673 are situated no more than 5m to the northeast of the alignment. F.520 and F.537 are located within 6m of the alignment to the southwest. These pits ranged between 0.7m and 1.52m in length, 0.6m and 1.38m in width and 0.08m and 0.35m in depth.

F. No.	F. Type	Shape	Length (m)	Width (m)	Depth (m)	Finds		
						BN (wt)	BC (wt)	PT (wt)
F.520	Pit	Sub-circular	0.70	0.60	0.08	4 (17g)	6 (37g)	22 (298g)
F.523	Pit	Sub-oval	1.00	0.67	0.19	-	-	2 (82g)
F.537	Pit	Sub-oval	1.52	1.38	0.12	21 (14g)	-	1 (3g)
F.562	Pit	Sub-oval	0.72	0.64	0.23	12 (6g)	1 (2g)	7 (61g)
F.673	Pit	Sub-oval	1.40	>1.3	0.35	4 (14g)	-	26 (148g)
					Total	41 (51g)	7 (39g)	58 (592g)

Table 5: Prehistoric pit features associated with the pit alignment. BN = bone, BC = burnt/worked clay, PT = pot.

Area 3 pits

A concentration of features in Area 3 has been identified as later prehistoric. Three pits aligned on an approximate north/south orientation were located towards the north-

eastern corner of Area 3. These features, F.329-331, were dated by either their relationship to the nearby planting bed or by Middle Iron Age pottery recovered. F.329 and F.330 were similarly sized and shaped pits (see Table 6) located close together with the larger pit, F.331, situated *c*. 2.5m to the south. The fills in these pits contained a high frequency of charcoal that suggests that all three of these were rubbish pits. They may have been associated with a L-shaped feature *c*. 6.5m further to the south F.332 which was also cut by a Roman planting bed though no dateable artefacts were recovered from it. A further prehistoric pit, this one containing high densities of Iron Age pottery and animal bone, was found on Area 2 (see Wright 2015) *c*. 15m to the north. This sparse concentration of later prehistoric features may indicate a small settlement.

F. No.	F. Type	Shape	Length (m)	Width (m)	Depth (m)	Finds	
						BN (wt)	MIA (wt)
F.329	Pit	Sub-circular	0.90	0.71	0.10	-	-
F.330	Pit	Sub-circular	1.00	0.69	0.22	2 (12g)	3 (23g)
F.331	Pit	Sub-circular	1.41	1.40	0.31	9 (49g)	8 (113g)
					Total	11 (61g)	11 (136g)

Table 6: Prehistoric pit features in Area 3. BN = bone, MIA = Middle Iron Age.

Other pits and post holes

Four other pits (F.386, F.387, F.388 and F.575) were recorded as possibly later prehistoric. These were scattered across Area 4. In addition, three post holes (F.439, F.538 and F.678) contained later prehistoric pottery though this may have been residual and an additional six post holes (F.679, F.690, F.691, F.692, F.693 and F.694) may be associated with well F.655.

Linear features

Apart from F.332 mentioned above, very few linear features were identified as potentially prehistoric in date. F.718 (width 1.1m and depth 0.16m) was aligned east/west from the eastern excavation limit to the well complex where it was cut by F.629. It also seemed to be cut by Roman planting beds suggesting it has prehistoric origins. F.442 (width 0.75m – 1m and depth 0.23m – 0.4m) located near the southern edge pre-dated all of the Middle Saxon features in this area where a concentration of later prehistoric objects were found (e.g. a fragment of triangular loomweight (see Timberlake below) and Middle Iron Age pottery (see Beats below recovered from F.441 where it cuts F.442). Further phasing work may reveal other linear features that can be assigned to a later prehistoric period.

Roman Period

A total of 68 features on this site can be dated to the Roman period. All of these are a particular feature type often labelled as a ‘planting bed’ or ‘agricultural bed’ (see Figure 8). These are typically arranged regularly over large areas and contain little in

the way of archaeological material suggesting they were removed from domestic contexts. These are known to be a Roman phenomenon and are thought to create a greater depth of dry planting soil via the raising of plant roots above wet ground with spoil from the linear features (Fowler 2002), or to provide irrigation (Brittain with Evans 2014).

As a group, the planting beds on this site contained a scarcity of dateable artefacts (Table 7). However, their characteristics, form and arrangement are distinctly of the planting bed type associated with the Roman era and as such their dating is confidently held.

Planting beds

A large percentage of the two areas was covered by an arrangement of agricultural planting beds all running north-east/south-west with widths ranging from 0.25m to 1.2m (82% had widths between 0.4m and 0.87m) and depths between 0.04m and 0.7m (99% had depths between 0.04m and 0.36m). These were set at a distance of c 4m from each other.

A total of 68 planting beds were identified. Fifty-one of which were investigated with one or more hand-dug slots, 1m in length. The remaining 17 were not investigated but a total of 112 slots were excavated and 11 environmental samples were taken to provide cross-site comparative evidence. In Area 3, one in five of the planting bed terminals were excavated and four other features were sampled at points along their length providing a total of 11 slots. The remaining 101 slots were excavated at approximately 50m intervals along planting bed features in Area 4. No differences in fill or artefacts recovered could be identified between terminal slots and those situated elsewhere.

The planting beds mostly contained a single fill and seem to have silted up in a single episode. There were no indications of re-cutting or re-establishment of these features which suggests a single phase of large-scale Roman agriculture. Though the plans show a break between the planting beds in the north of Area 4 and the south of Area 3 it seems possible that these continued with beds being truncated rather than terminating. The areas in which planting beds are absent are those which are at a lower depth where alluvium collected and features may therefore have been invisible rather than absent. However, if the postulated water channel existed at this time between the two areas it is assumed that the planting beds would have stopped and restarted to avoid that natural feature.

The table below details the pottery found in the planting beds. Negligible amounts of struck flint, worked stone, slag and animal bone were also found in these features. Although small amounts of pottery dating to throughout the Roman period were found as residual material in later features, no other ascribable Roman features were identified. The earliest confidently dated features cutting the Roman planting beds contain Middle Saxon pottery and suggest a general lack of activity during the later Roman and Early Saxon periods.

Feature	LBA/EIA (wt)	MIA (wt)	Early Roman (wt)	2nd – 4th century (wt)	Middle Saxon (wt)	Undated (wt)	Total sherds (wt)
F.292		1 (4g)					1 (4g)
F.297		1 (1g)					1 (1g)
F.298		4 (29g)					4 (29g)
F.334		1 (3g)					1 (3g)
F.351				1 (11g)	1 (11g)		2 (22g)
F.377						3 (10g)	3 (10g)
F.410			1 (15g)				1 (15g)
F.411	1 (2g)						1 (2g)
F.412			1 (5g)			2 (11g)	3 (16g)
F.415			1 (2g)				1 (2g)
F.421		2 (6g)					2 (6g)
F.508				1 (15g)	1 (14g)		2 (29g)
F.633	1 (15g)			1 (6g)			2 (21g)
Total	**2 (17g)**	**9 (43g)**	**3 (22g)**	**3 (32g)**	**2 (25g)**	**5 (21g)**	**24 (160g)**

Table 7: Pottery sherds found in planting beds by feature. LBA = Late Bronze Age EIA = Early Iron Age MIA = Middle Iron Age

Late Roman to Middle Saxon Period

Droveway ditches

A pair of similar ditches, F.206 and F.208, have been identified as forming a droveway (see Figure 9). The ditches are oriented approximately northwest/southeast and run from the midpoint of the eastern limit of excavation in Area 4 to truncate out near the north-western corner of the area. Although they followed very similar orientations they were not dug in parallel and narrowed to a funnel *c*. 2m wide at their north-western limit from a maximum distance of *c*. 9.8m separating them at the eastern limit of Area 4. This would have produced a channelling effect when driving livestock and may have aided counting, branding or management of individual animals (Pryor 1998).

The ditches themselves were very similar in dimensions and deposits. F.206 varied in width between 0.5m and 0.86m and in depth between 0.15m and 0.31m whereas F.208 ranged in width from 0.5m to 0.81 and in depth from 0.14m to 0.36m. Filling deposits in both cases were singular silting episodes producing similar mid grey/brown homogeneous clayey silts. A range of archaeological material was recovered from these fills though actual quantities were very low, similar to the majority of Middle Saxon features on this site (see Table 8). Although the ceramic finds can be dated to a range of periods the single sherd of Medieval ware is likely the result of manuring (see Blinkhorn below) and small amounts of Roman wares have been found to be residual over the entire site. The features show clear cutting relationships with the Roman planting beds and are cut by all other linear features dating to the broad Saxon period. This leads to the conclusion that the droveway features were either the only later Roman features on site or, more likely, due to the lack of other later Roman activity in the vicinity, the earliest of the Saxon features.

Feature	E. Roman pot		Roman pot		Medieval pot		Animal bone	
	No.	Wt.	Wt.	No.	No.	Wt.	No.	Wt.
F.206	3	10g	-	-	-	-	6	89g
F.208	-	-	1	46g	1	16g	3	61g
Total	**3**	**10g**	**1**	**46g**	**1**	**16g**	**9**	**150g**

Table 8: Finds recovered from droveway features F.206 and F.208.

Other possible droveway ditches have been identified to the north of these features crossing both Area 4 and Area 3. At the northern extent of Area 4, F.405 and F.406 exhibited similar characteristics to F.206 and F.208. They seem to have been relatively early features within this Saxon period, their dimensions were similar (widths varied between 0.65 and *c*. 0.8m and depths between 0.08m and 0.25m), and they were oriented on the same northwest/southeast alignment. These two ditches seem to have run parallel, *c*. 6m apart, but as only a short length was found within the bounds of the site this cannot be verified.

Further to the north, in Area 3, two more ditches (F.40 and F.43) on the same general northwest/southeast alignment ran on orientations leading to a narrowing of the distance between them, however this distance is much wider than between F.206 and F.208 (maximum of *c*. 29m and minimum of *c*. 20.8m). Dimensions of these two ditches range between widths of 0.5m and 1.17m and depths of 0.07m and 0.45m. Archaeological remains in ditches F.40, F.43, F.405 and F.406, were limited to only one sherd of Middle Iron Age ceramic recovered from a total of 23 slots in these four ditches. Dating of these ditches is less secure than with F.206 and F.208 due to fewer illuminating cutting relationships, however further phasing analysis may allow for better placement of these features in a timescale within the broad Saxon phase.

Middle Saxon Period

Cutting relationships with the ubiquitous Roman planting beds and scattered dateable artefacts allow the majority of linear features and post holes to be dated to the Middle Saxon period (Figure 10). Little in the way of Early Saxon artefacts could be identified and, similarly, identifiably Late Saxon artefacts were notably scarce (see Blinkhorn below). No features have yet been attributed to either the Early Saxon or Late Saxon periods.

Linear features

Linear features account for the majority of features ascribed to the Middle Saxon period. Many of these were enclosure ditches arranged in a generally rectilinear system. Few were curvilinear enclosure ditches likely to be part of the same enclosure system.

The ditches seem to have been reinstating an existing boundary in some cases, and to have been part of a rearrangement of space in others. They all seem to have been used and abandoned within the Saxon period with the dominant activity during the Middle Saxon period. An absence of dateable material restricts the ability to date any of these

features more closely at this point, however, further phasing analysis may allow phasing within this period.

Enclosure ditches
A total of 161 identified enclosure ditches formed an ever-changing system of small paddocks and enclosures during a broad Middle Saxon period. These ditches are very variable in terms of dimensions. They vary in width between 2.49m and 0.2m and in depth between 0.9m and 0.03m, though sections tend to be similar (Figure 10). Finds recovered from these ditches are generally scarce, only 92 of the 161 (57%) features contained archaeological material, which is in keeping with finds densities from the rest of the site (Table 18). Deposits within these features were mostly homogeneous silting fills, though very occasional dumps of charcoal rich material were also identified.

The majority of these ditches formed approximately rectilinear enclosed areas on an approximately north/south oriented layout, though many also did not fall easily into any discernible layout pattern. It is presumed that many sub-phases of enclosure arrangement were formed during the broad Middle Saxon phase and further phasing analysis will aid interpretation of these.

	Quantity	Weight (g)
Flint	6	182
Prehistoric pottery	15	279
Roman pottery	22	288
Saxon pottery	95	2462
Worked stone	47	1132
Burnt stone	29	6030
Burnt/worked clay	27	1858
Metalwork	13	225
Slag	21	1575
Animal bone	1946	32119
Worked bone	3	30
Totals	2238	46180

Table 9: Enclosure ditches finds assemblage breakdown

Areas enclosed by particular ditch systems are difficult to discern amidst a large amount of intercutting features. Further analysis of these cutting relationships may clarify the phasing and associations of these features, however, at this point cross comparison of enclosures has not been attempted. The features have been compared in terms of form and character and several distinguishing qualities became apparent.

For example, a number of enclosure ditches were noticeably curved in comparison with the general trope. These are not particularly dissimilar in any other way, dimensions are similar to straighter features (widths between 0.72m and 1.2m, depths between 0.27m and 0.47m), filling deposits are also similar and recovered artefacts, for example lava quern fragments, animal bone, ironwork (nail and knifeblade) and pottery (see Table 10) are also similar to those found elsewhere. Often these features seemed to join other more linear ditches suggesting that they were part of the same general system. However, more in-depth phasing analysis may prove that they belonged to the same sub-phase of activity.

F. No.	Length (m)	Width max (m)	Depth max (m)	Finds				
				BN (wt)	BS wt	WS wt	FE wt	PT wt
F.186	>27.5	0.72	0.31	18 (122g)		-	-	2 (3g)
F.474	~17.8	1.20	0.38	32 (316g)	-	-	3 (18g)	-
F.569	>14.5	0.78	0.27	20 (568g)	-	-	-	-
F.683	>45.3	1.6	0.47	4 (278g)	1 (273g)	7 (610g)	-	5 (134g)
			Total	74 (1284g)	1 (273g)	7 (610g)	3 (18g)	7 (137g)

Table 10: Curvilinear enclosure ditches.

Structures

A total of six structures have been attributed to this broad phase of activity (Figure 11). These range from large beam-slot built buildings to three-sided post-built structures and, possibly, a smaller four-post structure. All seem to have been non-domestic structures relating to the agricultural use of the site. The features have been grouped by association to a structure and their dimensions and orientations are detailed in the text and tables below (Tables 11-16).

Structure 1

Consisting of two L-shaped beam-slots with nine possibly associated post holes (see Table 11; Figure 12), which may represent internal sub-division, Structure 1 was the remains of a large rectangular construction measuring *c*. 13m by *c*. 5m. The structure was oriented with the longest side on a NE/SW alignment. L-shaped beam-slots were positioned in the NW and SE corners leaving areas without negative features in the NE and SW corners. Beam-slots varied in width between 0.31m and 0.51m and in depth between 0.05m and 0.15m.

Shallow, sub-circular postholes were spatially associated with this structure appearing within its bounds or just outside. The lack of obvious patterning means any internal subdivision these represent could not be discerned. While it is assumed that these features were contemporary with the beam-slots it is possible that the two sets of features were separated in time within the broad Middle Saxon phase of activity. There was little variation in fill between the features of Structure 1 and few cutting relationships to elucidate phasing. It is possible that Structure 1 was associated with post alignment 6 situated *c*. 6m to the west and respected field boundaries (F.114 and F.167) to the north and south.

Little archaeological material was recovered from any of the features in Structure 1. What material there was represents a background of archaeological activity and does not indicate any particular function or use of the structure. The lack of domestic refuse suggests that this was not a domestic structure and was most likely an animal byre or barn.

Structure	F. No.	F. Type	Orientation/ Shape	Width (m)	Depth (m)	Finds
Structure 1: Large rectangular building	F.95	Post hole	Sub-circular	0.5	0.05	-
	F.96	Post hole	Sub-circular	0.5	0.06	-
	F.97	Post hole	Sub-circular	0.35	0.03	-
	F.98	Post hole	Sub-circular	0.36	0.10	-
	F.99	Post hole	Sub-circular	0.30	0.10	-
	F.100	Post hole	Sub-circular	0.37	0.11	-
	F.101	Post hole	Sub-circular	0.44	0.20	Pottery
	F.102	Post hole	Sub-circular	0.41	0.10	-
	F.103	Post hole	Sub-circular	0.4	0.21	-
	F.250	Beam -slot	L-shaped: NW corner	0.31-0.40	0.08-0.15	Animal bone, iron
	F.252	Beam -slot	L-shaped: SE corner	0.38-0.51	0.05-0.13	-

Table 11: Features forming Structure 1.

Structure 2

Formed of four post holes, one of which was recut, Structure 2 was an approximately square, small, four-post structure. Sides measured 1.9m by 1.8m and post holes were both sub-circular and shallow. Post hole diameters varied between 0.43m and 0.65m and depths ranged between 0.06m and 0.10m (Table 12). F.156 is the only post hole that was recut. It was replaced with a larger posthole, F.157. There was little variation in the single silting fills of the five features that constitute Structure 2 and no archaeological material was recovered from these.

Situated near the southern edge of the site, it is possible that Structure 2 was associated with features not yet found. There were no cutting relationships to directly relate this structure to any surrounding features but the positioning was aligned with the dominant phase of Middle Saxon activity.

Structure	F. No.	F. Type	Orientation/ Shape	Width (m)	Depth (m)	Finds
Structure 2: Small four-post structure	F.156	Post hole	Sub-circular	0.61	0.08	-
	F.157	Post hole	Sub-circular	0.43	0.10	-
	F.158	Post hole	Sub-circular	0.43	0.10	-
	F.159	Post hole	Sub-circular	0.65	0.06	-
	F.160	Post hole	Sub-circular	0.60	0.09	-

Table 12: Features forming Structure 2.

Structure 3

Formed of five post holes, Structure 3 was a three-sided rectangular, post-built structure. The sides measured 2.4m by 2.7m and post holes were sub-circular and shallow, similar to the majority of post holes on this site. Post hole diameters varied between 0.24m and 0.29m and depths ranged between 0.06m and 0.13m (Table 13). There was little variation in the single silting fills of the five features that constituted Structure 3 and fragments of animal bone from two of these features were the only archaeological material recovered.

Post holes were arranged to roughly form three sides of a rectangular structure oriented slightly to the east of a north-south alignment. The northern line of post holes was formed by F.256, F.257 and F.258. These were spaced regularly approximately 0.5m from each other. The eastern line was formed by F.258 and F.259 and regular spacing of approximately 0.5m continues in this direction. On the western side, however, spacing between F.256 and F.255 was twice that of the general spacing pattern (*c*. 1m) and suggests that a further post was once situated between these. No evidence remained of this feature but the heavily truncated nature of the site and shallowness of the features means it is not unlikely for no evidence to have survived. For these reasons it is also possible that there were posts located on the southern side of the structure, completing a four-sided rectangular structure.

Situated near the centre of Area 4, Structure 3 demonstrated a cutting relationship with the Roman planting bed, F.357, that proves its later origins. It is possible that this structure was positioned with respect to F.422 which was situated 0.7m to the east and curved slightly to the north and south to partially enclose an area containing Structure 3.

Structure	F. No.	F. Type	Orientation/ Shape	Width (m)	Depth (m)	Finds
Structure 3: Small rectangular post-built structure	F.255	Post hole	Sub-circular	0.29	0.10	-
	F.256	Post hole	Sub-circular	0.24	0.06	Animal bone
	F.257	Post hole	Sub-circular	0.27	0.13	Animal bone
	F.258	Post hole	Sub-circular	0.27	0.13	-
	F.259	Post hole	Sub-circular	0.27	0.07	-

Table 13: Features forming Structure 3.

Structure 4

Structure 4 is a rectangular, post-built structure of eight post holes forming two alignments. The alignments are positioned to form the north and south sides and oriented slightly northwest-southeast. The northern side measured 2.6m and the southern 3.1m. Post holes were relatively regularly spaced in these two alignments at distances between 0.12m and 0.39m. No evidence remained of any post holes forming the eastern and western boundaries of this structure but alignments were separated by a distance of *c*.3.5m. Due to the small size of the building no further post holes may have been necessary.

All eight post holes were sub-circular and shallow with diameters between 0.27m and 0.36m and depths ranging between 0.03m and 0.14m (see Table 14). There was very little variation in the silting fills of the post holes and the only archaeological material recovered was a small amount of burnt clay.

Structure	F. No.	F. Type	Orientation/ Shape	Width (m)	Depth (m)	Finds
Structure 4: Small rectangular post-built structure	F.263	Post hole	Sub-circular	0.27	0.14	Burnt clay
	F.264	Post hole	Sub-circular	0.36	0.11	-
	F.265	Post hole	Sub-circular	0.31	0.03	-
	F.266	Post hole	Sub-circular	0.32	0.06	-
	F.269	Post hole	Sub-circular	0.34	0.12	
	F.270	Post hole	Sub-circular	0.35	0.12	
	F.271	Post hole	Sub-circular	0.30	0.06	
	F.272	Post hole	Sub-circular	0.32	0.05	

Table 14: Features forming Structure 4.

Structure 5

Formed of both post holes and a beam slot, Structure 5 is a more complex structure. As with the other structures on this site, the footprint suggests at least one open side. In this case the features are arranged in a rectangular layout on a slight northeast-southwest orientation with a large opening to the northeast side. The eastern wall measures 4.3m and is formed by three post holes (F.601 F.602 and F.606) and a short beam-slot (F.600). Two other small post holes (F.597 and F.598) may represent a different phase of construction on this side. The southern edge is formed of five post holes (F.463, F.478, F.497, F.603 and F.602) and measures *c*. 4.3m. A further three post holes (F.464, F.470 and F.473) extend from the southern side to form the 3.1m western boundary. Two post holes (F.550 and F.541) may have formed an incomplete fourth wall to the north. Alternatively, these may have been part of an internal subdivision and the western side may have extended to incorporate F.476. Four further post holes (F.475, F.539, F.540 and F.538) located in this area may also have been incorporated into the structure.

Post holes were either sub-circular or sub-oval and typically shallow. Post hole diameters vary between 0.21m and 0.7m and depths range between 0.03m and 0.23m (Table 15). The short beam slot had a maximum width of 0.34m and a maximum depth of 0.19m. The features in or associated with Structure 5 contained a range of artefacts not encountered in the other structures. These included a spindlewhorl and quern fragments. However, this is against a background of a higher finds density located on the southern edge of Area 4 and only eight of the twenty features contained any archaeological material.

Features constituting Structure 5 cut various features that belong to previous phases of activity including F.412, an early Roman planting bed and F.442 a ditch attributed to the broad Middle Saxon phase. Gully feature, F.461, curved around Structure 5's south-western corner and may have been associated with drainage for the building. The structure was also respecting or respected by F.441 a ditch that ran northeast-southwest less than 1m from the southern wall of Structure 5. Within the structure a single pit (F.471) and a lozenge-shaped feature (F.472) may have been internal features of the building. Of the six structures on this site Structure 5 exhibited most evidence for being a domestic structure. However, the lack of any hearth derived material in features within or associated with the structure counters this and it is most likely that Structure 5 was an ancillary building with an agricultural function.

Structure	F. No.	F. Type	Orientation/ Shape	Width (max m)	Depth (max m)	Finds
Structure 5: Beam-slot and post-built rectangular structure	F.463	Post hole	Sub-oval	0.57	0.15	-
	F.464	Post hole	Sub-oval	0.57	0.15	Animal bone, quern fragments
	F.470	Post hole	Sub-circular	0.4	0.10	-
	F.473	Post hole	Sub-circular	0.38	0.05	-
	F.475	Post hole	Sub-circular	0.53	0.19	-
	F.476	Post hole	Sub-circular	0.48	0.12	-
	F.478	Post hole	Sub-oval	0.70	0.23	Animal bone, iron
	F.497	Post hole	Sub-oval	0.64	0.30	Animal bone
	F.538	Post hole	Sub-circular	0.46	0.05	Animal bone, pottery (MIA)
	F.539	Post hole	Sub-oval	0.35	0.18	Animal bone
	F.540	Post hole	Sub-oval	0.30	0.06	-
	F.541	Post hole	Sub-oval	0.43	0.14	-
	F.550	Post hole	Sub-circular	0.39	0.04	-
	F.597	Post hole	Sub-oval	0.23	0.07	-
	F.598	Post hole	Sub-oval	0.25	0.11	Animal bone
	F.600	Beam slot	N/S lozenge	0.34	0.19	Animal bone, spindlewhorl (Saxon)
	F.601	Post hole	Sub-oval	0.46	0.07	-
	F.602	Post hole	Sub-circular	0.21	0.03	-
	F.603	Post hole	Sub-oval	0.41	0.08	Quern fragment
	F.606	Post hole	Sub-oval	0.33	0.04	-

Table 15: Features forming Structure 5.

Structure 6

Twenty-one post holes were found arranged to form a rectangular three-sided structure measuring 4.7m by 6.1m. The structure was oriented northeast-southwest with no evidence of structural elements on the northeast side. A narrow (0.2-0.4m), very shallow (<0.01m) gully feature (F.715) was seen to have existed in approximately the same layout as the post holes. The ephemeral nature of this feature made it impossible to excavate and any relationship to the post holes could not be determined. However, it seems likely that this feature represents a separate phase of building.

Structure	F. No.	F. Type	Orientation/ Shape	Width (max m)	Depth (max m)	Finds
Structure 6: post-built structure	F.542	Post hole	Sub-oval	0.45	0.08	-
	F.543	Post hole	Sub-oval	0.48	0.04	-
	F.544	Post hole	Sub-oval	0.37	0.02	-
	F.545	Post hole	Sub-oval	0.29	0.08	-
	F.546	Post hole	Sub-oval	0.26	0.07	-
	F.549	Post hole	Sub-circular	0.20	0.03	-
	F.576	Post hole	Sub-circular	0.53	0.08	-
	F.577	Post hole	Sub-circular	0.20	0.10	-
	F.578	Post hole	Sub-circular	0.20	0.06	-
	F.579	Post hole	Sub-circular	0.20	0.06	-
	F.580	Post hole	Sub-circular	0.35	0.05	-
	F.581	Post hole	Sub-circular	0.25	0.03	-
	F.582	Post hole	Sub-circular	0.25	0.06	-
	F.583	Post hole	Sub-oval	0.30	0.08	-
	F.584	Post hole	Sub-circular	0.20	0.04	-
	F,585	Post hole	Sub-circular	0.20	0.06	-
	F.586	Post hole	Sub-circular	0.20	0.03	-
	F.587	Post hole	Sub-circular	0.30	0.08	-
	F.588	Post hole	Sub-circular	0.35	0.25	-
	F.589	Post hole	Sub-circular	0.25	0.10	-
	F.590	Post hole	Sub-circular	0.25	0.13	-

Table 16: Features forming Structure 6.

At least six post holes (F.582, F.583, F.584, F.585, F.586, and F.587) formed the eastern wall and were similar in their size and regular in their spacing. The western wall was also formed by at least six post holes (F.542, F.543, F.544, F.545, F.549 and F.576) though size and spacing are much less regular. The southern side was formed of four posts (F.578, F.579, F.580 and F.581) and was cut by two later features (F.554 and a furrow) which likely destroyed two further post holes that are inferred from the spacing pattern. Several external post holes (F.547, F.548, F.577, and F.588) are assumed to have been associated with this structure and two internal post holes (F.589 and F.590) suggest the possibility of internal subdivision.

Post holes varied between a sub-circular and a sub-oval shape with maximum widths between 0.2m and 0.53m (see Table 16). Depths ranged between 0.02m and 0.25m though the majority of post holes were 0.08m in depth or less. No archaeological material was recovered from any of the post holes forming Structure 6.

Post alignments

A total of seven post alignments have been attributed to the Middle Saxon phase of activity (Figure 11). These range from 4.7m in length and five post holes to 16.4m in length and 16 post holes. All seem to have been boundaries relating to the agricultural use of the site. The post holes have been grouped by association to an alignment and their dimensions and orientations are detailed in the table below (Table 17).

Post alignment	Alignment length (m)	No. Post holes	Orientation	Post hole widths (m)	Post hole depths (m)	Finds
1	4.9	6	NW/SE	0.24-0.55	0.06-0.18	-
2	5.7	5	NE/SW	0.32-0.65	0.04-0.17	BN, BC
3	9.4	9	NE/SW	0.20-0.40	0.07-0.10	BN
4	11.7	16	NE/SW	0.29-0.45	0.03-0.22	BN, PT
5	4.7	6	NE/SW	0.20-0.42	0.05-0.23	BN
6	16.4	16	N/S	0.21-0.52	0.03-0.21	BN, FE
7	5.8	13	NE/SW	0.30-0.70	0.05-0.15	

Table 17: Post alignments.

Several of the post alignments (Post Alignments 4, 6 and 7) exhibited double lines of post holes for part of their length. This suggests that they were re-instated at some point during their use and alignments may be evidence of more than one phase of their respective boundaries. Post Alignment 5 was situated between terminals of F.459 and F.515 which suggests that a fence line may have completed a ditched boundary or closed an entranceway that was no longer needed. Other post alignments may well be related to particular phases of ditched enclosures but further phasing work is needed before these relationships can be discerned. In addition, Post Alignment 1 may be a continuation of Post Alignment 6 on slightly different orientation.

Other post holes

A total of 43 post holes have not yet been ascribed any particular function or associations. The majority of these were isolated from other post holes but seemed likely to be associated with or respecting other Saxon features. The vast majority were shallow and contained single fills and very few finds. Dimensions vary, with lengths between 0.18m and 0.62, widths between 0.18m and 0.6m and depths between 0.04m and 0.31m.***Pits***

Excluding post holes (see above), a total of 89 Middle Saxon discrete features have been identified. Some were found in pit groups, while others were isolated. None of these discrete features was deeper than 0.58m. The majority of pit features were relatively small, shallow with little artefact material recovered. Some had no relationships to other dateable features. It was, therefore, difficult to determine their age and function. Most discrete features have been ascribed to this dominant Middle Saxon phase of activity where there was no clear reason to date them otherwise. Where possible, for the purposes of this report, discrete features have been grouped by form, function, deposit or location.

Pit groups
Thirty-nine pits were found in groups of three or more intercutting or associated pits (Figure 11). Pit groups are confined to the northeast corner of Area 4 where pit features are more common in general. Pits in these clusters vary between lengths of 0.56m and 3.2m widths of 0.4m and 1.55m and depths of 0.11m and 0.58m (Table 18). Fills within the pits of a cluster vary very little and though some cutting relationships between pits have been identified it seems likely that they were contemporary with each other and filled by similar episodes of natural silting. No backfilling or dumping episodes were identified. Little in the way of dateable artefacts were found in these features but they have been ascribed to the dominant Middle Saxon phase of activity due to their cutting relationships with Roman planting beds and Saxon linear features.

Pit Cluster	Cluster dimensions (m)	No. Pits	Pit lengths (m)	Pit widths (m)	Pit depths (m)	Finds
1	c. 5.4 x 2.2	4	1.00-1.90	0.90-1.48	0.25-0.40	BN, FL, PT, SH
2	c. 4.3 x 3.5	6	0.80-3.00	0.60-1.20	0.20-0.45	BN, PT
3	c. 3.3 x 2.6	7	0.90-1.50	0.45-1.15	0.19-0.44	BN, FL
4	c. 2.8 x 2.6	5	0.56-1.16	0.4->1.4	0.22-0.45	BN, FL
5	c. 7.8 x 1.8	7	0.81-3.2	0.7->1.3	0.11-0.58	BN, PT, BC
6	c. 6.2 x 1.7	5	1.02-1.73	0.75-1.26	0.12-0.58	BN
7	c. 2.9 x 2.4	5	0.60-1.90	0.50-1.55	0.21-0.30	BN

Table 18: Pit clusters.

The function of these features is difficult to determine but the lack of dumped deposits and refuse suggests that they were not dug as rubbish pits. Their intercutting and irregular natures suggest that they may be quarrying pits dug to obtain the natural sands, clays and gravels. Further phasing of the surrounding linear features may clarify whether the clusters were located within a single bounded area.

Rubbish pits
These pits are defined by containing one or more fills that were dumped deposits of refuse. In general, the dumped fills contain charcoal rich deposits which were the remains of hearth material. Three rubbish pits were found dispersed across Area 4. There was no evidence that these pits were associated with houses or any of the structures recorded on site.

F. No.	Shape	Length (m)	Width (m)	Depth (m)	Finds						
					BN	PT	FE	SL	BC	WS	FL
F.106	Sub-circular	1.10	1.24	0.40	31 (639g)	3 (55g)	1 (6g)	3 (368g)	1 (3g)	2 (8g)	1 (1g)
F.361	Sub-circular	0.70	0.65	0.31	2 (25g)	-	-	-	-	17 (511g)	2 (122g)
F.611	Sub-oval	0.20	1.15	0.31		3 (55g)					

Table 19: Rubbish pit features.

F.106 is exceptional for the high quantities of artefacts found. Finds included a Saxon iron knife blade, both Middle Saxon and Roman pottery sherds, burnt and worked clay, smithing hearth base and burnt stone; a combination not found anywhere else on site. Located near the southern edge of Area 4 this pit contributed to the high frequency of finds in this area. As with the Iron Age finds, this concentration of material suggests a nearby domestic setting, perhaps to the south, beyond the excavation limits.

Other pits
The 46 remaining pits vary greatly in shape and dimensions: lengths vary between 0.35m and 3.77m, widths between 0.16m and 1.75m, and depths from 0.04m to 0.55m. However, these are grouped by a lack of variety in their filling deposits. All of the pits have singular silting fills and contain little archaeological material; only small amounts of animal bone, iron slag and burnt stone were recovered. In addition, only four of these pits contained pottery sherds (six sherds, 168g). The pits are dated by relationships to and associations with Roman features and Middle Saxon linear arrangements, as such some may be open to reinterpretation subsequent to further phasing analysis. The function(s) of these pits is difficult to determine. Some may be providing extra drainage and some may be the result of quarrying.

Human remains

A single incomplete burial was encountered (Figure 12). This was found in the subsoil overburden approximately 0.25m above the archaeological level. The grave was very much disturbed by later agricultural activity and all bones from the upper body were missing. Evidence from the remaining bones suggests that the individual was an adult and probably female (see Neil below). A fragment of bone comb was found in the subsoil surrounding the partial grave and was likely associated with the remains.

Later Medieval to Present

All but one feature attributable to the Later Medieval or later periods were furrows. This single feature was a post hole, F.86, which contained a piece of specifically Post-Medieval metalwork (see Wiles below) though this may have been intrusive due to the large amount of furrow disturbance over the entire site. A total of 17 furrows were given feature numbers where they were investigated to ascertain their function or at junctions with earlier archaeological features. Furrow widths varied depending on the amount of truncation with a maximum width of c. 2m encountered. Furrows oriented on a north-northeast/south-southwest alignment were found on the majority of Area 4 and a portion of Area 3. These were generally separated by a distance of approximately 8m. At the eastern extent of the excavations on Area 4, furrows were found running on a perpendicular alignment (approximately east/west), generally separated by distances of approximately 5m. This indicates a change of field alignment. The section of Area 3 which had no furrows at the archaeological level had a deeper overburden. It is presumed that furrows would have existed here but no remains were found due to their removal via machine stripping. Artefacts recovered from investigated furrows included Middle Iron Age, Saxon and Medieval pottery.

Unphased

Of the undated or poorly dated features excavated, the majority have been included within the dominant Middle Saxon phase detailed above. A number of features, however, remain unphased and can only be very broadly dated. Nine discrete features remain unphased. Four of these (F.302, F.314, F.315 and F.319) are in Area 3 where a lack of extant dateable features made phasing by relationships very difficult. The remaining five features (F.262, F.390, F.401, F.559 and F.560) are scattered across Area 4. All but one of these features contained no archaeological material and all were filled by a single, homogeneous, silting deposit.

Area	F. No.	F. Type	Shape	Length (m)	Width (m)	Depth (m)
4	F.262	Lozenge	NW/SE ovoid	>1.20	0.28	0.09
3	F.302	Pit	Sub-oval	>2.75	0.80	0.28
3	F.314	Post hole	Sub-circular	0.61	0.45	0.21
3	F.315	Lozenge	Sub-oval	1.00	0.23	0.05
3	F.319	Pit	Sub-circular	0.60	0.40	0.10
4	F.390	Post hole	Sub-oval	0.45	0.51	0.09
4	F.401	Pit	Sub-oval	1.40	0.55	0.13
4	F.559	Post hole	Sub-circular	0.37	0.36	0.07
4	F.560	Post hole	Sub-circular	0.31	0.22	0.17

Table 20: Unphased discrete features.

Nine linear features also remain unphased. Seven linear features were located in Area 3 (F.307, F.312, F.313, F.316, F.317, F.322 and F.327) and two in Area 4 (F.407 and F.527). No archaeological material was recovered from any of these features and all

of them were filled with a single, homogeneous, silting deposit. As with the unphased discrete features, further phasing analysis may aid dating of these features.

Area	F. No.	F. Type	Orientation	Length (m)	Width max (m)	Depth max (m)
3	F.307	Ditch	E/W	~26.1	0.90	0.09
3	F.312	Ditch	NW/SE	~16.3	0.45	0.13
3	F.313	Ditch	NW/SE	~3.9	0.40	0.09
3	F.316	Ditch	NW/SE	~6.3	0.80	0.14
3	F.317	Ditch	NE/SW	>3.9	0.50	0.10
3	F.322	Ditch	E/W	>2.7	0.37	0.06
3	F.327	Gully	NW/SE	>6.1	0.45	0.80
4	F.407	Ditch	NW/SE	>3.9	0.65	0.24
4	F.527	Ditch	N/S	>8.9	0.90	0.05

Table 21: Unphased linear features.

DISCUSSION

Later prehistory

There is limited evidence of later prehistoric activity. Several Early/Middle Iron Age well/watering holes indicate pastoral land use and are consistent with activity recorded on the western slopes of the Isle of Ely during this period (e.g at the West Fen Road development's Ashwell, Consortium and Trinity and Runciman sites). The re-cutting and re-use of the features in this single location suggests a long-standing use of the land and pottery finds indicate possible Late Bronze Age origins and use until the Middle Iron Age.

A loose alignment of pits may have been established along a boundary which is no longer extant which may suggest that excavations were centred on an area at the edge of a settlement. Indeed, little evidence of domestic activity was apparent and no structural remains could be attributed to this period. Small amounts of domestic refuse, concentrated in three pits on Area 3 and in F.441 at the southern extent of Area 4, may indicate nearby domestic structures to the north east and south respectively. Evidence of Iron Age domestic activity was encountered on several sites immediately to the east of East Cambs District Leisure Village site, for example at Ashwell (Mortimer *et al* 2005), Consortium (Mudd & Webster 2011) and Trinity and Runciman Lands (Masser 2001) as well as a defended settlement at Hurst Lane Reservoir (Evans *et al* 2007) to the west.

Whilst there was clearly a significant later prehistoric presence in the landscape, the evidence from East Cambs District Leisure Village site is scarce, indicating that the site was situated on the edge of significant Iron Age activity. Nevertheless, the identification of later prehistoric features allows a more complete appreciation of the landscape setting of the Iron Age sites located on the Isle of Ely. Further consideration of the prehistoric remains within a regional context should include comparison to sites such as Wardy Hill. Additional spatial analysis and refitting of ceramic sherds is

required to provide a more detailed chronology of prehistoric features, highlight features of possible Late Bronze Age origins and aid interpretation of site function.

Roman period

As detailed above, the Roman period activity comprised only agricultural planting beds. A paucity of domestic refuse and absence of structures suggest that the Roman settlement on the Isle of Ely was situated elsewhere and domestic Roman remains at Ashwell site, West Fen Road (Mortimer *et al* 2015) indicate that occupation was located further to the east. Whilst the land was clearly used agriculturally at some point during the first centuries AD, the lack of evidence for any re-use or re-arrangement of land boundaries suggests that agricultural use of this marginal land may have been abandoned after a short-lived Roman phase of activity.

Site function and economy

A few planting bed features, very similar in character, were also found at the West Fen Road development's Trinity and Runciman Lands (Masser 2001). Wright (2016) following Fowler (2006) suggests that planting beds are deliberately located on soils where the raising of root systems above the wet ground conditions beneath may contribute to better yields of cultivated crops. The precise crops possibly grown in this manner are still a matter for debate. Both asparagus (Evans & MacKay 2005) and brassicas (Timberlake 2014) have been suggested as these are known to have been consumed in Roman towns but there is little or no *in situ* evidence for these specific crops. On the other hand, Brittain (with Evans 2014) argues that the main function of planting beds is to provide irrigation throughout the drier months on clayier soils. Environmental analysis of planting bed contexts from East Cambs District Leisure Village has proven to be severely limited by a lack of plant macrofossil remains therefore it seems that little can be contributed to this debate by any further analysis.

Saxon period

There is no consistency between the previous Roman phase and the Middle Saxon features. The relative lack of Early Saxon ceramic (see Blinkhorn below) suggests a hiatus in archaeological activity until the Middle Saxon period. However, in areas located further upslope, towards the current city of Ely, sites exhibit continuity throughout the Roman and Saxon periods. The hiatus at East Cambs District Leisure Village site is probably due to the location and character of the land.

The flourishing of activity during the Middle Saxon period is evidenced by the large number of linear features and pits and the six structures. The linear features signify a system of enclosures changing many times over a short time period with the paucity of Late Saxon and Medieval pottery (see Blinkhorn below) suggesting that the majority of features were used and abandoned during the Middle Saxon period. There is potential, however, for unphased elements of the site to relate to later usage which will be explored as part of subsequent detailed analysis.

The pit clusters suggest possible quarrying and the lack of domestic refuse around the structural features indicates that the buildings were probably auxiliary structures relating to agriculture. Structural remains at East Cambs District Leisure Village seem better articulated than at other sites in the wider settlement. The large size and unusual L-shaped beam slots of Structure 1, in particular, warrant closer comparison with other structural remains in the local and regional areas. The possible pattern of 3-sided structures also requires further investigation.

The isolated burial requires more secure dating to place it within the wider regional context. If it is assumed to be of Middle Saxon date then it fits within a pattern of isolated inhumation remains associated with the wider Middle Saxon occupation of the Isle of Ely.

Site function and economy

Situated at the far extent of the western slope, almost at the fen edge, it is presumed that the land would have been relatively wet and perhaps unsuitable for anything other than grazing which may account for the latest Roman/earliest Saxon features being droveway ditches for moving livestock. This could also account for the lack of domestic architecture.

The land was clearly divided, sub-divided and re-divided by both ditches and post alignments, and rearranged many times within this intense and complicated phase of activity. Individual enclosures are difficult to distinguish within this complex pattern of land use but further phasing analysis will allow sub-phases of land use to be identified. Since the lack of domestic architecture suggests that these enclosures were unlikely to have been part of a system of subsistence agriculture, it can be argued that enclosures were paddocks for animal rearing in order to supply meat and other animal products for domestic occupation elsewhere. The auxiliary structures were likely barns or byres or animal shelters. Similar arguments have been presented for nearby sites of a similar character (e.g at Ashwell site, West Fen Road, see Mortimer *et al* 2005).

Evidence for the beginnings of specialisation in animal husbandry to meet supply needs is also indicated by the composition of the faunal assemblage (see Rajkocava below), further analysis of which may lead to more robust evidence of specialisation. The addition of the faunal remains data from East Cambs District Leisure Village to that of the surrounding sites may provide strong evidence to support the theory of land use for the supply of animal products. The recipient of these animal products is presumed to have been the monastic double house founded in AD673. The date of the founding corroborates well with the period of intensive activity during the Middle Saxon period at East Cambs District Leisure Village.

Chronology

A predominance of Ipswich ware pottery dates the phase to the 8th and 9th centuries AD and suggests that the development of the land was related to the founding of the monastic houses in the late 7th century AD. Rectilinear enclosures are a feature of

several other Middle Saxon sites in the region, the nearest being the Ashwell and Consortium sites of the West Fen Road development which show a continuation of Middle Saxon settlement into East Cambs District Leisure Village areas. These individual sites should be considered as a single expansive settlement probably relating to the ecclesiastical centre.

The curved shape of some linear features is also seen in features from the previous phase of work at East Cambs District Leisure Village. Wright (2016) suggests that this form of enclosure is analogous to the sub-ovoid enclosures dated to the Late Saxon at the Consortium site of West Fen Road (Mudd & Webster 2011). If the chronology of form can be extended to East Cambs District Leisure Village then it could be argued that the curved enclosure forms are likely to be the later of the enclosure forms. Further phasing analysis is required for a more detailed chronology.

Local and regional context

The character and amount of Middle Saxon features extends our knowledge of the local Middle Saxon landscape centred on the monastic double at Ely. The size of the settlement can be extended to include Areas 3 and 4 of the East Cambs District Leisure Village and features on the western edge of the excavations suggest that Middle Saxon activity may have continued even further towards the fen. This implies a motivation to use all available land that is likely to have been driven by the significance and power of the religious settlement for which food supplies were needed. It can be argued that the monastic houses were the single most significant driver of the local land economy via the creation of a 'home farm'(Wright 2015).

Considering the site within its regional Saxon context will be a major part of the full analysis stage of work. Most important locally is the relationship between Middle Saxon sites and the monastic double house. An overview of the regional evidence may highlight Ely's importance due to the significance of the religious settlement during this period. The large size of the settlement associated with and arguably supplying the monastic houses may lead to a reinterpretation of the importance of this settlement within a wider regional and national context.

Later Medieval - present

Evidence of post-Saxon activity within the boundaries of the Areas 3 and 4 of East Cambs District Leisure Village is restricted to agricultural features: north-south aligned furrows, east-west aligned furrows and Post-Medieval field drainage. These represent low level agricultural activity that conforms to our current understanding of the contemporary landscape.

ASSESSMENT OF POTENTIAL

Artefactual and ecofactual analysis

A relatively small prehistoric finds assemblage together with a small number of Roman finds and a scarce Saxon assemblage were recovered from East Cambs District Leisure Village site (Table 22).

	Quantity	Weight (g)
Flint	31	606
Prehistoric pottery	355	5207
Roman pottery	47	488
Saxon pottery	98	2893
Medieval pottery	3	39
Worked stone	35	2982
Burnt stone	42	2065
Burnt/worked clay	99	2735
Brick and tile	5	1146
Metalwork	60	852
Slag	35	2616
Human remains	1 partial individual	900
Faunal remains	3436	53110
Worked bone	6	>48
Totals	4253	75687

Table 22: Finds assemblage breakdown

Detailed assessment and recommendations for further work are included in the individual Specialist Studies. Below are summary statements for each, as discussed with the relevant specialist. It is anticipated that all pottery reports, as well as the worked clay, slag, metalwork, worked bone, faunal and human remains and environmental reports will be summarised for inclusion in any publication

Flint
The flint assemblage is of little interest and the assemblage as a whole is insignificant in quantity and quality.

Later Prehistoric Pottery
The Later Prehistoric pottery assemblage from East Cambs District Leisure Village is relatively small, however, it provides a valuable insight into the ceramic character of the region, in particular the Plain Ware tradition. Further comparison between the assemblage and those of nearby sites is recommended. Additional refitting analysis of sherds across contexts may also aid interpretation of site function. A summary will be included for publication

Roman Pottery
The paucity of recovered sherds and absence of fine wares or diagnostic sherds means this assemblage is of little value and does not warrant any further study. A summary is required for publication.

Saxon and later Pottery
The small and fragmentary assemblage requires no analysis, though illustration of the stamped and incised sherd is required. Full reporting and publication is necessary.

Worked Stone
The worked stone consists of fragments of saddle and lava querns. No further work is required on this assemblage though a summary should be reproduced for publication.

Burnt Stone
No further post-excavation work is considered necessary on this material.

Burnt and Worked Clay
The assemblage has been fully recorded and requires little further work. The loomweights and spindlewhorls should be drawn and photographed for inclusion in any publication of the site.

Brick and Tile
No further work is required on this material

Slag
The spread of features containing iron smithing debris implies the presence of more than one smithing hearth and iron-working during more than one phase of occupation. Analysis of the assemblage is complete and no further work or illustration is required. A summary will be included in any publication of the site

Metalwork
Items of note are the seven partial or complete knife blades which are likely to be Middle Saxon. Other Saxon/Medieval objects include a copper alloy hooked tag, a copper alloy sheet a copper alloy finger ring. These have been fully recorded and no further work is warranted. Illustration and/or photography are recommended for publication alongside a summary of the report.

Human Remains
No further assessment is required on the remains of a single inhumed individual. Sampling for radiocarbon analysis is recommended to determine dating/phasing for this individual and any dating should be included with a summary of the assessment report in any publication of this site.

Faunal Remains
Further work is required to complete analysis of this assemblage which has the potential to indicate specialism in animal husbandry during the Saxon period. In addition, comparison across nearby sites will allow identification of any patterns of animal use and economy contributing to an understanding of regional economy patterns. Recommendations include recording material from heavy residues, identification to species of avian remains, analysis of butchery patterns and more detailed spatial analysis. Full reporting is required for any publication text.

Worked Bone
The small assemblage consists of six objects: three combs, two pin-beaters and a skate. Analysis of the assemblage is complete but illustration or photography of all objects will be required and a version of the report will be included in any publication.

In summary, the prehistoric pottery, Saxon/Early Medieval pottery, metalwork, faunal remains, worked bone/antler and human remains warrant full analysis and reporting. For the remaining artefact groups, appropriate period-specific summary reports may be produced for the publication.

Environmental analysis

Twenty-four bulk environmental samples have been submitted for assessment (see Fryer, below). In addition three column tin samples were taken for pollen analysis from the deep and previously waterlogged features in the well complex. None of the plant remains assemblages are of sufficient size to warrant further analysis or quantification. Their potential to contribute to the broader palaeoenvironmental analysis is limited though it is worth noting that the habitat types indicated are similar to those in the rest of the western Ely landscape. A summary of the report will be included in any publication.

Radiocarbon dating

The watering hole contexts would benefit from a closer dating procedure, which may place these more securely in a chronological phase. Dadiocarbon dating of these contexts would also date the pollen sequence and worked wooden objects.

Radiocarbon dating is recommended for the single inhumed individual in order to date the remains to a specific phase of occupation.

Statement of potential

The later prehistoric evidence has the potential to contribute to our understanding of the nature of the prehistoric occupation of the Isle of Ely. Recent discoveries of Bronze Age activity on the clay geology north of the city of Ely (Phillips & Morgan 2015) indicate early expansion from the gravel island on to the lower slopes and fen-edge. The very small assemblage of Late Bronze Age artefacts from East Cambs District Leisure Village may also indicate similar expansion to the west.

A more substantial Iron Age presence is indicated by the larger pottery assemblage, several loomweights, large watering holes, a pit alignment and possible settlement evidence. Addition of this site's Iron Age features and artefacts to Iron Age phases on nearby sites on the western slope of the Isle of Ely could add to our understanding of land use, economy and transition into the Early Roman period.

The ubiquity of planting bed features across this site adds to our knowledge of the Roman presence in this area. It is clear that these investigations have not uncovered

the full extent of Roman agricultural land use. The lack of evidence for re-use or re-arrangement of planting bed features indicates one phase of use, which may have been unsuccessful enough to restrict later Roman activity to areas further from the fen-edge (eg. West Fen Road, Ashwell site, see Mortimer *et al* 2005). The paucity of later Roman remains on this site is certainly worth noting within a locality with well-defined later Roman phases of occupation (e.g at Ashwell site, *ibid*).

The intense, broad, Middle Saxon phase of occupation will benefit from further detailed phasing. However, the majority of features and artefact assemblages bear close resemblance to nearby sites, especially the West Fen Road development's, Consortium site, located *c*. 500m to the east, and to a lesser extent, the Ashwell site, which both recorded Middle Saxon enclosure systems and structures. Additional comparison of structural evidence, feature types and enclosure layouts of sites within this settlement area may indicate differential land use between or across excavated areas.

It was expected that investigations at East Cambs District Leisure Village would extend knowledge of the Saxon settlement of the Isle of Ely towards the fen-edge and this was ascertained. Further detailed analysis of linear features may even suggest individual ditches connected the site to the previously investigated settlement remains. The current excavations at East Cambs District Leisure Village must be considered an extension of the settlement activity on the West Fen Road sites and beyond. This large area of occupation on the Isle of Ely centred around the monastic houses founded in AD 673 and the Middle Saxon features and artefact assemblages must be considered within this local context.

The investigations have the potential to expand our knowledge of this well-understood local landscape further by adding to the corpus of Middle Saxon features and artefacts. Comparison of assemblages, particularly the faunal remains, could aid interpretation of the potential development of specialisation in animal husbandry in relation to the local economy. These local interpretations have further implications for the regional and national understanding of the Middle Saxon period.

REVISED RESEARCH AIMS

As a result of the post-excavation assessment the following revised key research aims have been identified:

- to establish the character of the Iron Age activity at the site and how it developed over time. To what extent do the Iron Age features potentially represent 'off-site' activity relating to the more substantial settlement at the Ashwell site?

- to fully analyse and characterise the Middle Saxon remains and consider their significance in a local and regional context.

- to characterise the development of the local economy, land use and environment throughout the Middle Saxon period in combination with other sites located on the Isle of Ely.

PUBLICATION AND DISSEMINATION

The Saxon archaeology of western Ely warrants full publication and it is anticipated that this site will be included with results from the previous phase of work at East Cambs District Leisure Village (Wright 2016) in a journal article. The exact format, layout and timetable of the article is being developed.

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SPECIALIST STUDIES

Flint – *Emma Beadsmoore*

A total of 31 (≥606g) flints were recovered from the site, 26 (≥403g) were unburnt and worked, whilst 5 (≥203g) were unworked and burnt. The flints are listed by type and feature in Table 23.

	Type										
Feature/ context	chip/chunk	secondary flake	tertiary flake	secondary blade	tertiary blade	irregular core	core fragment	miscellaneous retouched flake	serrated flake	unworked burnt chunk	**Sub totals**
F. 106		1									**1**
F. 361										1	**1**
F. 372		1									**1**
F. 439			1								**1**
F. 469				1							**1**
F. 522	1									4	**5**
F. 613		1									**1**
F. 621						1					**1**
F. 624		1									**1**
F. 628					1						**1**
F. 629			1								**1**
F. 668		1	1	1							**3**
F. 688			1			1				1	**3**
F. 695								1			**1**
F. 701							1				**1**
F. 708		2	2								**4**
F. 709		1									**1**
F. 710			1								**1**
F. 725			1								**1**
sample 34									1		**1**
Totals	**1**	**8**	**8**	**2**	**1**	**2**	**1**	**1**	**1**	**6**	**31**

Table 23: Flint listed by type and feature/context

The flint recovered from the site is a chronologically mixed assemblage, the majority of which was residual in later features. There is evidence for the products/byproducts of systematic flake production/core reduction focused on narrow flakes and blades, characteristic of Neolithic assemblages. Whilst others flints are the products of more expedient strategies prevalent in later prehistory. The only flints that were potentially broadly contemporary with the feature they were recovered from are the four flints

from F.708, which comprise irregular, potentially later prehistoric flint in an Iron Age pit.

Recommendations for further work
No further work is required on this assemblage.

Later Prehistoric Pottery – *Kate A. Beats*

A total of 355 sherds (5207g) of Late Bronze Age and Iron Age pottery were recovered from 45 features (Table 24). With a higher than average mean sherd weight (MSW) of 14.7g, this assemblage supports the hypothesis of an underlying later prehistoric settlement in the area, particularly focused upon the Middle Iron Age (350-100 BC). The sherds are almost exclusively handmade, with only three likely to have been wheel-made. Decoration is rare and limited to only a few variations. Several of these characteristics are shared by nearby sites at Lancaster Way, Wardy Hill, Prickwillow and Hurst Lane and parallels will be drawn from these sites throughout this report.

Ceramic phase	No. of sherds	Total weight (g)	% by count	% by weight (g)
LBA/EIA	74	625	20.8	12
EIA	110	1448	31	27.8
MIA	167	3089	47	59.3
LIA	3	42	0.8	0.8

Table 24: Breakdown of assemblage by ceramic phase

The Later Prehistoric pottery has been analysed following the guidelines produced by Prehistoric Ceramic Research Group (2010). Each sherd was counted and weighed, and then assigned to a fabric group. Estimated vessel equivalent (EVE) was recorded, as well as any refits within the same feature. Notes were made on form and classification and any decoration was recorded and as well as any remnants of residue. Each sherd was classified in terms of size; sherds under 4cm were categorised as small, sherds between 4–8cm were categorised as medium, and sherds in excess of 8cm were categorised as large.

Deposition
There is evidence for a varied post-breakage history of assemblage. The MSW of 14.7g is relatively high, despite over 65% of sherds sized less than 4cms. This small size is indicative of a delay between breakage and disposal, increasing the erosion to the sherd (Brudenell 2007, Hill & Braddock 2006). This characteristic is shared with the nearby site of Lancaster Way, 4kms away (Wright forthcoming). However, refits are much less common at East Cambs District Leisure Village, with only 34 sherds (842g) re-joining within the same context.

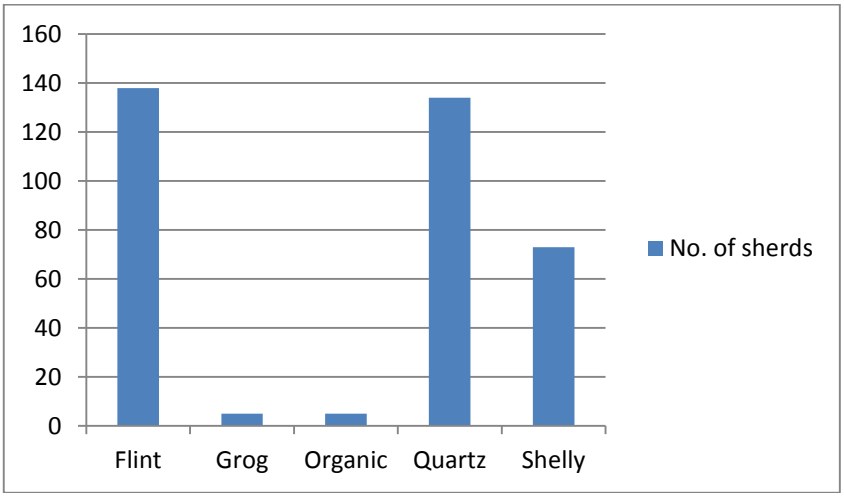
The large pit, F.594, is an example of complex deposition at East Cambs District Leisure Village. The pit contained animal bone and burnt stone as well as Early Iron Age pottery of a nearly even amount of small and medium sized sherds. Judging by the amount of medium sized sherds, it is likely that breakages occurred within a short distance from their deposition in the pit. Further analysis of refits across contexts within features would provide a useful insight into deposition on site.

Fabric series

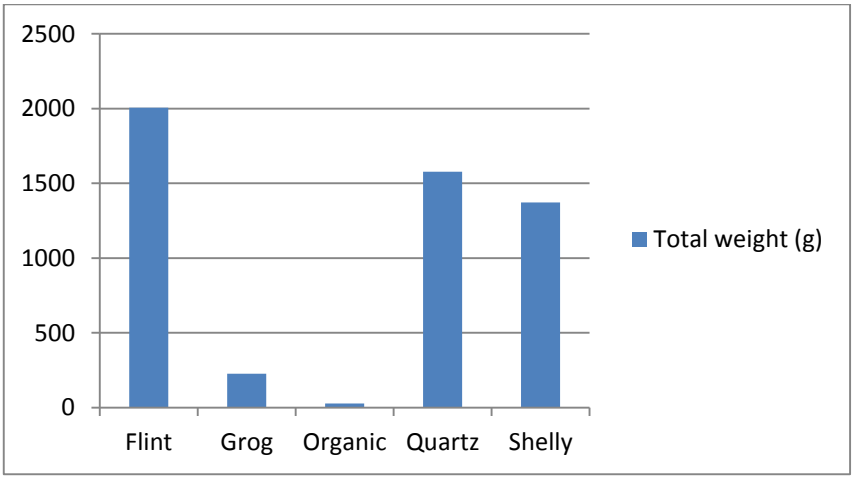
The majority of the sherds were produced in a flint fabric, which reflects the Late Bronze Age and Early Iron Age character of the assemblage (Table 25, Graph 1 and Graph 2). Middle Iron Age sherds produced in a flint fabric, 27.5% of the entire assemblage, range from poorly sorted coarse ware, to well sorted fine ware. Of near equal quantity to the flint, sherds produced in quartz fabrics indicate the large Middle Iron Age assemblage. The bulk of quartz sherds are produced in a well sorted Q2 fabric, which is likely to have been locally sourced (Hill & Horne 2003, 167). In comparison with the nearby sites of Lancaster Way, this site has a considerably higher percentage of flint tempered sherds, which could suggest that this is a site of earlier occupation.

Fabric	No. of sherds	Total weight (g)	% by count	% by weight (g)
Flint	138	2005	38.9	38.5
Grog	5	227	1.4	4.3
Organic	5	26	1.4	0.5
Quartz	134	1578	37.7	30.3
Shelly	73	1371	20.1	26.3

Table 25: The complete Later Prehistoric assemblage by count and weight of fabric form



Graph 1: The complete later Prehistoric ceramics assemblage by number of sherds



Graph 2: The complete later Prehistoric ceramics assemblage by total weight (g)

Late Bronze Age and Early Iron Age
20.8% of sherds have been dated to the Late Bronze Age/Early Iron Age. This part of the assemblage is heavily abraded and does not offer any information with regards to vessel form and carries no decorative features. Sherds from the Early Iron Age proper represent 31% of the assemblage and are similarly plain. Only two rim sherds were large enough to provide diameters, which range from 10cms to 15cms, suggestive of medium sized jars. Of note is the pit F.594, mentioned above, which contained 56 sherds of Early Iron Age pottery, with evidence of 15 vessels in a range of flint, quartz and shelly fabrics. Further analysis is required to compare the character of this Early Iron Age pit and a pit containing a similar number of Early Iron Age sherds from the earlier excavation (see F.70 in Wright 2016, 10).

Middle Iron Age
47% of the assemblage dates to the Middle Iron Age, and represents the largest proportion of the sherds. Despite offering thirty-eight feature sherds, only seven rim sherds are sufficiently intact for the identification of forms. Four examples of a simple slack-shouldered open vessel – Wardy Hill Type A – in three different fabrics were excavated from the same pit/well, F.655. The relative frequency of this form at Downham Road is a common feature of Cambridgeshire ceramics during this period and suggests domestic activity within close proximity to the Early Iron Age pit F.594.

The only decorative features in this assemblage appear on Middle Iron Age sherds, with evidence of both burnishing and smoothing to vessel surfaces. Burnishing occurs on nine sherds and most commonly on the fine ware quartz fabric Q4, both internally and externally. With only 2.5% of sherds with a burnished surface, it suggests the assemblage is predominately lower status ceramics. A further three sherds have finger-tip impressed decoration, which does not occur with any other decoration. This assemblage is notably plainer than the Iron Age assemblages from the surrounding area.

Late Iron Age
Only three sherds (42g) of Late Iron Age date were recovered, all from ditch F.114. These wheel-made sherds are signs of activity on the site during the 1st century AD.

Residues
Evidence of use has been recorded on three sherds in the assemblage, which includes residues of soot and carbon. A Middle Iron Age sherd is notable for its soot residue on the external side of the rim (<413>, F.441 [1474]). With an upright flat topped rim, this sherd has a diameter of 30cms, suggesting it functioned as a cooking or serving vessel. The surface is burnished, indicative of fine ware and denoting higher status pottery.

Individual Feature Assemblages
F.655: A large pit/well in Area 4 yielded 72 sherds (2042g) and represents the largest ceramic deposition. The assemblage is almost exclusively Middle Iron Age, with a few residual Early Iron Age sherds. Interestingly, 29% of sherds from this deposit are feature sherds, which is markedly high considering that feature sherds are only 16% of the entire assemblage. Seven rims sherds are large enough to take rim measurements, with vessels ranging in diameter from 10cms to 30cms. The form most commonly identified is the slack-shouldered to ovoid bodied vessel, known as Type

A, which follows the typology of Wardy Hill (Hill and Horne 2003). The depositional character of F.655 suggests the use and breakage of domestic pottery within a short distance. Further examination of this assemblage and other archaeological material recovered from here is necessary for an insight into this interesting feature.

Well/Watering holes F.629 and F.624: The complex well-cluster in Area 4 yielded 40 sherds (367g) in a highly fragmentary state, with 80% of the sherds less than 4cms in size. Over 57% of the assemblage is likely to be from the Early Iron Age, dating early activity in the area to between 800-350 B.C. There are no feature sherds amongst the earlier component of this feature, which, along with the 86% of sherds sized less than 4cms, denotes a highly disruptive depositional character. The remaining Middle Iron Age sherds are similarly fragmentary, and any feature sherds are too small to measure or provide information on form. It is possible that these sherds travelled some distance from the time of breakage before deposition in the well-cluster.

Pits F.330 and F.331: The small assemblages from these two pits in Area 3 provide a limited insight into Iron Age activity. There are three pits in the area, but only two have ceramic finds. F.330 contained only 3 sherds (23g) of Middle Iron Age pottery in quartz, shelly and grog fabrics. There are no feature sherds, but one sherd with a burnished surface. Eight sherds (113g) came out of F.331, produced almost exclusively in quartz, excepting a single organic tempered sherd. Without evidence of form, little can be discerned as to the ceramic character of the assemblages. However, it is likely that the parallels between these assemblages in Area 3 and the larger excavated site demonstrate contemporary activity during the Middle Iron Age.

Discussion
The Later Prehistoric pottery assemblage from Downham Road is small in comparison to the assemblages from the nearby sites of Lancaster Way, Wardy Hill and Prickwillow. However, it provides a valuable insight into the ceramic character of the fen-edge region, particularly during the Iron Age. With little decoration or surface treatment, the largest percentage of this assemblage appears to be of the Plain Ware tradition, dated between *c*.350 B.C – A.D 43.

Recommendations for further work
The initial analysis outlined here provided spot-dating for the site and basic interpretation of fabric, form and surface treatment. Points for further study have been noted throughout and recommendations are outlined below.

- Further comparison between Downham Road and the nearby sites of Lancaster Way, Wardy Hill, Prickwillow and Hurst Lane.
- Further refitting of sherds across contexts.
- Illustration of sherds.

Roman Pottery – *Francesca Mazzilli*

A total of 47 sherds of Romano-British pottery, weighing 488g, (mean sherd weight 10.4g), representing 0.3EVEs, were recovered. The low value of the mean sherd weight and of the EVEs is a clear indicator of high disturbance of the soil.

Methodology

All the pottery was examined visually and details of fabric, form, decoration, use-ware and date were then recorded in accordance with the guidelines set out by the Study Group for Roman Pottery (Darling 1994) and the National Roman Fabric Reference Collection (Tomber & Dore 1998) and in accordance with the coding used for recent Cambridge excavations (Anderson, in Cessford & Evans 2014). All the percentage figures used in this report are based upon sherd counts.

Assemblage composition

The assemblage mostly presented unsourced coarse fabrics: early Roman and Romano-British coarse wares, and buff sandy ware. In addition, five fragments of the imitation Black-burnished ware were recovered. They do not seem to come from Dorset, because of the higher presence of mica, the lack of black coat and the fact that the inclusions appear finer than the Black-burnished ware from Dorset, at least, to the naked eye. The only sourced fabrics are the Nene Valley whiteware (five sherds) and the East Gaulish Samian ware (one fragment). The latter is the only fine ware recovered on site. The Nene Valley whiteware fragments present rouletting decoration (Table 26).

Fabric	No. of sherds	Wt.(g)
Buff sandy ware with white slip - unsourced (BUFF)	1	2
Coarse sandy greyware - unsourced (CSGW)	4	62
Coarse sandy micaceous greyware - unsourced (CSGW M)	7	223
Coarse sandy greyware with white slip - unsourced (CSGW WS)	1	2
Coarse sandy oxidised ware - unsourced (CSOX)	6	22
Nene Valley whiteware (NNWW)	5	11
Medium sandy fabric, bit abrasive to touch. Frequent small quartz. Sandwich fired grey core, oxidised edges or oxidised core (Early Roman period) - unsourced (Q1b)	7	17
Flinty coarse sandy greyware or oxidised ware (Early Roman period) – unsourced (Q6)	10	81
East Gaulish Samian ware (SAM E)	1	5
Imitation Black-burnished ware - unsourced (BB1 IMIT)	5	63
Grand Total	***47***	***488***

Table 26: Romano-British pottery by fabric type.

The dating of the assemblage spans the 1st to 4th centuries. 61% of the Romano-British assemblage is dated from the 2nd to the 4th century. There is no diagnostic sherd that can be dated to the late 3rd-4th century (Table 27).

Dating	No. of sherds	Wt.(g)
EROM	14	54
C1-C2	1	5
C1-EC2	3	44
C2	6	65
C2-C3	5	11
C2-C4	18	309
Grand Total	***47***	***488***

Table 27: Romano-British pottery by phase

The majority of the assemblage comprises non-diagnostic sherds (87%) (Table 28). The only form that can be identified is jar; in a couple of cases we can identify everted and lid-seated everted rims.

Forms	No. of sherds	Wt.(g)
Jar	3	46
Wide mouthed jar	3	39
Unknown	41	403
Grand Total	***47***	***488***

Table 28: Romano-British pottery by form

Discussion

The paucity of Romano-British sherds recovered in this site, together with the low value of the mean sherd weight, the almost absence of sourced fine wares and diagnostic sherds, indicates that there was not a major Romano-British settlement.

Recommendations for further work

The assemblage is of little merit and does not warrant any further study.

Saxon and Medieval Pottery – *Paul Blinkhorn*

The pottery assemblage comprised 101 sherds with a total weight of 2932g. It comprised a mixture of Middle and Late Anglo-Saxon and Medieval material.

The middle Anglo-Saxon and later material was recorded using the system of codes and chronologies suggested by Spoerry (2016), as follows:

Fabric	Abbrev.	Period AD.	No. sherds	Wt. (g)
Ipswich Ware Group 1 fabric	IPS1	720-850	77	2183
Ipswich Ware Group 2 fabric	IPS2	720-850	18	660
Thetford-type ware	THET	c10th-c12th	3	50
Medieval Ely Ware	MEL	1150-1350	1	6
Hedingham Coarseware	HEDIC	1150-1350	1	16
Huntingdonshire Fen Sandy Ware	HUNFSW	1175-1300	1	17

Table 29: Saxon and Medieval sherds by fabric type.

The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 29. Each date should be regarded as a *terminus post quem*. The range of fabric types is typical of sites in the region (eg. Blinkhorn 2005; Hall 2005).

The bulk of the pottery is of Middle Anglo-Saxon date, in the form of Ipswich Ware, along with a few sherds of Late Anglo-Saxon Thetford Ware and Medieval types, indicating that activity at the site mostly dated to that period, before coming to end soon after the introduction of Thetford Ware early in the second half of the 9th century. Much of the assemblage comprises fairly large and fresh sherds, and it generally appears to be reliably stratified, albeit as the product of secondary deposition. The few sherds of Medieval material are all small and abraded and probably the result of manuring.

Cat No.	Context No.	Feature	IPS1		IPS2		THET		MEL		HEDIC		HUNFSW		Date
			No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	
101	332	87							1	6					M12thC
102	342	88			1	34									MSAX
112	370	101					1	2							LSAX
119	380	106	2	52											MSAX
131	392	111	2	205											MSAX
148	508	114					1	21							LSAX
177	540	172			1	5									MSAX
209	620	197											1	17	L12thC
221	643	207			3	131									MSAX
329	814	304	9	273											MSAX
231	1091	208									1	16			M12thC
341	1140	351	1	11											MSAX
153	1196	114	1	8											MSAX
351	1222	369	1	24											MSAX
356	1232	373	1	26											MSAX
296	1236	267	1	25											MSAX
379	1264	381	1	41											MSAX
156	1306	114	1	24											MSAX
139	1318	113			3	46									MSAX
349	1383	274	1	51											MSAX
360	1385	373	1	22											MSAX
366	1411	374			1	25									MSAX
406	1442	433			1	98									MSAX
437	1501	452			1	83									MSAX
399	1531	422	1	5											MSAX
453	1543	468	1	17											MSAX
474	1581	482			1	23									MSAX
476	1583	446			1	57									MSAX
484	1599	487	2	32											MSAX
482	1603	486	2	18											MSAX
488	1608	486	4	74											MSAX
368	1612	374			4	93									MSAX
320	1616	288	1	24											MSAX
499	1649	501	1	66											MSAX
140	1657	113	1	182											MSAX
370	1667	374	6	120											MSAX
521	1683	186	1	1											MSAX
467	1730	477	3	30											MSAX
542	1732	524	1	14											MSAX
469	1850	477	1	9											MSAX
455	1864	468	1	50											MSAX
478	1874	484	1	4											MSAX
567	1892	573	1	49											MSAX
544	1900	524	5	119											MSAX
524	1967	448	3	91											MSAX
589	1989	605	1	14											MSAX
591	2002	611	1	52											MSAX
602	2057	621	2	26											MSAX
604	2075	621	1	29											MSAX
627	2099	630	2	39	1	65									MSAX
633	2149	637	1	28											MSAX
634	2154	639					1	27							LSAX
519	2188	509	1	75											MSAX
512	2192	508	1	14											MSAX
628	2258	634	1	7											MSAX
630	2281	634	1	36											MSAX
680	2334	213	3	97											MSAX
682	2336	683	4	99											MSAX
Total			**77**	**2183**	**18**	**660**	**3**	**50**	**1**	**6**	**1**	**16**	**1**	**17**	

Table 30: Catalogue of Saxon and Medieval pottery.

The Ipswich Ware assemblage is typical of sites in the Ely area, being dominated by small jars, along with a few pieces of larger storage vessels. For example, a basesherd from a very large vessel (base diameter = 300mm) occurred in F.113 (1657). Pitchers are entirely absent, other than perhaps the single stamped and incised sherd from F.509 (2188) (below). Such a vessel profile is fairly typical of Middle Anglo-Saxon sites within the "Primary Zone" of Ipswich Ware distribution (Blinkhorn 2012), and similar to that of other assemblages in the Ely area (eg. *ibid*. 2005, 62). Most of the context-specific assemblages consist of just one or two sherds, meaning that they cannot provide any information beyond basic chronology.

All the Ipswich Ware was undecorated apart from a single stamped and incised sherd from F.509 (2188). The vessel has a band on the shoulder defined by parallel combing, with a zig-zag line between the two. The resulting triangles are filled with somewhat careless stamping. The decorative scheme, "Band and Zig-Zag" (BZZ), is one of the less common ones utilized by Ipswich Ware potters (Blinkhorn 2012, 60). The stamp motif is a Round Grid (RG) type, the most common type found on such pottery (ibid. Table 15). They are too carelessly made to allow them to be matched to the *corpus* of known types (ibid. fig. 28). The Ipswich Ware potters limited stamped decoration to pitchers and large jars (ibid. 63), with the thickness and curvature of this sherd suggesting it is from the former vessel type, but this cannot be said with certainty.

The Thetford Ware assemblage is mostly plain bodysherds, with the single rimsherd being a lid-seated jar form that was a very common product of the industry (eg. Rogerson and Dallas 1984).

Recommendations for further work
Given the small and somewhat fragmentary nature of the assemblage, no further work is required, other than perhaps an illustration of the stamped and incised sherd.

Burnt and Worked Clay – *Simon Timberlake*

Some 2.73 kg of burnt and worked clay was recovered from this site (Tables 31 & 32), of which 2.25 kg appeared to be of worked clay, most of this consisting of loomweight (2.12 kg [or a minimum of 12 weights]). At least four of these loomweights were more or less complete. In addition were found two clay spindlewhorls (72g), one of which was intact. The few other pieces of worked clay could not be properly identified, although the vitrified clay object seems unlikely to be crucible, therefore not metallurgical in function. Seven different clay fabrics were identified, most of them composed of sandy-gritty textures.

Burnt clay fabric types

Fabric 1	heterogenous sandy orange-pink to dark grey fabric with grit inclusions (<2mm) of burnt flint, grog etc. with only very occasional voids.
Fabric 2	a pink to pale tan to light grey fine-grain silt and clay fabric with slight reduced interior and inclusion of flint and grog (<4mm) and occasional larger burnt flint (*c*. <10).
Fabric 3	a variegated pink/ buff yellow streaky clay fabric, hard, with a few small gritty inclusions (<2mm).
Fabric 4	vitrified grey-blue fabric full of gas vesicle inclusions and occasional carbonaceous material.

Fabric 5 similar to Fabric 1 but less sandy and darker silt with abundant grit/ sand grains (<1mm).
Fabric 6 pale yellow clay fabric with some swirl texture and rare inclusions.
Fabric 7 hard brown silty-sandy clay fabric heavy with crushed quartz grit inclusions (<1mm).

Cat. no	Feature	Context/ SF no	Wt. (g)	No. pieces	Size (mm)	Fabric type	Inclusions	Notes
107	F.91	(348)	4	1	17	3		
123	F.106	(390)	6	1	25	1		
152	F.114	(1156)	6	1	25	2		
195	F.186	(1693)	6	3	10-15	1		
205	F.196	(632)	10	3	10-18	1		daub?
213	F.204	(630)	1	1	8	1		
293	F.263	(1027)	16	6	12-30	2		
300b	F.274	(1053)	52	2	10-65	2		daub
332	F.321	(904)	50	1	52	6		
364	F.374	(1379)	6	1	23	1		
380	F.383	(1268)	70	8	15-50	1		
420b	F.441	(1634)	44	2	30-45	2+3		
420c	F.441	(1634)	58	1	70	1		
515	F.509	(1687)	18	1	30	3		
528	F.520	(1722)	40 (34)	6 (5= Fb1)	18-48	1+3		
562	F.562	(1846)	4	1	17	1		
576c	F.594	(1954)	16	3	15-25	3		
573	F.593	(1952)	8	2	15-25	3		
619	F.624	(2267)	14	1	35	3		daub?
643	F.648	(2121)	20	3	20-28	1		weathered daub?
710	F.713	(2404)	8	2	20-25	2		
713	F.714	(2406)	28	4	25-30	4		

Table 31: Catalogue of burnt clay.

Loomweights

Two different types of clay loomweight have been recorded from this site. This included five nearly complete ring 'doughnut-shaped' weights which came from F.274, F.524 and F.441 (the latter feature and context containing three sized/ shaped weights) – all of which can fairly confidently be ascribed to the Early/Middle Saxon period. A much smaller fragment from what may have been another ring loomweight was also recovered from F.441. The most likely (though not necessarily completely standardised) weight of each original would have been between 300-350g. Typologically these loomweights would appear to be of the Early-Intermediate form, thus Early-Mid Saxon in date (Hurst 1959).

The other possible loomweight pieces recovered were all extremely fragmentary. These were all of triangular – rectangular types which seem most likely to have been Iron Age in date. Fragments (some of them fairly undiagnostic) of 6-7 different weights were identified, with just one or two end fragments with traces of the warp thread perforations still visible on them. Features containing these loomweight fragments included F.191, F.219, F.441, F.593, F.679 and F.692. Clearly not all of these were Iron Age – confirming once again the degree of re-deposition of material which seems to have taken place.

Spindlewhorls

The two well-moulded rounded disc-like clay spindle whorls, each of about 45-48mm diameter, but manufactured differently, with a similar-sized central distaff hole (of between 6-10mm) were recovered from F.593 and F.600. Clay spindlewhorls have a fairly long currency of use, but such forms (in particular the half spindlewhorl fragment from F.593) are not untypical of the well-moulded or even turned clay weights found at other Early-Middle Saxon sites (see Spall & Troop 2005; Dunning 1952, Fig.2.3).

Cat. no	Feature	Context /SF no	Wt. (g)	No. pieces	Size (mm)	Fabric type	Inclusions	Notes
125	F.106	(390)	8	2	25-35	4		smooth moulded surface – possibly lip of ceramic – not a crucible!
199	F.191	(604)	8	1	32	1		external surface of *loomweight*?
251	F.219	(678)	88	1	70	3		possible large fragment of uneven side of triangular *loomweight*? (+ PM tile)
300a	F.274	(1053)	258	7	30-90	2	Burnt flint	fragments (3/4 complete) from the top half of a weathered ring doughnut-shaped *loomweight* with a central perforation of *c*.30mm and external diameter of *c*.110mm + probably thickness of *c*.40mm + : Saxon?
420a	F.441	(1634)	170	11	15-55	1		fragments (mostly) of waterworn *loomweight* , perhaps triangular (non-diagnostic), with corner perforations of 0.5-0.7mm
412	F.441	(1474)	20	1	36	2		small fragment of rounded *loomweight* with part of perforation 8mm+ diameter – possibly 'doughnut-shape' type?
415 *	F.441	(1474)	1072	3	70-100	2		x3 complete but weathered and eroded flattened'doughnut-shaped' *loomweights* (a) 110mm external diameter, 45mm thick, 23mm diameter central perforation, (b) 90mm external diameter, 40mm thick, 18mm central perforation., (c) 94mm external diameter., 43mm thick, 18mm central perforation.
537	F.522	(1726)	52	1	65	1?		uncertain lenticular object – now heavily waterworn
540	F.524	SF 50	298	1	95	2		complete ring 'doughnut-shape' *loomweight*, unevenly circular 85-90mm diameter, 44mm thick, with 40mm diameter perforation.
576a *	F.594	(1954)	26	1	47	5		half of moulded round clay *spindlewhorl* 47 mm diameter with ellipsoid x-section 28mm thick and central stick perforation of *c*.6mm.
576b	F.594	(1954)	40	1	42	1		fragment from side of triangular? *loomweight*
587 *	F.600	(1979)	46	1	47	7		intact circular *spindlewhorl* with two small areas of damage – flattened finger-moulded ellipse 45-48mm diameter, 17mm thick, with 10mm straight perforation
676	F.679	(2279)	14	1	30	1		corner of triangular *loomweight*?
675	F.678	(2273)	40	2	35-45	2		possibly fragments from side of triangular *loomweight*
695	F.692	(2309)	110	11	15-50	1		possibly fragments (undiagnostic) of triangular *loomweight*?

Table 32: Catalogue of worked clay.

Recommendations for further work

Little or no further post-excavation work is required on this assemblage, other than illustrations of the three loomweights <415> and the two spindlewhorls <576a> and <587>. These objects may be worthy of drawing for any final publication.

Brick and Tile – *Simon Timberlake*

A total of 1.15 kg of tile and brick was recovered from the excavation (Table 33), of which 0.99 kg appears likely based on its form and fabric to be Roman, with the

remainder being Post-Medieval or modern. The presence of two pilae tiles, probably hypocaust bricks, is interesting given the lack of Roman occupation of this site, or nearby sites. The largest of these pila tiles <396> appears to have either a dog footprint, or otherwise three intentional human fingertip impressions close to one edge of the tile.

Recommendations for further work
No further work except for a photograph of the above tile <396>, its further analysis for verification of the print, and then possibly a drawing if this is required for publication.

Fabric type

Fabric 1	hard-fired brick pinkish-grey clay with lens-like light grey grog/ lithic inclusions (<10mm) internally and pinkish-red exterior
Fabric 2	well fired bright pink-red earthenware with thin reduced horizon in middle
Fabric 3	light yellow exterior, lenticular pinkish interior clay fabric

Cat. no.	Feature (context)/SF. No.	No. pieces	Wt (g)	Dimensions (mm)	Fabric type	Description	Tile type
118	F.104 (1057)	1	154	110 x 85	2	convex	possible modern pipe
269	F.229 (1290)	1	114	55 x 40 x 33	1	small rectangular broken fragment from edge of tile brick	Roman *pila*
387	F.402 SF 45	1	30	50x30x15	3	edge of flat tile	modern?
396*	F.422 (1453)	1	830	150 x 90 x 40	1	corner of large tile/ brick with dog footprint or three fingertip prints against edge	Roman *pila* (*c*.200 x 200 mm)
473	F.482 (1581)	1	18	36 x 36 x 12	2	edge of flat tile	modern?

Table 33: Catalogue of tile. * = illustration recommended.

Burnt Stone – *Simon Timberlake*

Burnt stone weighing 20.65 kg was recovered from 15 different features on site, most of this coming from features F.448 (4.4 kg [x12]), F.274 (3.67 kg [x8]), F.502 (3.2 kg [x1]) and F.113 (2.88 kg [x4]). Amongst all this was found 2.57 kg of worked stone fragments, most of which had been re-cycled for burning, or else intentionally broken-up by this means. A fragment of burnt and broken-up Iron Age saddle quern from F.104 is recorded in the worked stone report and not included here.

Only two of the 42 pieces of burnt stone were igneous rocks, the majority of them being sandstone cobbles, with a slightly higher than normal percentage of limestone, most likely due to the presence of hard septarian nodule fragments amongst the available glacial pebbles, their origin being the larger 'doggers' eroding out of the Kimmeridge Clay.

The overall size fraction of the calcined, cracked and broken-up burnt stone reveals how the material was likely used and its potential date. Typically the large burnt cobbles (>100mm-200mm) are fairly characteristic of Iron Age boiling pits, some of which are small and clay-lined, and commonly used with single large 'potboilers', as noted at the Broom settlement in Bedfordshire (Slater 2008). However, there is little evidence here of the smaller size stone pieces which are typical of a systematic re-use of burnt stone, a feature of some Middle – Late Bronze Age, and possibly even Early Iron Age sites.

At least some of the burnt or calcined (quenched) broken-up stone found within Romano-British or Saxon features seems likely to be re-deposited.

Recommendations for further work
No further post-excavation work is considered necessary on this material.

Cat. no.	Feature (context)	No. pieces	Size (mm)	Wt (kg) (largest stone wt.)	Geology	Notes
122	F.106 (380)	1	110	0.492	Quartzite sandstone	
130	F.111 (392)	2	30-42	0.04	Conglomeritic grit + burnt flint	
141	F.113 (1657)	4	35-170	2.884 (1.824)	Hard micaceous lithic sandstone + dolerite + fine quartz sandstone + white limestone (Jurassic)	Includes 1 large waterworn cobble.
201	F.196 (618)	1	200	2.122	Slightly calcareous quartzitic sandstone.	Large irregular cobble
214	F.204 (630)	1	75	0.084	Red quartzite	
302	F.274 (1146)	5	40-65	0.278	Limestone	
303	F.274 (1146)	3	110-170	3.39 (1.85)	Limstone Upper.Jurassic (Kimmeridge Clay?).	Waterworn cobbles of septarian nodule from Upper.Jurassic Kimmeridge Clay.
307	F.275 (1061)	1	150	1.348	Limestone	Slightly burnt
308	F.275 (1061)	1	105	0.556	Siltstone/ fine sandstone.	Reddened
376	F.379 (1256)	1	70	0.16	Dolerite	
435	F.448 (1848)	12	40-170	4.4 (1.232)	Metasandstone (Pal) + dolerite+ quartzitic sandstonen (3) + hard sandstone + fine micaceous sandstone + crystal volcanic tuff + sandstone + fine quartz sandstone + micaceous sandstone (2) + burnt flint.	
503	F.502 (1669)	1	260	3.206	Gneiss (Lewisian – Scottish?)	
527	F.516 (1708)	3	25-75	0.38	Dolerite	All from one piece – also same as dolerite in <141>
575	F.593 (1952)	2	30-55	0.2	Hard sandstone + soft sandstone (LGS)	
580	F.594 (1955)	2	20-60	0.09	Micaceous sandstone + soft green sandstone (LGS)	
658	F.631 (2227)	1	80	0.466	Quartz sandstone	Reddened
681	F.683 (2336)	1	105	0.276	Hard sandstone	

Table 34: Catalogue of burnt stone.

Worked Stone – *Simon Timberlake*

A total of 2.89 kg (*c*.35 pieces) of worked stone were recovered from this site, just one piece of which was identified as saddle quern (0.418 kg from F.104). The remainder were fragments of worn, weathered and burnt lava quern, most of which would have been derived from discarded Romano-British rotary hand mill quern stones.

Cat. No.	Feature [context]	Wt. (kg)	Dimensions (mm)	Est. outer diameter (mm)	Wear	Notes	Geology (Origin)
104	F.89 (476)	0.08	30x 45 (thick)			Burnt, broken undiagnostic piece (rotary quern)	basalt lava (Mayen, Germany)
116	F.104 (1057)	0.418	100 x 60 x 45	200	4	Burnt. Flat, unused underside (saddle quern)	dolerite
245	F.215 (1280)	0.18	15– 55x37	450?	3	unweathered piece of upper? stone rim (rotary quern)	basalt lava (Mayen, Germany)
299	F.274 SF.38	0.036	10-25		6	Burnt, broken-up small fragments – Roman (rotary quern)	basalt lava (Mayen, Germany)
306 *	F.275 (1061)	0.072	80x35x12-20 (2 pieces)	350	4 + 6	Rim, broken-up worn,thin lower stone, well-defined edge– wedge (rotary quern)	basalt lava (Mayen, Germany)
344	F.355 (1212)	0.072	60x40x20	200-300	6	Burnt, weathered, thin worn upper? stone –Roman (rotary quern)	basalt lava (Mayen, Germany)
346a	F.361 (1198)	0.216	20-40	300+	6	Burnt, broken-up with few small grind surfaces Roman (rotary quern)	basalt lava (Mayen, Germany)
421	F.441 (1634)	0.232	10-50	300+	6	Burnt,worn, few diagnostic surfaces on small frags. Small grind surfaces x27 – Roman (rotary quern)	basalt lava (Mayen, Germany)
414	F.441 (1474)	0.116	35-40	300+	6	-ditto- x5	basalt lava (Mayen, Germany)
448	F.464 (1529)	0.066	30-45		6	-ditto x4	basalt lava (Mayen, Germany)
518	F.509 (2188)	0.018	25		6	-ditto- x1	basalt lava (Mayen, Germany)
588	F.603 (1985)	0.004	15		6	-ditto- x1	basalt lava (Mayen, Germany)
593	F.613 (2009)	0.034	25		6	-ditto-	basalt lava (Mayen, Germany)
599	F.621 (2045)	0.234	10-50		6	very worn weathered pieces, No diagnostic surface- Roman (rotary quern)	basalt lava (Mayen, Germany)
684a	F.683 (2336)	0.414	140x140x4-30 (5 pieces):	300+	4 + 6	Burnt adjoining pieces ofbroken, worn down wedge shaped upper stone – Roman (rotary quern)	basalt lava (Mayen, Germany)
684b	F.683 (2336)	0.2	100x83x10-20 (2 pieces)	200+	4 + 6	Burnt, worn thin upper stone – Roman (rotary quern)	basalt lava (Mayen, Germany)
688	F.684 (2341)	0.502	80x45x 40-55 (7 pieces – 2 joining)	300	6	Burnt, broken-up undiagnostic pieces – Roman (rotary quern)	basalt lava (Mayen, Germany)

Table 35: Catalogue of worked stone.

Saddle quern

A single piece from the edge of a small flat slab saddle quern (probably originally sub-rectangular – oval in shape and a minimum of 200mm long and 60-100mm wide) was recovered from F.104. As is quite common with this type which is probably a small Iron Age domestic quern, the rock type chosen was dolerite (an igneous rock); this being a dense and crystalline rock, and one of the most commonly selected lithologies (apart from quartzitic sandstone) amongst the glacial erratics available.

The extreme rarity of fragmentary saddle quern from this site suggests that many of the features examined during this investigation were either earlier or later than this, therefore were not Iron Age in date. This is confirmed by the presence of highly fragmentary lava quern, which seems ubiquitous (albeit in small amounts) from across the site.

Lava quern
Lava quern (rotary quern stone) was collected as weathered fragments from 14 different features. In some cases these fragments were re-fitting (e.g. from F.275, F.683 and F.684), and also less weathered and dispersed, yet all appeared to have come from very worn and thin stones which had either broken in use, or else been broken-up by intentional burning for the purposes of discarding these as rubbish. In fact some pieces showed considerable signs of subsequent wear, weathering and abrasion, and it is believed that many of these may be derived from Romano-British querns re-deposited within Saxon occupation horizons/ features.

This certainly seems to have been the case with F.274, although some or all of the other nine features may also contain quern of similar origin. Indeed, the presence of fragments belonging to wedge-shaped (worn) upper and lower stones (i.e. within F.275 and F.683) seems reminiscent of the Roman flat-topped quern types (see Watts 2002, 35). These lava querns will originally have come from the quarries at Mayen in Germany, most likely as imports from the end of the 1st century/ early 2nd century AD onwards, coming through the ports of London and Colchester.

Recommendations for further work
No further work needs to be carried out on this assemblage prior to publication. There are no particular pieces worthy of illustration, apart perhaps from <306> as a very partial but diagnostic piece, which may be photographed or drawn.

Slag – *Simon Timberlake*

A total of 2.62 kg of iron smithing slag was recovered from this site, of which 1.66 kg consisted of broken-up smithing hearth base (SHB), and 0.58 kg of vitrified hearth lining and adhering glassy slag masses. The relatively low magnetism of the SHBs and smithing slag lumps (SSL) suggests a very low percentage of wustite and free iron within the slag, and instead dominant glassy phases, including fayalite (iron silicate) within the denser SHB material. Possibly this suggests a low loss of iron during the smithing process. The identification of a fused vitrified hearth lining (VHL) horizon within the glassy phases indicates the repeat addition of a clay lining to the forge hearth, as does the presence of a VHL fused onto the top of a SHB.

There is no evidence here of any copper-alloy metallurgy, all of the assemblage being associated with the standard forging and possibly welding of iron objects.

The spread of features containing iron smithing debris implies the presence of more than one smithing hearth, although there are no obvious indications of different

phases/periods of ironworking. Slag recovered from F.441 for instance would appear to indicate ironworking here during the middle Saxon period of occupation.

Recommendations for further work

No further work is required as regards post-excavation analysis, or for that matter the illustration of finds.

Cat. No.	Feature (context)	No. piece	Wt (g)	Magnetic (scale 0 >4)	Fe concretion	Notes
120	F.106 (380)	2	376	0	SM	SHB 95mm diameter + 50mm thick with hinge break for tuyere at front (360g)
134	F.113 (524)	1	216	0	SM	VHL + vertical ribs of bubbly glassy slag
146	F.114 (400)	4	38	0 + 4 (x1)	SM + F	VHL + glassy SSL + runnel (small pieces)
151	F.114 (1156)	1	8	0	SM	VHL/ glassy slag
172	F.168 (532)	1	44	0-2	F	VHL + glassy slag
178	F.172 (540)	2	250	0-1	SM	SSL + VHL with hole for tongs lifting
185	F.175 (551)	1	86	0-1	F	Smithing runnel + fuel ash/ charcoal concretion
188	F.176 (549)	1	82	3-4	SM	Very oxidised SSL
215	F.204 (630)	1	26	0	SM	VHL + glassy slag lump
219	F.207 (643)	1	398	1-3	SM + F	Uneven SHB + VHL (on top) + replaced charcoal/ wood
270	F.229 (1290)	7	398	0-1	SM + F (x1)	Fragments of very dense + non-porous SHB with some bubbly surface – lenticular shape 100mm + 40mm thick
306	F.275 (1061)	7	440	1-2	SM + F	SHB fragment (4 pieces) 35mm thick + estimate diameter 110mm
423	F.441 (1697)	1	40	0		VHL + slag - possibly associated with iron smithing?
452	F.468 (1543)	1	60	0-1	SM + F	VHL with small amount of iron slag
460	F.471 (1553)	2	44	0-2	SM	VHL + very oxidised slag
687	F.684 (2341)	1	58	2-4	SM + F	VHL + SSLglassy in places - weathered
732	SF 57	1	52	0-1	SM	Small fragment of broken SHB

Table 36: Catalogue of slag (N= natural; F= fuel ash; S= smelting; SM= smithing)

Metalwork – *Justin Wiles & Leanne Robinson Zeki*

A total of 60 (852g) metal items were recovered, of which four (10g) were copper alloy objects (Table 37) and the remaining 56 (842g) were iron items (Table 38). Metalwork items were found using two methods: hand-digging of archaeological features (23 and 38%) or via metal-detecting areas that were unexcavated (37 and 62%). The majority were found via metal detecting of the many linear features forming the Middle Saxon enclosures and the Medieval furrows.

Cat. No.	Feature (context) SF No.	Dimensions (mm)	Wt. (g)	Description	Date
756	F.566 (1904)	L=17 W=18	1	A copper alloy hooked tag, circular form with two perforations and incised line decoration. Hook is missing.	Saxon
758	F.441 (1474) SF48	Diam.=20, D=1	1	A complete simple hoop copper alloy finger ring.	12th-15th Century
759	F.468 (1865) SF53	L=24 W=14	4	Fragment of copper alloy sheet with pierced with central hole for attachment. Mount or fitting.	Saxon-Medieval
760	F.702 SF67	Diam.=15 (at base) H=19	4	A complete machine made copper alloy thimble	18th or 19th Century

Table 37: Copper objects. L = length, W = width, D = depth, H= height, Diam.= diameter

Items of note are the seven partial or complete knife blades (<747>.<748>.<750>.<753>.<770>.<779>.<781>) which are dated to the Saxon/Medieval period (see ref) but, due to the phasing of the contexts in which they are found, are likely to be Middle Saxon. Other Saxon/Medieval objects include a copper alloy hooked tag which is missing its hook and a copper alloy sheet which is likely to be a mount for a fitting or attachment and a copper alloy finger ring likely to date to between the 12th and 15th centuries.

The remainder of the assemblage largely consists of undated partial or complete iron nails, pins or rods and Post-Medieval objects which are unrelated to the archaeology of the site. The only object which requires more work to identify is a heavily-corroded cone-shaped iron object with a socket at the widest end. No parallel for this shape of object was identified at the assessment stage. It remains undated and assigned no particular function. It may be that it is part of a composite tool or a piece of some machinery.

Recommendations for further work
No further analysis work is required.

Cat. No.	Feature (context) SF No.	Dimensions (mm)	Wt. (g)	Description	Date
464	F.474 (1618)	L=28 W=25	12	Irregularly shaped, heavily corroded undiagnostic fragment.	Undated
743	F.71 (350)	L=33	6	Incomplete nail, square in section.	Undated
744	F.86 (330)	L=32 W=25	9	Rectangular fragment of iron sheet with hole for bolt or pin	Post-Medieval
745	F.101 (371)	L=22	3	Nail fragment, square in section with sub-square head	Undated
746	F.106 (380)	L=40	5	A small hook, full length is missing.	Undated
747	F.107 (382)	L=132	32	Knife blade, heavily corroded, wedge shaped section, the tang is centrally placed and square in section.	Saxon
748	F.168 (532)	L=126	33	Knife blade, incomplete and heavily corroded, the tang is set in line with the back of the wedge shaped blade	Saxon/Medieval
749	F.111 (392)	L=34 W=21	11	An incomplete U-eyed hinge strap, with one end bifurcated	Medieval
750	F.113 (1657)	L=59	11	Fragment of knife blade incomplete and heavily corroded, no tang present, wedge shaped blade.	Saxon/Medieval
751	F.105 (407)	L=124	135	Handle from window of car or tractor, heavily corroded.	Post-Medieval
752	F.128 (431)	L=54	8	Nail fragment	Undated
753	F.196 (632)	L=51	11	Fragment of knife, heavily corroded	Saxon/Medieval
754	F.201 (628)	L=41 W=28	10	Fragment of iron sheet. Curved along one edge	Undated
755	F.204 (630)	L=61	9	Fragment of nail.	Undated
757	F.250 (788)	L=22	2	Small fragment of probable nail.	Undated
760	F.474 (1563)	L=46	10	Nail, square in section.	Undated
761	F.477 SF51	L=49	5	Incomplete nail, circular in section.	Undated
762	F.478 (1571)	L=60	18	Rectangular strip, curves slightly along its narrow axis.	Undated
763	F.446 (1583)	L=43	7	Incomplete nail, circular in section.	Undated
764	F.484 (1874)	L=95	10	Nail	Undated
765	F.231 (712) SF1	L=104	7	Nail, square in section, head missing	Undated
767	F.176 SF3	L=238	83	Long hook or handle, possible latch lifter. Rectangular in section. Part of the hook is missing.	Undated
769	F.104 SF5	L=29	2	Fragment of nail.	Undated
770	F.104 SF6	L=143	34	Knifeblade bent towards end of blade, tang is centrally placed.	Saxon/Medieval
771a	F.104 SF7	L=28 W=23	2	Possible nail fragments	Undated
771b	F.104 SF7	L=28 W=23	2	Possible nail fragments	Undated
771c	F.104 SF7	L=24	1	A small curved ferrous strip	Undated
771d	F.104 SF7	L=45 W=27	10	An 'L' shaped fragment with a smaller spur projecting from one end. Possible fragment of fitting or band.	Undated
772	F.105 SF8	L=56	10	Hook, square in section.	Undated
773	F.362 (1201) SF9	L=68	18	An iron strip which tapers to a point at one end, knife shaped but no cutting edge is present, possible tool.	Undated
774	F.167 SF10	L=59	6	A fragment of hinge strap or fitting, with a bifurcated terminal.	Medieval
775	F.113 SF11	H=47	14	Nail, round head and in section.	Undated
776	F.412 SF12	L=36	2	Fragment of nail.	Undated
777	F.513 SF13	L=71	7	Nail, square in section.	Undated
778	F.224 SF14	L=21	1	Nail, round head and in section	Undated
779	F.113 SF15	L=94	23	Knife blade, incomplete tang centrally placed.	Saxon
780	F.502 SF16	L=48	3	Nail, circular in section.	Undated
781	F.474 SF17	L=81	18	Knife blade, incomplete, tang centrally placed.	Saxon
782	Furrow SF18	H=80	18	Fragment of iron candle sconce. Tapered base, rectangular in section. The two arms and central rod are incomplete.	Medieval
783	Furrow SF19	L=92	12	Small iron rod or nail. Circular in section.	Undated
784	Furrow SF20	L=48	3	Complete nail, bent 90°, circle head and section.	Undated
785	Furrow SF21	L=51	9	Nail, square head and in section	Undated
786	Furrow SF22	L=76	10	Nail, circular in section.	Undated
787	Furrow SF23	L=86	6	Nail circular in section	Undated
788	F.491 SF24	L=150 W=26	98	Cone shaped object with socket at widest end, heavily corroded possible tool.	Undated
789	F.422 SF26	L=104	16	Nail, circular in section and bent in two places.	Undated
790	F.422 SF27	L=38	2	Complete nail, circular head and square in section.	Undated
791	F.114 SF28	L=85	11	Iron rod, tapered at both ends. Unknown function.	Undated
792	F.210 SF29	L=38	9	Incomplete loop headed pin, square in section, the aperture has a diameter of 5mm.	Undated
793	F.207 SF30	L=51 W=28	21	Fragment of possible binding strip. Narrows at one end, partial rivet hole present and possible in situ rivet.	Undated
794	Furrow SF31	L=80	7	Nail fragments, circular in section.	Undated
795	F.190 SF32	L=131	20	Two finds refit to form a near complete door latch, at one end the remnants of the pin to attach to the door is still present.	Post-Medieval
797	F.468 SF53	L=20	1	Small fragment, possibly nail.	Undated
798	F.633 SF64	L=24	6	Fragment of nail, heavily corroded.	Undated
799	F.669 SF65	L=22	1	Fragment of nail.	Undated
805	F174 (546)	L=41	2	Nail fragment, rectangular in section.	Undated

Table 38: Iron objects. L = length, W = width, D = depth, H= height, Diam.= diameter

Faunal Remains – *Vida Rajkovača*

Fieldwork at Downham Road, Ely represents a continuation of archaeological work carried out in the area. Previous work revealed traces of Iron Age and Saxon occupation. The recent findings mirror this, with some Iron Age fauna present in the assemblage and the bulk of animal bone recovered from the Saxon contexts.

With a raw count of 3436 fragments and a total weight of 53110g, the assemblage represents a relatively substantial collection of bone. Some 1698 assessable specimens were recorded, 709 of which were identified to species level (*c.*42%). The assemblage was split into chronological sub-sets in order to study the site. The following offers a brief outline of the results, the quantification and the characterisation of the assemblage, a statement of potential and recommendations for further study.

Methodology: Identification, quantification and ageing
The zooarchaeological investigation followed the system implemented by Bournemouth University with all identifiable elements recorded (NISP: Number of Identifiable Specimens) and diagnostic zoning (amended from Dobney & Reilly 1988) used to calculate MNE (Minimum Number of Elements) from which MNI (Minimum Number of Individuals) was derived. Identification of the assemblage was undertaken with the aid of Schmid (1972), and reference material from the Cambridge Archaeological Unit. Most, but not all, caprine bones are difficult to identify to species however, it was possible to identify a selective set of elements as sheep or goat from the assemblage, using the criteria of Boessneck (1969), Halstead (Halstead et al. 2002) and Zeder and Pilaar (2010). Age at death was estimated for the main species using epiphyseal fusion (Silver 1969) and mandibular tooth wear (Grant 1982, Payne 1973). Where possible, the measurements have been taken (Von den Driesch 1976). Sexing was only undertaken for pig canines, based on the bases of their size, shape and root morphology (Schmid 1972: 80). Withers height calculations follow the conversion factors published by Von den Driesch and Boessneck 1974.

Taphonomic criteria including indications of butchery, pathology, gnawing activity and surface modifications as a result of weathering were also recorded when evident. Butchery marks were located by zone, position of the cut and direction of the mark, multiple occurrence, depth and the implement type, and the function of the mark was assessed. Undiagnostic fragments were assigned to a size category.

Methodology: Preservation, fragmentation and taphonomy
Bone preservation was overall quite good, with only 79 specimens (2.3%) recorded as having poor or quite poor preservation. There were no discernible differences in preservation between different phases of occupation. Some 47 specimens were recorded as complete. Although mostly phalanges and lower limb elements, four long bones were available for measurements. Canine gnawing was noted on 89 specimens or 2.6% of the assemblage, a low figure indicative of a quick deposition of the material. Looking at the butchery evidence for the assemblage as a whole, 141 specimens (*c.*4.1%) were affected by butchery. Less than 1% of the assemblage (33 specimens) was recorded as charred or calcined.

Iron Age
Fauna recovered from Iron Age contexts was recovered from several pits and ditches, and a few substantial bone deposits came from watering holes and wells (F.629 and F.655). The Iron Age sub-set amounted to 236 specimens (*c.*14%) with a weight of 4693g (*c.*9%) of the site assemblage. Though dominated by the domestic species, the only two cervid specimens came from the Iron Age sub-set (Table 39). Cattle and ovicapra were recorded in similar quantities, within the NISP and MNI counts. Pig, horse and cat were the other domestic species, with red deer antler and a roe deer mandible completing the range of identified species. Red deer antler was heavily eroded with longitudinal cracks and one tine appears to have been sawn off, though

this is impossible to confirm given the poor preservation. A pig mandible aged to 14-21 months was the only mandible available for assessment of tooth wear.

The skeletal element for the two main 'food species' showed a very slight under-representation of joints of high meat value compared to mandibles, skull elements, metapodials and phalanges. Butchery marks were recorded on ten specimens. Fine marks consistent with meat removal were observed on limb elements. Crude butchery was also noted: one sheep skull appeared to have been chopped in half and some limb bones were split axially for marrow removal.

The range of species, the character of butchery and the skeletal element count all point to a relatively typical domestic assemblage.

Early Romano-British
Early Roman planting beds contained a very small quantity of animal bone, with only ovicapra and horse positively identified (Table 39).

Taxon	Iron Age			Early Roman		
	NISP	%NISP	MNI	NISP	%NISP	MNI
Cow	40	*41.7*	3	.	.	.
Sheep/ goat	43	*44.8*	3	2	*66.7*	
Sheep	1	*1*	1	.	.	.
Pig	4	*4.2*	1	.	.	
Horse	5	*5.3*	1	1	*33.3*	
Cat	1	*1*	1	.	.	.
Red deer	1	*1*	1	.	.	.
Roe deer	1	*1*	1	.	.	.
Sub-total to species	**96**	*100*	**.**	**3**	*100*	**.**
Cattle-sized	50	.	.	2	.	.
Sheep-sized	73	.	.	8	.	.
Mammal n.f.i.	17	.	.	.	.	.
Bird n.f.i.	.	.	.	2	.	.
Total	**236**	.	**.**	**15**	.	**.**

Table 39: Number of Identified Specimens (NISP) and the Minimum Number of Individuals (MNI) for all species from Iron Age and Early Roman contexts. n.f.i.= specimen could not be further identified.

Saxon
Animal bone recovered from Saxon contexts amounted to 1371 specimens or *c.*80% of the site assemblage by count. Of this figure, 587 specimens (42.8%) were identified to species, order or family level (Table 40). Though the range of species appears broader, with the exception of avian fauna, the relative importance of the main domesticates is remarkably similar to that recorded from the Iron Age contexts. When we look at the NISP count, cattle and ovicapra were recorded in similar numbers, though the MNI count showed ovicapra were the dominant species.

Skeletal element count for the three main 'food species' showed that whole carcasses were represented in the assemblage. There is a slight under-representation of elements corresponding to joints of high meat value within the cattle cohort, though perhaps not

sufficient to suggest export of beef. The picture is opposite for ovicapra and pigs, with a considerable proportion of limb bones present in the assemblage.

Taxon	Saxon		
	NISP	%NISP	MNI
Cow	231	*39.3*	11
Sheep/ goat	213	*36.3*	21
Sheep	12	*2*	3
Goat	1	*0.2*	1
Pig	54	*9.2*	4
Horse	35	*6*	3
Dog	12	*2*	2
Cat	4	*0.7*	2
Chicken	6	*1*	2
Galliformes	7	*1.2*	1
Domestic goose	9	*1.5*	1
Anseriformes	1	*0.2*	1
Crane	1	*0.2*	1
Raptor	1	*0.2*	1
Sub-total to species	**587**	*100*	**.**
Cattle-sized	346	.	.
Sheep-sized	299	.	.
Rodent-sized	1	.	.
Mammal n.f.i.	100	.	.
Bird n.f.i.	29	.	.
Fish n.f.i.	9	.	.
Total	**1371**	.	**.**

Table 40: Number of Identified Specimens (NISP) and the Minimum Number of Individuals (MNI) for all species from Saxon contexts; n.f.i. = specimen could not be further identified.

Only three cattle mandibles were possible to age: one showed cattle were killed in their first year and two as young adults. Looking at the mandibular tooth wear for ovicapra, however, nine of 15 mandibles were of adult, mature and senile individuals. Only one animal was killed in their first, two in their second year and three individuals in their third year. This profile could suggest the focus on secondary products like milk and wool, which would fit well with the period.

Biometrical data for cattle gave the shoulder height range between 109cm and 118cm, while sheep withers were typically at 60cm.

Some 128 specimens were recorded with butchery marks. This corresponds to almost 10% of the sub-set, a relatively important percentage. Marks were encountered on large cattle elements, as well as on bird bone. In terms of the butchery actions, marks from all stages of carcass processing were identified. The majority of marks were consistent with gross disarticulation and skinning, with only a small proportion

associated with meat removal. Ribs were cut to pot sizes. Just under one third of chop marks indicated shafts were split for marrow removal.

Ditches were the main receptacle for the bone waste. Ditches F.113, F.196 and F.274 generated a raw count of 417 fragments with a combined weight of 9350g (12% of the assemblage by fragment count and 17% by weight).

Medieval/ Post-Medieval and undated material
The later material was very scarce, with three main food species being identified alongside a single goose element (Table 41). Animal bone from undated contexts was also rare, the range of species mirroring that of the site assemblage.

Taxon	**Medieval/ Post-Medieval**			**Undated**		
	NISP	%NISP	MNI	NISP	%NISP	MNI
Cow	3	*50*	1	4	*22.1*	1
Sheep/ goat	1	*16.7*	1	10	*55.5*	2
Pig	1	*16.7*	1	1	*5.6*	1
Horse	.	.	.	1	*5.6*	1
Domestic goose	1	*16.7*	1	.	.	.
Corvid	.	.	.	1	*5.6*	1
Frog/ toad	.	.	.	1	*5.6*	1
Sub-total to species	**6**	*100*	**.**	**18**	*100*	**.**
Cattle-sized	3	.	.	9	.	.
Sheep-sized	8	.	.	26	.	.
Rodent-sized	.	.	.	1	.	.
Mammal n.f.i.	.	.	.	6	.	.
Total	**17**	.	**.**	**60**	.	**.**

Table 41: Number of Identified Specimens (NISP) and the Minimum Number of Individuals (MNI) for all species from Medieval/ Post-Medieval and undated contexts; n.f.i. = specimen could not be further identified.

Summary of the results
The earliest material represents a fairly small component of the assemblage. Results from the Iron Age sub-set point to a typical domestic assemblage, albeit originating from what was evidently a short-lived occupation. Early Romano-British material was also remarkably sparse, making it impossible to make any conclusions about the animal use on site in the period. The smallest proportion of the material came from Medieval and Post-Medieval or undated contexts.

The most substantial component of the assemblage came from the Saxon features and this will be the focus of the following discussion. The volume of the material is even more considerable when we take into account the fairly small size of investigated

area. The faunal 'signature' was characteristic of a domestic assemblage. Though showing a slight prevalence over sheep within the NISP count, cattle were only represented with the MNI of eleven individuals. If we look at ovicapra, we have the remains of the minimum of 25 individuals. Pigs were typically in the third place, followed by horse, dog and cat. Poultry was occasionally used, as evidence by a small number of specimens. The crane and the raptor specimens complete the species range.

Though cattle must have been the main providers of meat, sheep were evidently husbanded in larger numbers. There were only three cattle mandibles available to age: one was a juvenile and two were adults. Ageing data was more abundant from the ovicaprid cohort. A brief look at the kill-off profile based on some 15 sheep/ goat mandibles shows that while some were slaughtered as young individuals, the majority were maintained into maturity. Albeit based on relatively small numbers, this is a clear indication the focus of sheep husbandry was on milk and wool. The complete absence of wild mammals is unusual, despite the general small numbers recorded across the region, indicating that hunting must have played a minor role in Saxon economy.

The rural Saxon sites from the area often have wild bird remains, especially water birds widely available in the Fens of East Anglia at the time. Crane is especially interesting, as this bird has appeared in substantial numbers at similarly dated sites across the region, suggesting they must have been widespread (Crabtree 1996). A single raptor element is also potentially interesting, as some historians argue that the history of hawking dates back to the 7th or 8th century. Given that birds of prey are rare from Saxon sites in the area, it would be important that this specimen is further identified to species level.

At first glance, the heavy reliance on domestic sources of food, the occasional use of poultry and wild avian fauna are in keeping with period patterns for East Anglia (Crabtree 2012). When plotted on triangular graph, the ratio of three main species is positioned amongst the majority of other Saxon sites excavated across East Anglia (*ibid*; Fig. 3.2). If we focus on the domestic aspect of the assemblage, the skeletal element count and the age profiles hint at typical mixed economy, practiced by a self-sufficient community. The complete absence of wild mammals, however, coupled with a heavy reliance on domestic sources of food may be taken to indicate the site was solely focused on rearing of livestock species, which may have been intended to supply other sites in the area. Other potential sign of specialisation may be hinted at by the prevalence of older individuals in the sheep cohort, indicative of the focus on secondary products. This move away from self-sufficiency toward the more specialised production must be related to the social, political and economic changes that were taking place at the time.

Recommendations for further work

Further work is required to complete an analysis of an assemblage that has the potential to point to specialisation in animal husbandry during the Saxon period. Comparison across the local area for this time period may illuminate further patterns of animal use and economy. Recommendations for areas of further work are detailed below.

1. Further specialist analyses: Faunal remains from heavy residues are to be fully analysed. Avian fauna should also be assigned to species where possible. The study of kill-off profiles should be complemented by analyses of butchery patterns with a view to understanding the chaîne opératoire of carcass processing in its entirety.
2. Spatial analyses and patterns of deposition: it is recommended to invest more analytical time in a detailed study of spatial distribution of species, skeletal elements by feature type. This should help us understand the level of on-site specialisation and whether the site supplied the nearby urban centres.
3. Reporting: It is necessary to produce a full archive report including measuring and ageing datasheets, as the foundation upon which to build a publication text.
4. Integration: Recovery of such a rich faunal record from a thoroughly investigated and a well-researched locale coupled with a good level of understanding of regional economy patterns provide an exclusive opportunity to make a meaningful contribution to our knowledge of Saxon animal use, economy and trade.

Worked Bone and Antler – ***Ian Riddler***

The six objects from the site include fragments of three combs (two of bone and one of antler), as well as two bone pin-beaters and a bone skate. All three combs are of Middle Saxon date, whilst the pin-beaters could be Middle or Late Saxon. The skate is of Late Saxon or Medieval date. All three object types have been found previously in excavations of this settlement beyond the bounds of the current site. This is the largest assemblage of handled combs from the settlement to date, and the pin-beaters can be added to previous examples to provide a good corpus for a Middle Saxon site, just slightly smaller than the assemblage from Flixborough. The bone skate is well worn and may have been adapted at one point for use by a child.

Combs

Three fragments of handled combs of two different types can be identified within the assemblage. They include part of a handle <456>, a section of a connecting plate <465> and a front end segment <180>. The handle has been cut from the proximal end of a caprine-sized tibia and the articulation has been removed, so that the object is hollow throughout. Saw marks from the cutting of a groove for the tooth and end segments are still visible and there is a faint trace of staining from an iron rivet, suggesting that the comb had been assembled and may well have been used. The handle is smoothed and slightly faceted, and is decorated with four lateral lines at its terminal. Handled combs produced from caprine bones, usually the tibia or the metatarsus, are known from Middle Saxon contexts, but they are not unduly common. Examples have been published from *Hamwic*, *Lundenwic* and North Elmham (Holdsworth 1976, fig 21.4; Cowie and Blackmore 2008, fig 102.S125; Wade-Martins 1980, fig 259.4-5). Caprine bones were being trimmed to produce handled combs in *Hamwic* from *c* 720 – 850 and waste from their manufacture has come from several areas in the northern part of the settlement. Worked caprine bones amount to *c* 1.7% of the worked bone from the settlement, a figure that accords well with the situation seen in *Lundenwic* as well (Riddler & Trzaska-Nartowski 2016, 276). It is reasonable to assume that they formed a minor part of comb assemblages within the emporia,

although that does not necessarily mean that they were utilised to the same minor extent in rural assemblages, as the presence of two examples amidst five handled combs from North Elmham indicates (Wade-Martins 1980, fig 259).

A second handle comb is represented by a fragment of cattle-sized bone, stemming from the distal end of a metatarsus and including a foramen <465>. It has been neatly trimmed and is decorated with bands of vertical incised lines, with knife-point dots applied to three of the blank areas between the vertical bands; one of the areas has not been decorated in this way. Tooth marks indicate that the comb was single-sided and originally included six teeth per centimetre. The extensive decoration of the connecting plate is indicative of a relatively late date during the Middle Saxon period. Sequences of handled combs from Brandon, *Hamwic* and Ipswich indicate that 8th-century examples are sparsely decorated, much in the manner of the other handled comb from this excavation <456>. Combs of the 9th- to 10th century, in contrast, are extensively decorated, as seen at Brandon, for example (Riddler 2014, 252 and figs 8.14.4194 and 8.15.4442). This decoration often takes the form of bands of vertical lines with narrow spaces between them, which can be left blank, as at Brandon (*ibid*, fig 8.15.4442) or filled with a variety of decorative patterns. The only handled comb to have been found previously within this area of Ely is a bone comb with an elaborately decorated handle from the Consortium site (Hylton 2011, 77 and fig 5.514). This includes bands of vertical lines and narrow zig-zag panels, which is the most common decoration to be seen on these later handled combs.

Knife-point dot decoration can be seen on an antler handled comb from Ipswich, as well as on bone and antler handled combs from London and a fragment of a bone handled comb found at Lagore, Co. Meath (Riddler 1990, fig 2b-c; Riddler *et al* forthcoming; Cowie *et al* 1988, fig 38.6; Hencken 1950, fig 99.608). If the specific decoration of handled combs was particular to individual sites, as appears to be the case for Middle Saxon single-sided composite combs, then this type of decoration, which is not precisely matched elsewhere, may be indicative of local, Ely-based manufacture. The caprine handled comb, in contrast, is sparsely decorated in a design common to Middle Saxon England as a whole.

The third fragment <180> consists of an antler front end segment from a handled comb. It has been neatly produced from a red deer antler beam, its lightly curved profile revealing its material origins. It includes a long, lightly curved graduation of comb teeth, set at four per centimetre. This indicates that it does not come from the cattle bone handled comb, which had six teeth per centimetre. It is unlikely to have come from the caprine bone handled comb and is almost certainly the vestige of a third handled comb. The teeth show evidence of some wear, indicating that the comb had been well used. Front end segments for handled combs either curve downwards towards the front of the comb or are near-rectangular in form, as here, with a lightly angled terminal edge. The curved form was popular in southern England and is the only form to be seen at Canterbury, whilst the rectangular form dominates the assemblage from Ipswich and occurs also at North Elmham and Riby Cross Roads in Lincolnshire; but the presence of curved examples from Wharram Percy and York suggests that this is not simply a question of a North-South divide in front end segment design (Wade-Martins 1980, fig 259.8; Steedman *et al*. 1994, fig 21.1; MacGregor 2000, fig 70.28; MacGregor *et al.* 1999, fig 895.7684).

<456> (1864) F.468 Handle from comb (fragment)

Fragment of the handle from a bone handled comb, made from a caprine tibia with the handle formed from the proximal end of the bone. Handle is decorated at the end with two pairs of vertical knife-incised lines and includes part of the slot for the tooth and end segments, cut with a saw blade 1mm in width. Highly polished on the outer surface.

<465> SF. 49 F.477 Connecting plate from comb (fragment)

Fragment of a connecting plate from a single-sided handled comb, fractured at both ends. Decorated with closely-spaced bands of vertical lines, with three intervening areas filled with dense knife-point dots. Two rivet holes remain, as well as a foramen, which suggests that the fragment comes from close to the front of the comb. Saw marks indicate that there were six teeth per centimetre.

<180> (546) F.174 Front end segment of comb (fragment)

Fragment of an antler front end segment from a handled comb, fractured at one end in front of a rivet hole. Rectangular in form with a long shallow graduation of the comb teeth, which show traces of some wear, in the form of lateral lines on their edges. Lightly curved in profile and polished on both sides. Four teeth per centimetre.

Pin-beaters

Two double pointed pin-beaters came from separate contexts. One of them <479> has a square section at the centre and tapers to a circular point at one end and a spatulate point at the other end. The second pin-beater <721> is more slender and slightly longer, and also tapers in the same way to two different terminal shapes. It includes linear grooves at its centre on each of its sides. The squared mid-sections of these objects are characteristic of some of the double pointed pin-beaters found previously in the settlement, including an incomplete example from West Fen Road (Riddler 2005a, fig 4.12.175). A total of eleven examples of double pointed pin-beaters are now known from the settlement. This is a decent figure, when compared against just two double pointed pin-beaters from Maxey, North Elmham, Wraysbury and Yarnton, five from *Sandtun*, seven from the Outer Court of Canterbury Christ Church and Trumpington, and eight from Maidenhead. Flixborough has slightly more, with a total of thirteen, a figure that actually reflects well on the Ely settlement (Walton Rogers 2009, 287-8). At least twenty are known from Brandon (and there may have been as many as twenty-nine), which emphasises the exceptional nature of that site, particularly when it exceeds the total from *Lundenwic* and comes close to the total from Ipswich. The largest collection, of almost fifty double pointed pin-beaters, comes from *Hamwic*.

Double pointed pin-beaters are essentially cylindrical implements of circular, oval or square section at the centre, which taper to points at either end. The points are sometimes the same shape but can also be of different forms, as is the case here. A small number of them are decorated at the centre and the linear grooves of one pin-beater <721> allow it to be added to that list, which includes pin-beaters from the emporia, as well as Beverley, Canterbury and Flixborough (Riddler *et al* forthcoming). Walton Rogers has suggested that this central decoration was actually intended to assist with gripping the implement (Walton Rogers 2009, 288).

Walton Rogers has separated double pointed pin-beaters into two groups on the basis of their maximum diameters (Walton Rogers 2009, 287-8; 2014, 290). The slender and more lightweight group consists of pin-beaters with diameters of 6-8mm, whilst the heavier, standard group includes diameters of 8-12mm. The slender pin-beaters tend to be a little longer than the standard group. Measurements are lacking for the double pointed pin-beaters from the Consortium site (Hylton 2011, 77) but most of the remaining examples from the settlement can be placed in the standard group. The

two exceptions lie with the pin-beater from this site with linear grooves at its centre <721>, which is just 7mm in diameter and with a fragmentary pin-beater from West Fen Road (Riddler 2005a, 79 n◦ 176). It is possible that these slender double pointed pin-beaters were associated with the production of linen, rather than wool (Walton Rogers 2009, 288). Early Anglo-Saxon double pointed pin-beaters also fall into two groups in terms of their overall lengths, and it is possible that they were retained and used in pairs (Riddler 1996, 136). For the Middle Saxon period the distinction between a short and a long group is much less obvious. The frequency distribution is closer to a normal one, albeit with a long tail formed by a small group of pin-beaters of 160mm or more in length. All of the Ely double pointed pin-beaters fall into the main group, which encompasses pin-beaters of 60 – 150mm in length.

Double pointed pin-beaters are regarded as textile manufacturing implements used on a warp-weighted loom, where their principal function was to separate warp threads, although they were, in effect, multi-purpose tools (Riddler 1996, 136; Walton Rogers 1997, 1755). They occur throughout the early and Middle Saxon periods but are scarce, particularly in urban deposits, from the tenth century onwards. In rural locations the warp-weighted loom with which they are associated may have continued for a longer period and it may well be significant that three of the eleven double pointed pin-beaters have come from Medieval contexts, mainly of 12th-century date. They provide the possibility, at least, that the warp-weighted loom continued in use in the settlement up to and beyond the Norman Conquest.

<479> (1874) F.484 **Pin-beater (partial)**
Near complete double pointed pin-beater, almost certainly made from bone and square in section across the middle part, tapering to a point of circular section at one end, and to a more spatulate point with a fractured tip at the other end. Highly polished, surface slightly degraded in some areas.

<721> SF. 25 **Pin-beater (complete)**
Complete double pointed pin-beater, probably made from bone, tapering on two faces to a spatulate point at one end, and tapering to a point of circular section at the opposite end. Mostly circular in section but square at the centre, where light grooves have been cut into three sides. Traces of wear in the form of undulating surfaces close to both pointed ends. Polished throughout.

Bone Skate

A fragmentary bone skate <807> has been cut from a horse radius, the surviving portion coming from the midshaft, just above the distal end. It has fractured at one end and has a highly polished, V-shaped terminal at the other end. The anterior face of the bone has been smoothed from use and includes longitudinal and diagonal scratches, which reflect the function of the object as a skate (Riddler 2005b, 86). The posterior face has not been trimmed but is polished from contact with the foot of the skater. At some point, the object has been trimmed and modified. Its location on the bone indicates that it comes from an area just beyond the distal end. It would be expected that the entire horse radius would be utilised for the skate but in this case the midshaft has been trimmed. It is upswept on the anterior face and angled downwards from the posterior face. What seems to have happened is that the skate fractured during use. Rather than being discarded, it was trimmed across the midshaft, enabling it to continue in use, albeit in a much shortened form, possibly with a stopper of wood or bone placed in the exposed bone channel. The original skate would have been suitable for an adult, horse radii being long, sturdy bones. In its revised form, it could only have been used by a child. Eventually it fractured again, and at that point it was discarded.

There are no bone skates from the early Anglo-Saxon period and they first occur in England within Middle Saxon contexts, although only a few examples, largely from the *wic* sites, can be ascribed to that period. They have been found at Bedford, *Hamwic*, *Lundenwic*, York and possibly at Shakenoak (MacGregor 1976, Appendix 1; 1985, 144; Keily and Blackmore 2012, 294; Rogers 1993, 1408; Brodribb, Hands and Walker 1972, fig 61.81). They remain conspicuously absent from Middle Saxon rural sites and skates made from horse bones have only been found, as yet, in Late Saxon and Medieval contexts. They include a skate produced from a horse radius found in earlier excavations within the settlement (Riddler 2005b, 86 n◦ 273).

<807> (1950) F.592 **Bone skate (fragment)**

Fragment of one end of a bone skate, cut from a horse radius with the anterior face smoothed and forming the layer in contact with the ice. Posterior face has not been trimmed but is polished. One end has been tapered diagonally and is lightly upswept. This may originally have been filled with a plug. The opposite end has fractured. The size of the object and its location on the bone suggest that this was a small skate, perhaps intended for a child.

Recommendations for further work

No further work is required on this assemblage.

Human bone – *Ben Neil*

The remains of a possible Saxon, truncated, adult probable female were found towards the south west of the site, south of and respecting the orientation of ditch F113.

Methodology

Sex estimation was accomplished by identifying the morphological structure of the os coxae, (Bruzek 2002) and the metric dimensions of the femur, (France 1998). Age at death estimation was based on methods and data outlined by Buckberry & Chamberlain (2002) and Scheuer & Black (2000). Stature was estimated using data compiled by Trotter (1970). Any taphonomic and post mortem alteration was noted. The overall completeness of a skeleton was calculated according to the percentage of elements present, using data outlined by Rowbotham et al. (2017).

Results

Feature	Context	Position	Condition	Age	Sex	Stature (cm)	Compl.	Pathology / Trauma	Taphonomy
174	**546**	• E-W aligned • Head towards west • Supine • Partial articulation	Moderate	Adult	Probable Female	147.71	19%	None observed	Fragmented post-mortem

Table 42: Characteristics of human remains.

Discussion

Inhumed within the subsoil, the individual comprised the fragmented remains of the os coxae and the lower appendicular skeleton (Figure 12). There was no indication of pathologic or traumatic change to these elements. The biological age of the individual possibly falls into the young middle adult category, (26-35 years old) based on the morphological changes of an auricular surface fragment.

Recommendations for further work
No further assessment work is required. Sampling for radiocarbon analysis is recommended to determine dating/phasing and provenance respectively for this individual.

Waterlogged Wood – *Iona Robinson Zeki*

Six items of waterlogged wood were recovered from Downham Road, Ely (DRE16) in August 2016. All six pieces were found in a large watering hole or well with several recuts, of which F.624 and F.668 contained waterlogged wood. One unworked item was recorded on site, with a subsample retained for dendrochronological assessment, while the remaining five worked items were recorded off-site in September 2016. Amongst the worked items, the presence of two log ladders, of differing forms, was of particular note.

Methodology
Each discrete piece of wood was recorded using the CAU wood-recording form, a development of the Fenland Archaeological Trust pro forma. Metric data were measured with callipers, tapes and rulers and toolmarks were recorded with a profile gauge. The angle and shape of cut roundwood was described following Coles & Orme's categorisation (Coles & Orme 1985, 25–29). Species identification was undertaken at the time of recording where possible, i.e. where the distinct morphological traits of oak (Quercus sp.) or ash (Fraxinus excelsior) were identified through visual inspection. When this was not the case, sub-samples of the wood were retained for microscopic identification, should this be required. The dendrochronological potential of wood was assessed following Historic England Guidelines (English Heritage 1998, 15). The condition of wood was assessed using the 0–5 scale developed by the Humber Wetlands Project (Van de Noort *et al*. 1995, table 15.1). This is based on assessing the clarity of the surface data on the material and its potential for use in various forms of analysis (Table 43). Where the condition score of an item varied, the nature of that variation was noted, but the highest score, i.e. the best persevered aspect, was applied to the wood record as a whole. This assessment has been prepared following Historic England Guidelines (Brunning & Watson 2010).

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 43: Waterlogged wood condition scale

Catalogue

WD 1 (2138) F.668 **Unworked roundwood**
Dimensions: Length 674+mm; diameter 69 x 42mm. Item was not fully excavated.
Condition: Score 2; bark, sapwood and heartwood present; heartwood very decayed
Species: Oak (*Quercus* sp.)
Wood type: Roundwood; c.20 growth rings, 1–3mm apart; uneven, twisted grain with large knots.

Woodworking: None.

WD 2 <4> (2138) F.668 Woodworking debris

Dimensions: Length 336+mm; max breadth 59mm; max thickness 16mm. Item is truncated at one end.
Condition: Score 4; bark, sapwood and heartwood present; radial cracking to heartwood and sapwood.
Species: Unknown, not ring porous
Wood type: Debris; off-roundwood; straight-grained.
Woodworking: Tangentially cleft woodworking debris, removed at a shallow angle, also displaying the partial remains of three shallow facets, struck at right-angles to the splitting-plane.
Toolmarks: One single axe/adze stopmark recorded.

WD 3 <2> (2071) F.624 Trimmed roundwood

Dimensions: Length 752mm; diameter 123 x 94mm (distorted by compression).
Condition: Score 3; sapwood and heartwood present; minor radial cracking; decayed at distal end.
Species: Oak (*Quercus* sp.)
Wood type: Roundwood; c.12 growth rings, moderately fast grown (2–4mm apart); thick sapwood (36mm); grain uneven; knots present; off-centre pith. Item is likely to be branch.
Woodworking: The proximal end has been cut from two directions to create a wedge-end. The distal end is decayed and shows no sign of woodworking.
Toolmarks: Two very incomplete stopmarks on the proximal end.

WD 4 <1><3><5> (2071) F.624 Post/pile

Dimensions: Length 1486+mm; diameter 139 x 118mm); 2 extant side-branches commencing 325mm from distal end, one 389mm long, diameter 53 x 40mm, and one 117mm long, diameter 45 x 38mm; tip of point (<5mm) lost in extraction.
Orientation: Diagonal in watering hole
Condition: Score 4; sapwood and heartwood present; radial cracking and decay to proximal end (top); side-branch ends decayed (Score 1); sawn in two places during extraction (modern damage).
Species: Oak (*Quercus* sp.)
Wood type: Roundwood; 19 growth rings, fast grown (3–5mm apart); thick sapwood (34mm); straight grained, except where knots/side-branches present; multiple side branch heels and knots.
Woodworking: The proximal end has been axe-hewn from multiple directions to a 120mm long point. No evidence of woodworking surviving on ends of side-branches.
Toolmarks: 4 partial axe stopmarks were observed on the point

WD 5 <6> (2071) F.624 Log ladder

Dimensions: Length 1678mm; diameter 144 x 141mm.
Condition: Overall condition score 4; bark, sapwood and heartwood present; distal end decayed, condition score 2; radial cracking at distal end; sawn into two pieces during extraction (modern damage).
Species: Oak (*Quercus* sp.)
Wood type: Roundwood; c.55 growth rings, slow grown (rings <1–2mm apart); sapwood 13mm thick; off-centre pith, item may be large bough; two large, trimmed, utilised side-branch heels; old knots along length.
Woodworking: Proximal end has been sawn at a right angle and an axe/adze and saw have been used to cut three flat-bottomed notches (footholds) into the log; two of these notches have been cut directly above the heel of trimmed side-branches, to create a deeper tread; steps are not vertically aligned with the lowest step at a 45° angle to the upper two steps.
Toolmarks: Kerf marks from the saw blade on the proximal end and on two of the step notches.

WD 6 <7> (2071) F.624 Log ladder

Dimensions: Length 1324mm; max diameter 162 x 161mm; distal end diameter 59 x 54mm.
Condition: Overall condition score 4; sapwood and heartwood present; distal end decayed; non-worked side of log has radial cracking and sapwood decay; one break to distal end during extraction (modern damage).
Species: Oak (*Quercus* sp.)

Wood type: Roundwood; c.35 growth rings, growth variable, initially slow and then faster grown (rings <1–5mm apart).

Woodworking: Proximal end has been axe-hewn from two directions to form a wedge-end and three, vertically aligned, flat-bottomed notches (footholds) have been cut into the log; faceting suggests an axe/adze was used for this work

Toolmarks: Seven stopmarks from an axe/adze were observed and recorded.

Results

The wood from watering hole/well F.624/F.668 can be divided into two groups: WD 1, WD 2 and WD 3 can be assumed to be incidental, i.e. debris which accumulated as a result of processes, natural and cultural, around the periphery of the well, while the presence of WD 4, WD 5 and WD 6, the two ladders and substantial post, are more likely to be the result of intentional action directly associated with use of the well. Log ladders have been found within waterlogged watering holes/wells across East Anglia and southern Britain, with dates from the Bronze Age onwards (Allen 2010; Evans & Patten 2011; Mepham 2015, 221). Across periods, they have been interpreted as a simple means of easing access to water and enabling maintenance of the watercourse to take place. The occurrence of a single large post (WD 4) in association with these ladders could be interpreted in a similar way, as a support for water access, especially since there is no evidence that it formed part of a more extensive revetment. The presence of short/partially trimmed side-branches at upper end of this post might also indicate that the natural forks between branch and trunk had an additional function as a pivot for the lowering and raising of buckets (*cf* Taylor 2011, 28), although without clear wear-marks or modification to support this suggestion, it remains speculative.

The ladders themselves are notable for their differing forms and the woodworking techniques employed in their production (see Figure 7). If WD 6 is a 'classic' log ladder, with three, vertically-aligned notched steps hewn in a substantial, straight log, then WD 5 is definitely a variant, with three miss-aligned steps, utilising adjacent side-branch heels to give a reasonable foothold, hewn and sawn into a much thinner and not entirely straight bough. WD 5 appears to be an expedient use of material not initially suitable for the task.

Recommendations for further work

This assemblage of waterlogged wood whilst small does contain certain items of note which require further work. The two log ladders (WD 5 and WD 6), whilst by no means surprising finds to encounter within a waterlogged watering hole/well context, preserve excellent evidence of woodworking technology which should be photographed and illustrated to accompany detailed recording of the techniques used and tool signatures observed. A literature search for comparably-dated log ladders is advisable, in order to place these objects in context. The simple woodworking evidence on the other three worked items (WD 2, WD 3 and WD 4) is well-understood and does not require further analysis.

In regards to woodland reconstruction and species identification, such a small assemblage of wood items would offer limited scope for analysis. Five of the six pieces of wood examined have been identified as oak (*Quercus* sp.) and therefore it is suggested that there is little analytical value in identifying WD 2 to species. An assessment of the growth rings present in the oak items shows that wood from relatively young trees was used in every case (Table 44), with only one item (WD 5)

exhibiting over 50 years growth, the usual minimum requirement for a dendrochronological sample. However, as a single sample from a site can only be recommended for tree-ring dating where over a hundred rings are present (English Heritage 1998, 15), none of the oak items from the assemblage are deemed suitable for submission for dendrochronological dating.

Wood no	Growth rings	Elements present			Dendrochronological potential
WD 1	c. 20	Bark	Sapwood	Heartwood	Not suitable
WD 3	c. 12	-	Sapwood	Heartwood	Not suitable
WD 4	19	-	Sapwood	Heartwood	Not suitable
WD 5	c. 55	Bark	Sapwood	Heartwood	Low potential
WD 6	c. 35	-	Sapwood	Heartwood	Not suitable

Table 44: Dendrochronological dating potential of oak (*Quercus* sp.) items

It is not suggested that any of the items should be retained for conservation after full recording (photography, illustration, tool-mark recording) has been completed.

Pollen Analysis – *Steve Boreham*

This report presents the results of assessment pollen analyses from two Iron Age well/watering holes found at East Cambs Leisure Village, Downham Road, Ely, Cambridgeshire (DRE16). Four sub-samples of sediment were taken from one of the earlier well feature in a well/watering hole complex, F.629 and five sub-samples of sediment were taken from the latest watering hole feature in the well/watering hole complex, F.624.

Methodology
Feature, F.629, was sampled using a 30cm monolith tin <375> and encompassed contexts [2441 – 2444]. The lithology of the monolith (described bottom-up) was as follows:

- 0 - 7.5 cm Light grey silty clay with occasional small pebbles and sandy inclusions with moderate preservation potential: sub-sampled for pollen at 5cm [2444].
- 7.5 - 17 cm Grey brown silt with abundant organic material. Note that this unit has inclined bedding and is less than 2 cm thick (9 cm) on one side of the monolith with moderate to good preservation potential: sub-sampled for pollen at 10cm [2444].
- 17 - 20.5 cm Grey to light grey silty clay with organic inclusions [2443] with moderate preservation potential: sub-sampled for pollen at 19cm. This unit was inclined and partly adjacent to the previous unit becoming much thicker on one side of the monolith.
- 20.5 - 30 cm Light grey silty clay with some sand inclusions [2441] with moderate preservation potential: sub-sampled for pollen at 25cm.

Feature, F.624, was sampled using a 50cm monolith tin <377> and encompassed contexts [2071], [2070] & [2069].The lithology of the monolith (described bottom-up) was as follows:

- 0 - 10 cm Dark grey organic silt with some wood fragments, shell, and occasional sand inclusions with moderate preservation potential: sub-sampled for pollen at 5cm [2071].
- 10 - 31 cm Light grey slightly mottled silty clay with some sand inclusions and occasional flecks of organic material with moderate preservation potential: sub-sampled for pollen at 15cm & 25cm [2070].
- 31 - 49 cm Dark grey organic silty clay with some mottling. Occasional sand inclusions, shell and organic fragments visible with moderate preservation potential: sub-sampled for pollen at 35cm & 45cm [2069]

The nine sub-samples of sediment from the monoliths were prepared using the standard hydrofluoric acid technique, and counted for pollen using a high-power stereo microscope. The percentage pollen data from these samples is presented in Tables 1 and 2.

Results

The pollen concentrations encountered ranged between 40,634 and 63,911 grains per ml. Preservation of the fossil pollen grains (palynomorphs) was variable, and finely divided organic material sometimes made counting difficult. Assessment pollen counts were made from a single slide. The pollen sums achieved (total land pollen and spores) ranged between 54 and 89. These counts do not exceed the statistically desirable total of 300 pollen grains main sum and as a consequence caution must be employed during the interpretation of these results.

<375> 5cm [2444] F.629

The basal sub-pollen sample (5cm) was dominated by grass (Poaceae) pollen (32.6%) with a range of herbs including sedges (Cyperaceae), members of the fat hen family (Chenopodiaceae), members of the cabbage family (Brassicaceae), dock (*Rumex*) and members of the cow parsley family (Apiaceae) (all 3.4%). Arboreal taxa were represented by hazel (*Corylus*) (15.7%), oak (*Quercus*) (5.6%), alder (*Alnus*) (4.5%), willow (*Salix*) and pine (*Pinus*) (both 3.4%). Fern spores together accounted for 8.9%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (9%) and reedmace (*Typha*) (1.1%).

<375> 10cm [2444] F.629

This sub-sample was dominated by grass (Poaceae) pollen (29.1%) with a variety of herbs including sedges (Cyperaceae), members of the fat hen family (Chenopodiaceae), and dock (*Rumex*) (all 4.7%). Arboreal taxa included hazel (*Corylus*) (11.6%), oak (*Quercus*) (5.8%), alder (*Alnus*) (5.8%), willow (*Salix*) (3.5%), pine (*Pinus*) (2.3%) and lime (*Tilia*) (1.2%). Fern spores together accounted for 9.3%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (10.5%) and reedmace (*Typha*) (2.3%).

<375> 19cm [2443] F.629

This sub-sample was dominated by grass (Poaceae) pollen (31.7%) with an assemblage of herbs including sedges (Cyperaceae) (4.9%), members of the fat hen family (Chenopodiaceae), members of the cabbage family (Brassicaceae) and dock (*Rumex*) (all 3.7%). Arboreal taxa comprised hazel (*Corylus*) (9.8%), alder (*Alnus*) (8.5%), oak (*Quercus*) (4.9%), willow (*Salix*) (4.9%) and pine (*Pinus*) (1.2%). Fern spores together accounted for 9.7%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (7.3%) and reedmace (*Typha*) (1.2%).

<375> 25cm [2441] F.629

The upper pollen sub-sample was dominated by grass (Poaceae) pollen (27.1%) with a selection of herbs including sedges (Cyperaceae) (5.9%), members of the cabbage family (Brassicaceae) (5.9%), and dock (*Rumex*) (3.5%). Cereal pollen was present in this sub-sample at 3.5%. Arboreal taxa were represented by hazel (*Corylus*) (12.9%), alder (*Alnus*) (5.9%), willow (*Salix*) (5.9%) juniper (*Juniperus*) and pine (*Pinus*) (both 1.2%). Fern spores together accounted for 8.9%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (12.9%) and reedmace (*Typha*) (2.4%).

<377> 5cm [2071] F.624

The basal pollen sub-sample was dominated by grass (Poaceae) pollen (37%) with a range of herbs including sedges (Cyperaceae) (7.4%) and meadowsweet (*Filipendula*) (3.7%). Cereal pollen was present in this sub-sample at 3.7%. Arboreal taxa were represented by alder (*Alnus*) (13%), oak (*Quercus*) (7.4%), hazel (*Corylus*) (5.6%) and pine (*Pinus*) (3.7%). Fern spores together accounted for 9.3%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (9.3%).

<377> 15cm [2070] F.624

This pollen sub-sample was dominated by grass (Poaceae) pollen (44.1%) with a range of herbs including sedges (Cyperaceae) (5.1%), members of the cabbage family (Brassicaceae) (3.4%) and buttercup (*Ranunculus*) (3.4%). Cereal pollen was present in this sub-sample at 3.4%. Arboreal taxa were represented by alder (*Alnus*), oak (*Quercus*) and hazel (*Corylus*) (all 5.1%), with pine (*Pinus*)

(3.4%) and willow (*Salix*) (1.7%). Fern spores together accounted for 11.9%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (8.5%).

<377> 25cm [2070] F.624
This pollen sub-sample was dominated by grass (Poaceae) pollen (41.7%) with a range of herbs including sedges (Cyperaceae) (6.7%), members of the lettuce family (Asteraceae (Lactuceae)) (3.3%) and buttercup (*Ranunculus*) (3.3%). Cereal pollen was present in this sub-sample at 3.3%. Arboreal taxa were represented by hazel (*Corylus*) (8.3%), alder (*Alnus*) (5%), oak (*Quercus*) (3.3%), pine (*Pinus*) (3.3%) and willow (Salix) (1.7%). Fern spores together accounted for 8.4%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (6.7%).

<377> 35cm [2069] F.624
This pollen sub-sample was dominated by grass (Poaceae) pollen (30.4%) with a range of herbs including sedges (Cyperaceae) (3.8%), meadowsweet (*Filipendula*) (3.8%) and members of the cabbage family (Brassicaceae) (2.5%). Cereal pollen was present in this sub-sample at 3.8%. Arboreal taxa were represented by hazel (*Corylus*) (10.1%), alder (*Alnus*) (7.6%), pine (*Pinus*) (5.1%), oak (*Quercus*) (2.5%), birch (*Betula*) (2.5%) and juniper (Juniperus) (1.3%). Spores of the polypody fern (*Polypodium*) were present at 1.3%. Undifferentiated fern spores together accounted for 14%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (8.9%).

<377> 45cm [2069] F.624
The upper pollen sub-sample was dominated by grass (Poaceae) pollen (40.4%) with a selection of herbs including sedges (Cyperaceae) (5.3%), members of the lettuce family (Asteraceae (Lactuceae)), meadowsweet (*Filipendula*), buttercup (*Ranunculus*) and dock (*Rumex*) (all 3.5%). Cereal pollen was present in this sub-sample at 1.8%. Arboreal taxa were represented by hazel (*Corylus*) (7%), pine (*Pinus*) (5.3%), alder (*Alnus*) (3.5%), oak (*Quercus*), birch (*Betula*) and juniper (*Juniperus*) (all 1.8%). Fern spores together accounted for 8.8%, and obligate aquatic plants were represented by bur-reed (*Sparganium*) (8.8%).

Discussion

The four sub-samples from the sequence of <375> are all rather alike in that they represent riparian (bank-side), meadow and grassland communities, with marginal emergent aquatic vegetation, hazel scrub/hedgerow, and willow/alder carr (wet woodland) nearby. Cereals were only detected in the upper-most sub-sample, and the absence of disturbed ground indicators suggests that arable activity, and indeed poaching by cattle, must have been happening at some considerable distance from the site.

There are minor changes worth noting through this sequence, although their significance is hard to judge. Oak is present in the bottom three samples, but not in the upper sample, which uniquely contains cereal and juniper pollen. Heather (Ericaceae – a lover of acid well-drained soils) pollen is present only in the basal sub-sample, whilst spores of the polypody fern (*Polypodium*), usually taken as indicator of mature trees on which it is an epiphyte, occurs only in the sub-sample from 19cm. Rock-rose (*Helianthemum* – a lover of chalk grassland) pollen occurs in the bottom two sub-samples, whilst meadowsweet (*Filipendula* – a riparian plant) occurs only in the upper two sub-samples).

Although the pollen concentrations were relatively low, there is little evidence for post-depositional modification of the pollen signal, usually indicated by elevated proportions of spores and Asteraceae pollen.

Taken as a whole, these pollen analyses show a post-clearance pollen signal, from a mosaic landscape of pastoral and probably arable agriculture, with hedgerows, spinneys and a few scattered trees. The curious absence of soil eutrophication and disturbance indicators hints that this well/watering hole feature was separate from intense human activity. The continuous presence of aquatics show that the site did not dry out over the time slice represented here.

It is hard to date these pollen assemblages, but they could easily be from anywhere within the Iron Age, or even the Roman, Saxon/Medieval period. Whilst there are subtle variations between the pollen samples analysed, as always it is important not to over-interpret these assessment pollen counts.

Similar to the sub-samples from F.629, the five sub-samples from the sequence of <377> are all rather alike in that they represent meadow and grassland communities, with riparian (bank-side) plants, marginal emergent aquatic vegetation, wet woodland (willow/alder carr), hazel/oak scrub/hedgerow, and some evidence of nearby arable activity.

There are minor changes worth noting through this sequence as well, although their significance is difficult to assess. Birch and juniper are present in the upper two samples, together with members of the pink family (Caryophyllaceae) and members of the cow parsley family (Apiaceae), perhaps suggesting an expansion of scrub and tall-herb meadow communities. The spores of the polypody fern (Polypodium), usually taken as indicator of mature trees on which it is an epiphyte, occurs only in the sub-sample from 35cm. The soil disturbance indicator ribwort plantain (Plantago lanceolata) occurs in all but the uppermost sub-sample. There is little evidence for post-depositional modification of the pollen signal in this pollen sequence too.

Taken as a whole, these pollen analyses show a post-clearance pollen signal, from a ‘patchwork’ landscape of arable and pastoral agriculture, with scattered trees, hedgerows and fragments of woodland. Soil eutrophication indicators appear to be absent, although the evidence suggests that this well/watering hole feature was surrounded by human activity. The continuous presence of emergent aquatics suggest that the site did not dry out over the time slice represented here, but that it was not necessarily a very deep or extensive pool.

As with the assemblage from <375>, it is difficult to date post-clearance pollen assemblages, but these could easily be from anywhere within the Iron Age, or even the Roman, Saxon/Medieval period. There are subtle differences between the two assemblages but both sequences indicate a post-clearance mosaic landscape of pastoral and arable agriculture. Whilst there are variations and similarities between the pollen samples analysed, as always it is important not to over-interpret these assessment pollen counts.

Context	2444	2444	2443	2441
Pollen sub-sample	**5cm**	**10cm**	**19cm**	**25cm**
Trees & Shrubs				
Pinus	3.4	2.3	1.2	1.2
Quercus	5.6	5.8	4.9	0.0
Tilia	0.0	1.2	0.0	0.0
Alnus	4.5	5.8	8.5	5.9
Corylus	15.7	11.6	9.8	12.9
Salix	3.4	3.5	4.9	5.9
Juniperus	0.0	0.0	0.0	1.2
Herbs				
Poaceae	32.6	29.1	31.7	27.1
Cereals	0.0	0.0	0.0	3.5
Cyperaceae	3.4	4.7	4.9	5.9
Ericaceae	1.1	0.0	0.0	0.0
Asteraceae (Asteroidea/Cardueae) undif.	2.2	1.2	1.2	0.0
Asteraceae (Lactuceae) undif.	0.0	2.3	1.2	1.2
Artemisia _type	0.0	1.2	1.2	1.2
Caryophyllaceae	1.1	1.2	0.0	0.0
Chenopodiaceae	3.4	4.7	3.7	2.4
Brassicaceae	3.4	3.5	3.7	5.9
Fabaceae	2.2	0.0	0.0	0.0
Filipendula	0.0	0.0	1.2	1.2
Helianthemum	1.1	1.2	0.0	0.0
Ranunculus _type	1.1	2.3	2.4	1.2
Rumex	3.4	4.7	3.7	3.5
Apiaceae	3.4	3.5	2.4	2.4
Liliaceae	0.0	1.2	2.4	4.7
Lower plants				
Polypodium	0.0	0.0	1.2	0.0
Pteropsida (monolete) undif.	6.7	8.1	8.5	9.4
Pteropsida (trilete) undif.	2.2	1.2	1.2	3.5
Aquatics				
Sparganium _type	9.0	10.5	7.3	5.9
Typha latifolia	1.1	2.3	1.2	2.4
Sum trees	13.5	15.1	14.6	7.1
Sum shrubs	19.1	15.1	14.6	20.0
Sum herbs	58.4	60.5	59.8	60.0
Sum spores	9.0	9.3	11.0	12.9
Main Sum	89	86	82	85
Concentration (grains per ml)	58501	41112	41066	40634

Table 45: Pollen percentages in <375> F.629

Context	2071	2070	2070	2069	2069
Pollen sub-sample	5cm	15cm	25cm	35cm	45cm
Trees & Shrubs					
Betula	0.0	0.0	0.0	2.5	1.8
Pinus	3.7	3.4	3.3	5.1	5.3
Quercus	7.4	5.1	3.3	2.5	1.8
Alnus	13.0	5.1	5.0	7.6	3.5
Corylus	5.6	5.1	8.3	10.1	7.0
Salix	0.0	1.7	1.7	0.0	0.0
Juniperus	0.0	0.0	0.0	1.3	1.8
Herbs					
Poaceae	37.0	44.1	41.7	30.4	40.4
Cereals	3.7	3.4	3.3	3.8	1.8
Cyperaceae	7.4	5.1	6.7	3.8	5.3
Asteraceae (Lactuceae) undif.	0.0	1.7	3.3	1.3	3.5
Artemisia _type	0.0	1.7	0.0	1.3	0.0
Cirsium _type	0.0	0.0	1.7	0.0	1.8
Centaurea nigra _type	1.9	0.0	1.7	0.0	0.0
Caryophyllaceae	0.0	0.0	0.0	1.3	1.8
Chenopodiaceae	0.0	1.7	0.0	0.0	0.0
Brassicaceae	1.9	3.4	1.7	2.5	1.8
Filipendula	3.7	0.0	1.7	3.8	3.5
Helianthemum	0.0	0.0	1.7	1.3	0.0
Lamiaceae	1.9	0.0	0.0	1.3	1.8
Plantago lanceolata	1.9	1.7	1.7	1.3	0.0
Ranunculus _type	0.0	3.4	3.3	1.3	3.5
Rumex	1.9	1.7	1.7	1.3	3.5
Apiaceae	0.0	0.0	0.0	1.3	1.8
Lower plants					
Polypodium	0.0	0.0	0.0	1.3	0.0
Pteropsida (monolete) undif.	7.4	8.5	6.7	8.9	7.0
Pteropsida (trilete) undif.	1.9	3.4	1.7	5.1	1.8
Aquatics					
Sparganium _type	9.3	8.5	6.7	8.9	8.8
Sum trees	24.1	13.6	11.7	17.7	12.3
Sum shrubs	5.6	6.8	10.0	11.4	8.8
Sum herbs	61.1	67.8	70.0	55.7	70.2
Sum spores	9.3	11.9	8.3	15.2	8.8
Main Sum	54	59	60	79	57
Concentration (grains per ml)	51629	51709	52585	63911	49956

Table 46: Pollen percentages in <377> F.624

Recommendations for further work

Continuing to full pollen counts of 300+ grains for these samples are likely to give approximately similar results. Investigating more samples is also likely to produce a similar result, since other tin samples taken are from similar contexts in the same well complex. The approach and execution of this pollen analysis was appropriate and dispassionate. The samples were anonymised and counted in a random order. The patterns in the data were only evident once the disparate data was brought together for the report. No further palynological work with these particular samples would produce archaeologically profitable results.

Environmental Bulk Samples – *Val Fryer*

Excavations at Downham Road, Ely, undertaken by the Cambridge Archaeology Unit (CAU), recorded multi-period activity including Early to Middle Iron Age pits and watering holes, Roman agricultural/planting beds and Middle Saxon enclosures with associated non-domestic structures. Samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated area, with a total of twenty four being submitted for assessment.

Methods

The samples were bulk floated by CAU with the flots being collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Tables 47 and 48. Nomenclature within the tables follows Stace (2010). Most plant remains were charred, but the assemblages from waterhole F.668 (sample <372>) and well F.624 (sample <367>) did include de-watered seeds and fruits. Modern roots, seeds and arthropod remains were also recorded.

Results

Cereal grains and/or seeds of common weeds and grassland herbs are present (mostly at a low to moderate density) within all but eleven of the assemblages studied. Preservation of the charred remains is generally poor, with most being fragmented and/or abraded. The de-watered remains are mostly well preserved, although some surface deterioration has occurred, probably as a result of the intermittent drying and re-wetting of the deposits.

Cereal grains are exceedingly scarce within the earlier Iron Age and Roman assemblages but they are present within all but seven of the Middle Saxon features. Barley (*Hordeum* sp.) and wheat (*Triticum* sp.) are both recorded, but most grains are too poorly preserved for close identification. Cereal chaff is all but absent. Two large, angular cotyledon fragments of probable field bean (*Vicia faba*) type are noted within the fill of post-hole F.478 (sample <354>).

Seeds of arable weeds and/or grassland herbs are noted (mostly as single specimens) within seven of the assemblages studied. The de-watered assemblage from Early Iron Age waterhole F668 is the most comprehensive, with taxa noted including agrimony (*Agrimonia eupatoria*), orache (*Atriplex* sp.), musk thistle (*Carduus* sp.), fat hen (*Chenopodium album*), thistle (*Cirsium* sp.), hawkbit (*Leontodon* sp.), knotgrass (*Polygonum aviculare*), buttercup (*Ranunculus acris/repens/bulbosus*), chickweed (*Stellaria media*) and nettles (*Urtica dioica* and *U. urens*). Charred seeds from the Middle Saxon features include specimens of stinking mayweed (*Anthemis cotula*), brome (*Bromus* sp.), small legumes (Fabaceae), medick/clover/trefoil (*Medicago*/ *Trifolium/Lotus* sp.), ribwort plantain (*Plantago lanceolata*), grasses (Poaceae) and dock (*Rumex* sp.). Seeds/fruits of wetland plants and tree/shrub macrofossils are present within five assemblages, with taxa noted including sedge (*Carex* sp.), spike-rush (*Eleocharis* sp.), marsh penny-wort (*Hydrocotyle vulgaris*), rush (*Juncus* sp.), duckweed (*Lemna* sp.), pond weed (*Potamogeton* sp.), water crowfoot (*Ranunculus* subg. *Batrachium*), birch (*Betula* sp.) and bramble (*Rubus* sect. *Glandulosus*). Comminuted charcoal/charred wood fragments are present throughout, although mostly at a low density). Other plant macrofossils, including indeterminate buds, culm nodes, leaf fragments and moss fronds, mostly occur within the de-watered assemblages.

Other remains occur very infrequently. Black porous and tarry residues are recorded, with most probably being derived from the high temperature combustion of organic remains. Small pieces of bone are also recorded along with fish bones, small mammal/amphibian bones and de-watered arthropod remains. Shells of terrestrial and marsh/freshwater slum molluscs are also noted, but as most are moderately well preserved, it is thought most likely that these remains may be post-depositional contaminants within the features.

Conclusions

In summary, the assemblages from East Cambs District Leisure Village are all very small (i.e. <0.1 litres in volume) and most are extremely limited in composition. Notwithstanding these issues, the assemblage from Early Iron Age water hole F.668 would appear to indicate that the surrounding habitat was one of damp, rough (possibly marginal), partially overgrown grassland, with the feature itself being at least semi-permanently water-filled. A few annual weeds are present, but these were possibly growing on soil disturbed by the excavation of the water hole. Similar material is also present within the fill of well F.624, possibly suggesting that these conditions were prevalent throughout much of the Iron Age period. Plant macrofossil evidence for the Roman use of the area is severely limited, and it is suggested that the planting beds (F.235, F.352 and F.397) were entirely peripheral to any focus of habitation.

In contrast, the composition of the Middle Saxon assemblages would appear to indicate that limited range of activities were occurring within the near vicinity, although it is suggested that much of the recorded material is derived from scattered midden waste, much of which was probably accidentally incorporated within the feature fills. The assemblages from ditches F.114 and F.477and pit F.386 may include both hearth waste and burnt flooring/bedding materials (i.e. slightly higher densities of charcoal and charred seeds of grassland herbs), but as the remains are so scarce, it is impossible to state with any degree of certainty whether the material is domestic in origin or whether it is largely derived from pastoral detritus. Either way, it would appear most likely that the enclosures were primarily being used for stock, with some cereals and dried herbage being imported to the site from elsewhere for use as fodder.

Recommendations for further work

As none of the current assemblages contain sufficient material for quantification (i.e. 100+ specimens), no further analysis is recommended. However, a summary of this assessment should be included within any publication of data from the site.

Feature No.	F668	F331	F624	F235	F352	F397
Context No.	**2138**	**932**	**2068**	**1114**	**467**	**1336**
Feature type	**WH**	**Pit**	**Well**	**PB**	**PB**	**PB**
Sample No.	**372**	**113**	**367**	**206**	**219**	**230**
Date	**EIA**	**MIA**	**IA**	**Rom**	**Rom**	**Rom**
Cereals						
Hordeum sp. (grain)	x					
Triticum sp. (grains)					x	
Cereal indet. (grains)					x	
Herbs						
Agriomonia eupatoria L.	xw					
Atriplex sp.	xw					
Carduus sp.	xw					
Chenopodium album L.	xw					
Chenopodiaceae indet.	xxw					
Cirsium ap.	xw					
Leontodon sp.	xw					
Lepidium sp.	xcfw					
Polygonum aviculare L.	xw					
Ranunculus sp.			xw			
R.acris/repens/bulbosus	xxw					
Stellaria media (L.)Vill	xw					
Urtica dioica L.	xw		xw			
U. urens L.	xw					
Viola sp.	xcffgw					
Wetland/aquatic plants						
Carex sp.			xw			
Hydrocotyle vulgaris L.	xw					
Juncus sp.	xw					
Lemna sp.	xw		xw			
Potamogeton sp.	xw					
Ranunculus subg. *Batrachium* (DC)A.Gray			xw			
Tree/shrub macrofossils						
Betula sp. (fruits)	xw		xw			
Rubus sect. *Glandulosus* Wimmer & Grab	xw		xw			
Other plant macrofossils						
Charcoal <2mm	x	xx	x	x	x	x
Charcoal >2mm		x	x		x	
Charcoal >5mm		x				
Charred root/stem			x			
De-watered root/stem	xxxx		xx			
Indet. buds	xw					
Indet. leaf frags.	xw		xw			
Indet. moss fronds			xw			
Indet. thorn (*Prunus* sp. type)	xw					
Wood frags. >10mm	xw					
Wood frags. >50mm	xw					
Other remains						
Black porous/ tarry material		x		x	x	
Bone					x	
Cladoceran ephippia	xw					
Eggshell					x	
Fish bone					x	
Small coal frags.				x	x	
Small mammal/amphibian bone	x					
Waterlogged arthropod remains	xx		x			

Table 47: Environmental remains in Iron Age and Roman features - Continued below

Feature No.	F668	F331	F624	F235	F352	F397
Context No.	**2138**	**932**	**2068**	**1114**	**467**	**1336**
Feature type	**WH**	**Pit**	**Well**	**PB**	**PB**	**PB**
Sample No.	**372**	**113**	**367**	**206**	**219**	**230**
Date	**EIA**	**MIA**	**IA**	**Rom**	**Rom**	**Rom**
Mollusc shells						
Woodland/shade loving species						
Discus rotundatus		x				
Zonitidae indet.			x			
Open country species						
Vallonia sp.		x		x	x	
Vertigo pygmaea				x	x	
Marsh/freshwater slum species						
Anisus leucostoma		x				
Lymnaea sp.		x				
Sample volume (litres)	**15**	**8**	**20**	**15**	**15**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 47: Environmental remains in Iron Age and Roman features. x = 1 – 10 specimens, xx = 11 – 50 specimens, xxx = 51 – 100 specimens, xxxx = 100+ specimens, cf = compare, fg = fragment, w = dewatered

Feature No.	F206	F521	F220	F114	F443	F477	F180	F250	F386	F542	F582	F478	F288	F676	F460	F270	F256	F40
Context No.	**534**	**594**	**680**	**1105**	**1482**	**1730**	**576**	**782**	**1292**	**1795**	**1928**	**1571**	**1377**	**F218**	**1579**	**1043**	**1007**	**832**
Feature type	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Gully**	**Gully/**	**Pit**	**ph**	**ph**	**ph**	**Ditch**	**Ditch**	**Ditch**	**ph**	**ph**	**Ditch**
Sample No.	**50**	**56**	**74**	**205**	**256**	**290**	**58**	**204**	**238**	**294**	**318**	**354**	**252**	**71**	**274**	**97**	**88**	**100**
Date	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**
Cereals and potential crop																		
Hordeum sp.(grains)				xcf	xcf	x				x			xfg					
(rachis node)																xcf		
Triticum sp. (grains)				x		x						x	x			x		
Cereal indet. (grains)				x	x	x	xfg	x	x	x		x	x			x		
(rachis node frag.)																x		
Vicia faba L.												xcf						
Herbs																		
Anthemis cotula L.						x												
Bromus sp.				x								x						
Chenopodium album L.						x												
Small Fabaceae indet.				xcf		x												
Medicago/Trifolium/Lotus sp.				x		x												
Plantago lanceolata L.				x		x												
Small Poaceae indet.													x					
Ranunculus acris/repens/bulbosus									xcf									
Rumex sp.						x						x						
Wetland plants																		
Carex sp.						x												
Eleocharis sp.				x								x						
Other plant macrofossils																		
Charcoal <2mm	X	x	x	x	x	xx	x	x	xxxx	x	x	xx	xx	x	x	xx	x	x
Charcoal >2mm		x		x		x			xxx	x		x				x		
Charcoal >5mm						x			xx									
Charcoal >10mm				x		x			x									
Indet. culm node						x												
Indet. Seeds			x			x												

Table 48: Environmental remains in samples from Saxon features – Continued below.

Feature No.	F206	F521	F220	F114	F443	F477	F180	F250	F386	F542	F582	F478	F288	F676	F460	F270	F256	F40
Context No.	**534**	**594**	**680**	**1105**	**1482**	**1730**	**576**	**782**	**1292**	**1795**	**1928**	**1571**	**1377**	**F218**	**1579**	**1043**	**1007**	**832**
Feature type	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Gully**	**Gully/**	**Pit**	**ph**	**ph**	**ph**	**Ditch**	**Ditch**	**Ditch**	**ph**	**ph**	**Ditch**
Sample No.	**50**	**56**	**74**	**205**	**256**	**290**	**58**	**204**	**238**	**294**	**318**	**354**	**252**	**71**	**274**	**97**	**88**	**100**
Date	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**	**M.Sax**
Other remains																		
Black porous/tarry material	X	x		x		x			x	x		x	xx					
Bone												x	x			x		
Fish bone				x		x							x			x		
Small coal frags.					x	x	x		x				x		x	x		
Small mammal/amphibian bone				x									x			x		
Vitreous material												x						
Mollusc shells																		
Woodland/shade loving species																		
Aegopinella sp.										x								
Oxychilus sp.				x														
Zonitidae indet.										x								
Open country species																		
Helicella itala				x														
Vallonia sp.		x	x		x	x	x		x			x			x			
V. costata													x					
Vertigo pygmaea		x		x		x	x						x					
Catholic species																		
Cochlicopa sp.				x		x												
Trichia hispida group		x		x		x						x						
Sample volume (litres)	**15**	**8**	**10**	**20**	**10**	**10**	**20**	**20**	**80**	**15**	**2**	**15**	**10**	**10**	**20**	**10**	**5**	**10**
Volume of flot (litres)	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**	**<0.1**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Table 48: Environmental remains in samples from Saxon features. x = 1 – 10 specimens, xx = 11 – 50 specimens, xxx = 51 – 100 specimens, xxxx = 100+ specimens, cf = compare, fg = fragment

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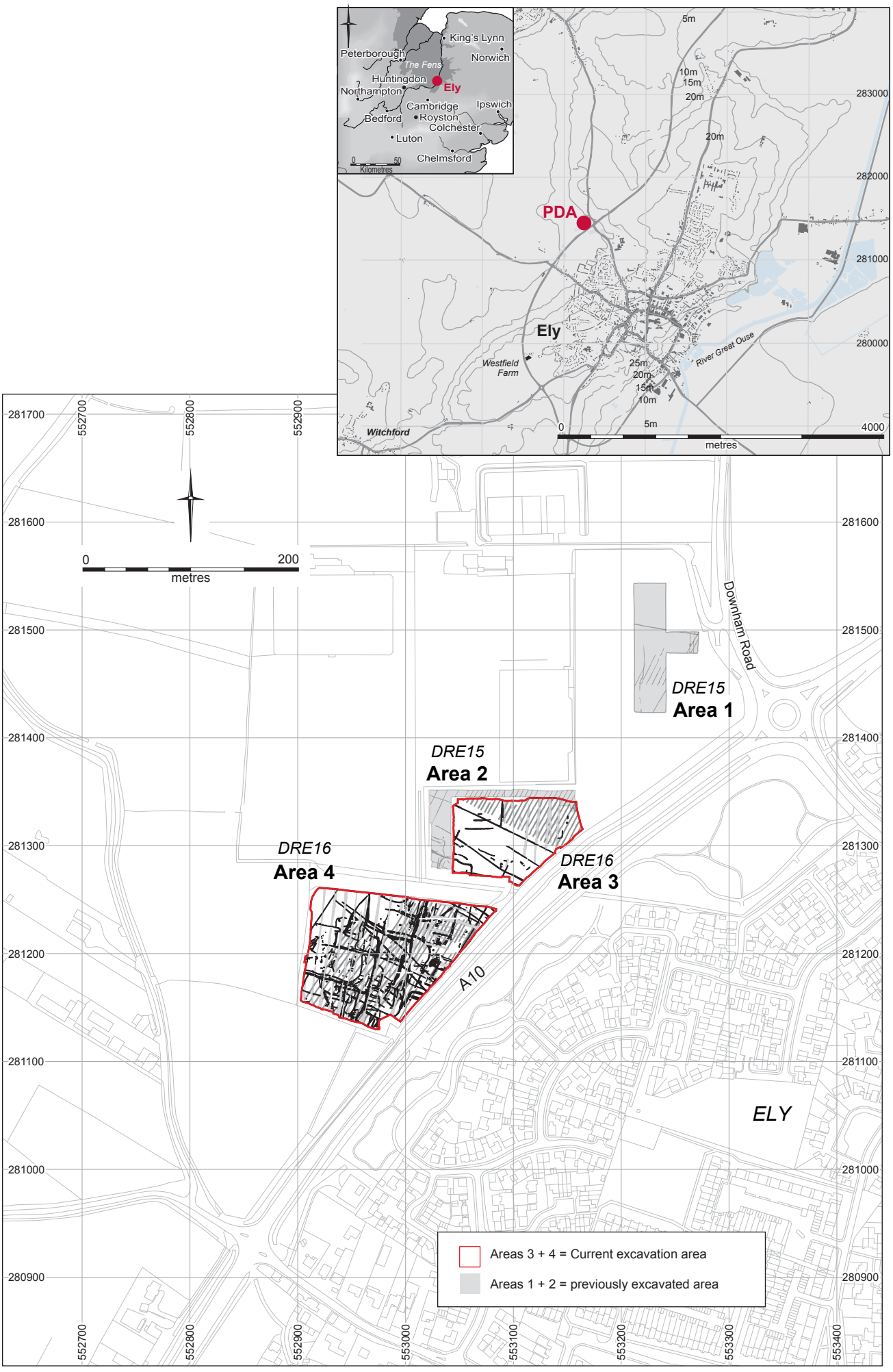


Figure 1. Location plan

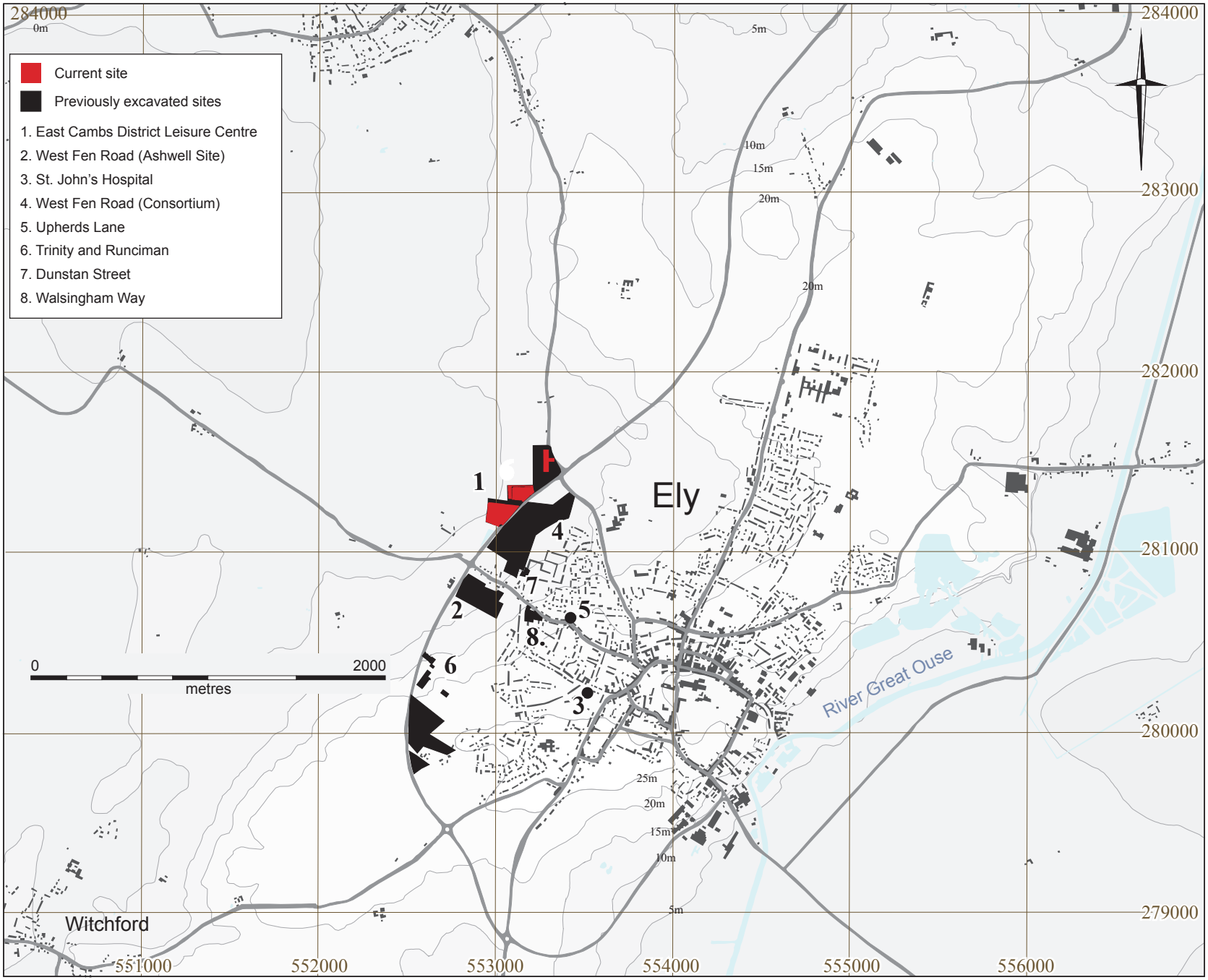


Figure 2. Wider site plan showing previous sites

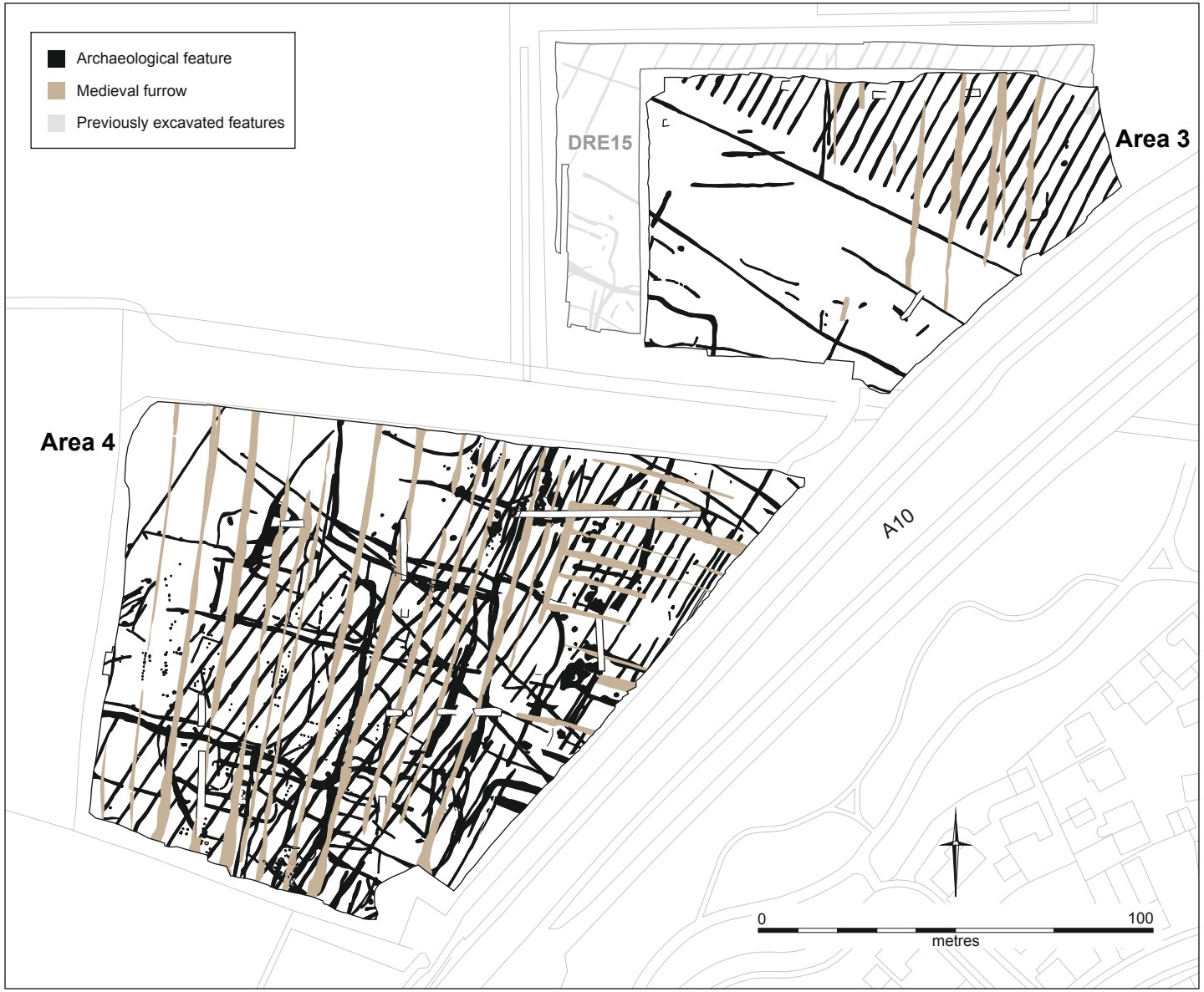


Figure 3. Site plan

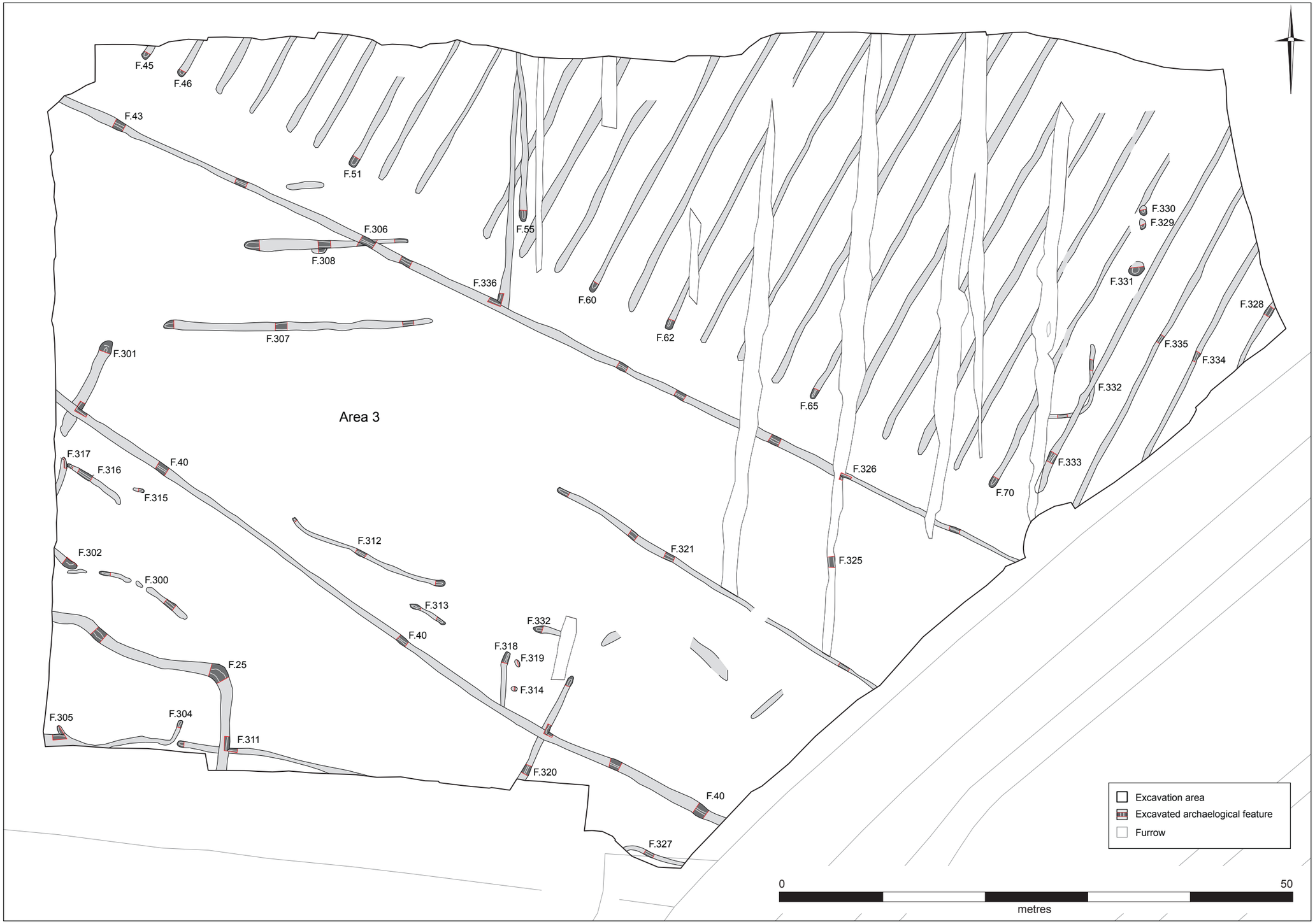
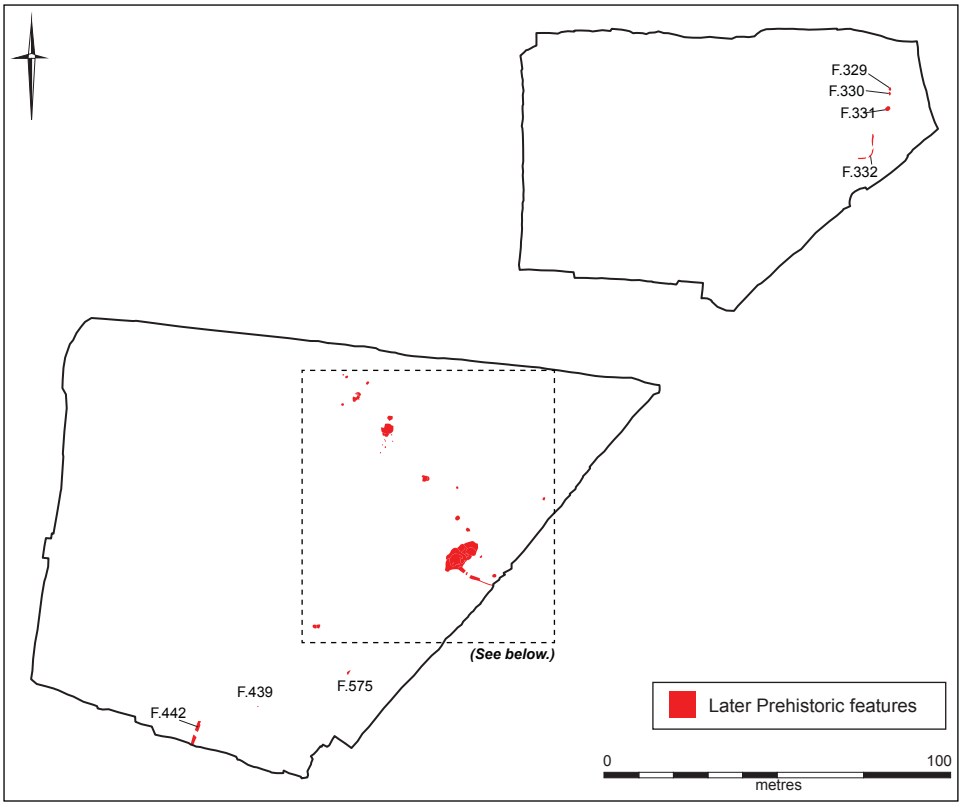


Figure 4. Site plan, Area 3

Figure 5. Site plan



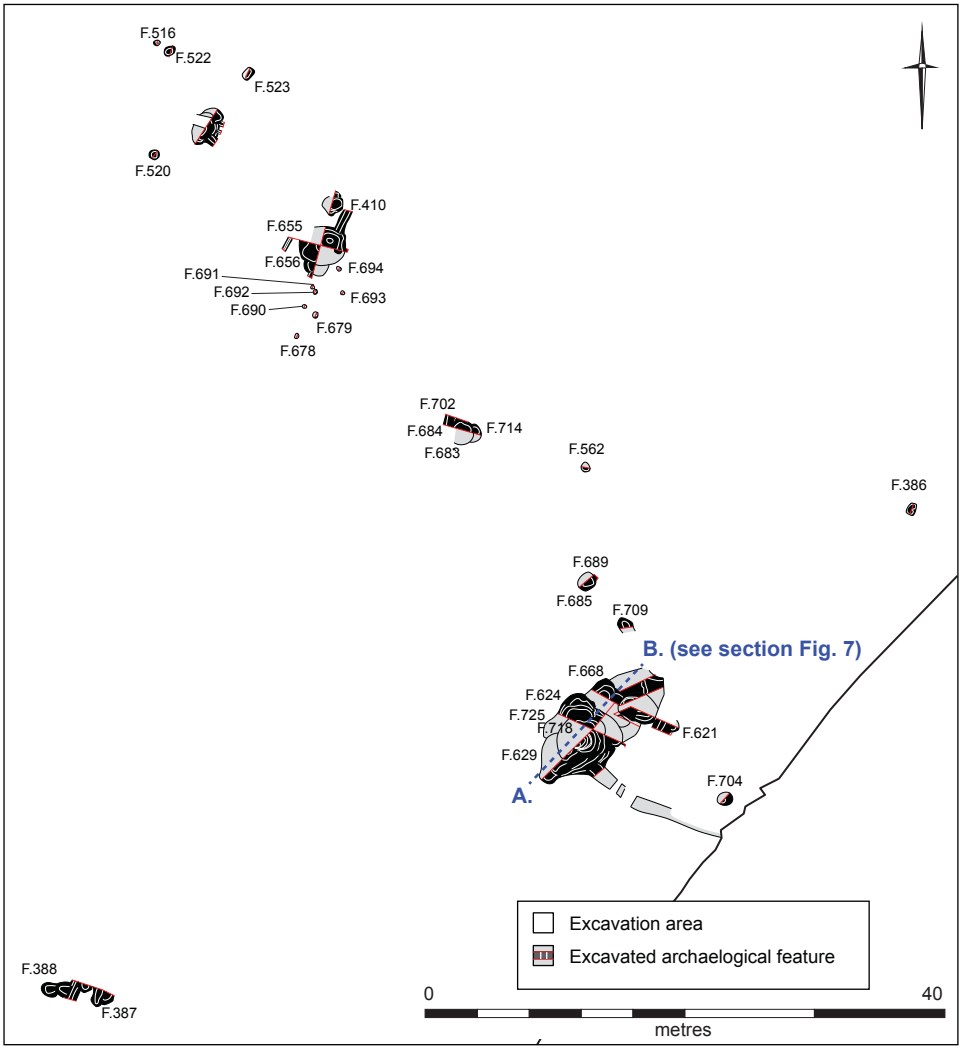


Figure 6. Later Prehistoric archaeology

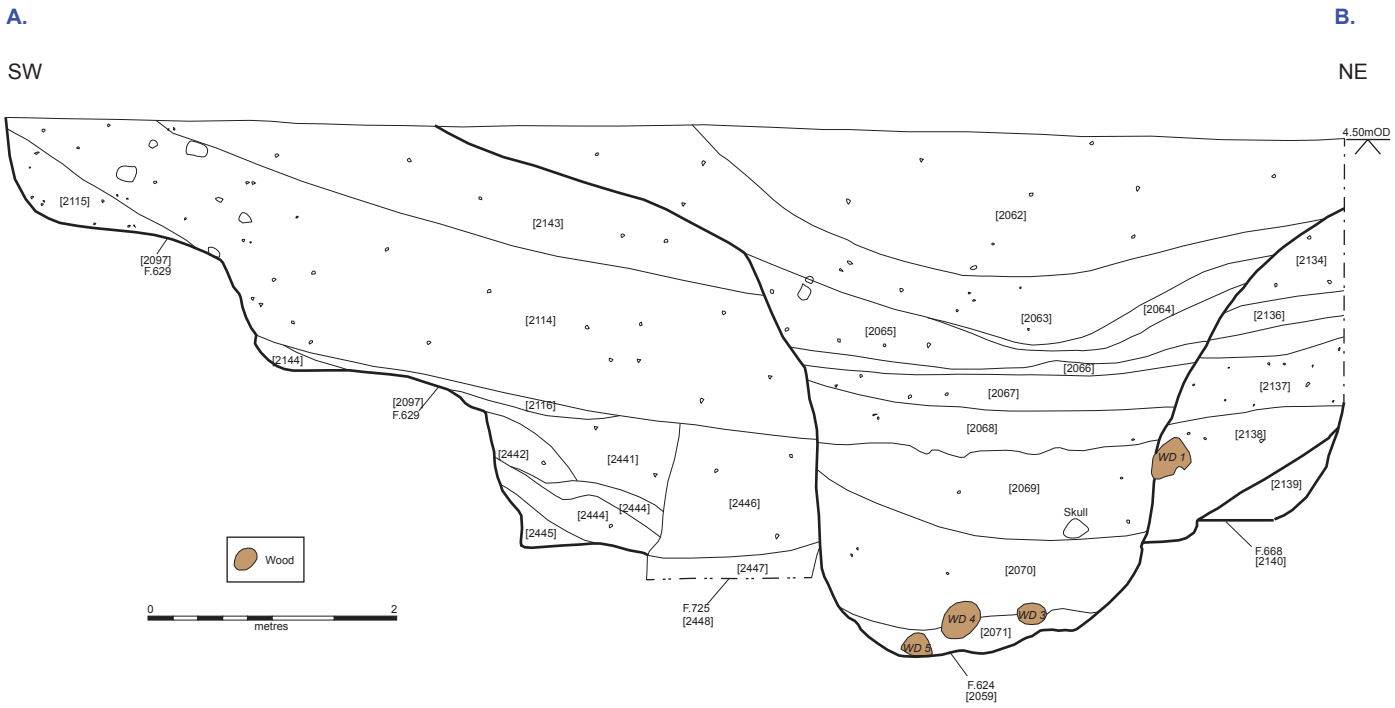


Figure 7a. WD 6 Log ladder

Figure 7b. WD 5 Log ladder with kerf marks

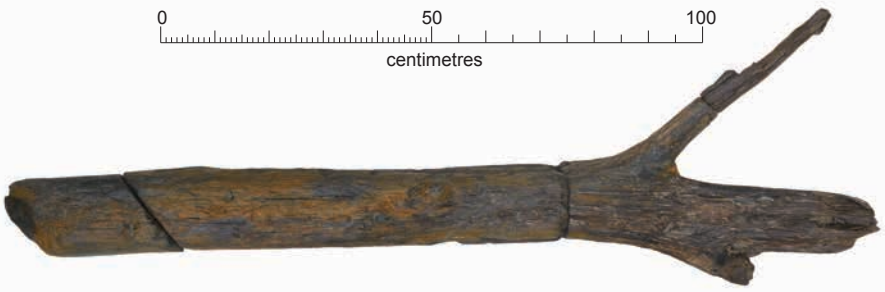
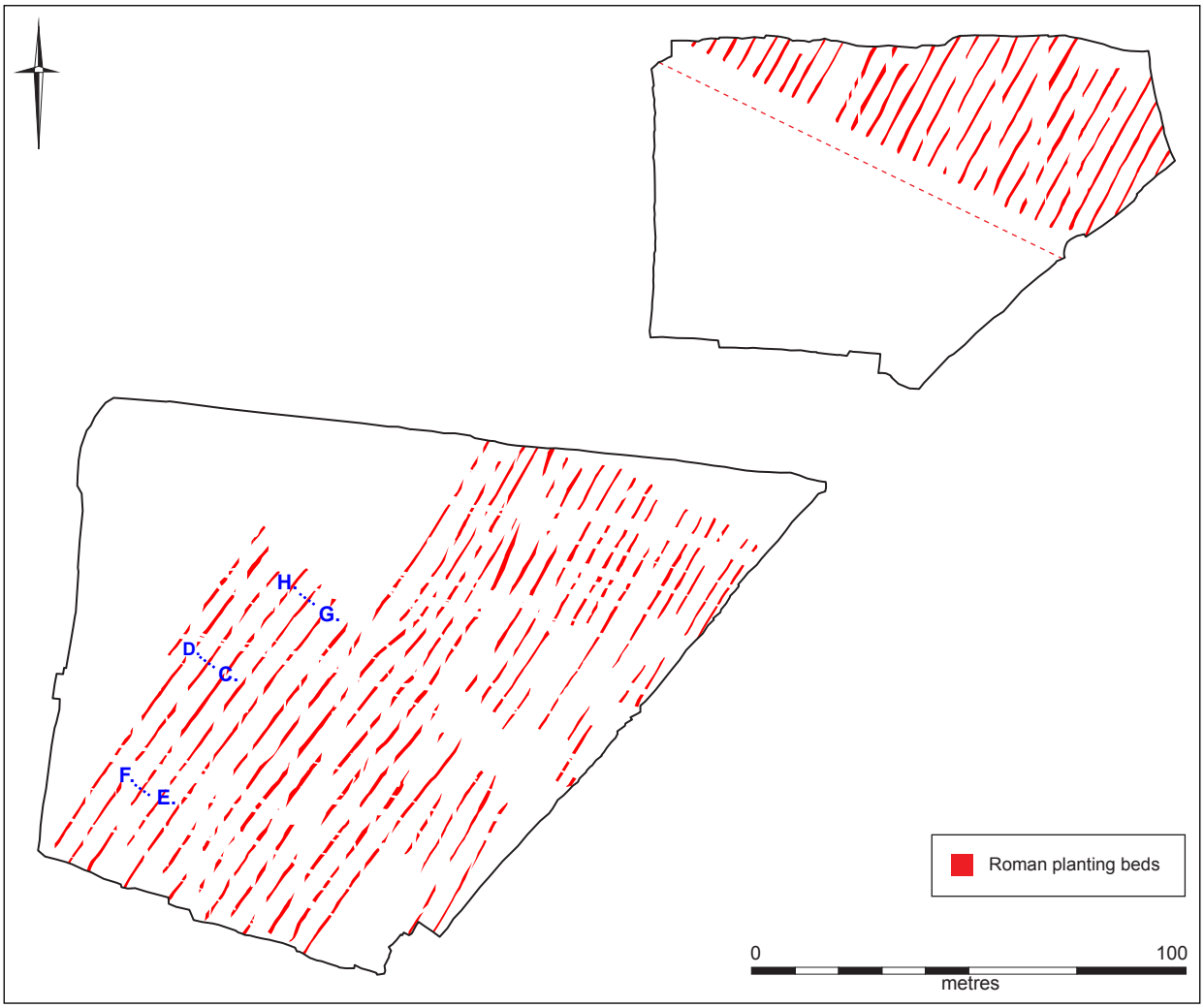


Figure 7c. WD 4 Post / pile

Figure 7. Section of Late Prehistoric watering holes / wells and log ladders



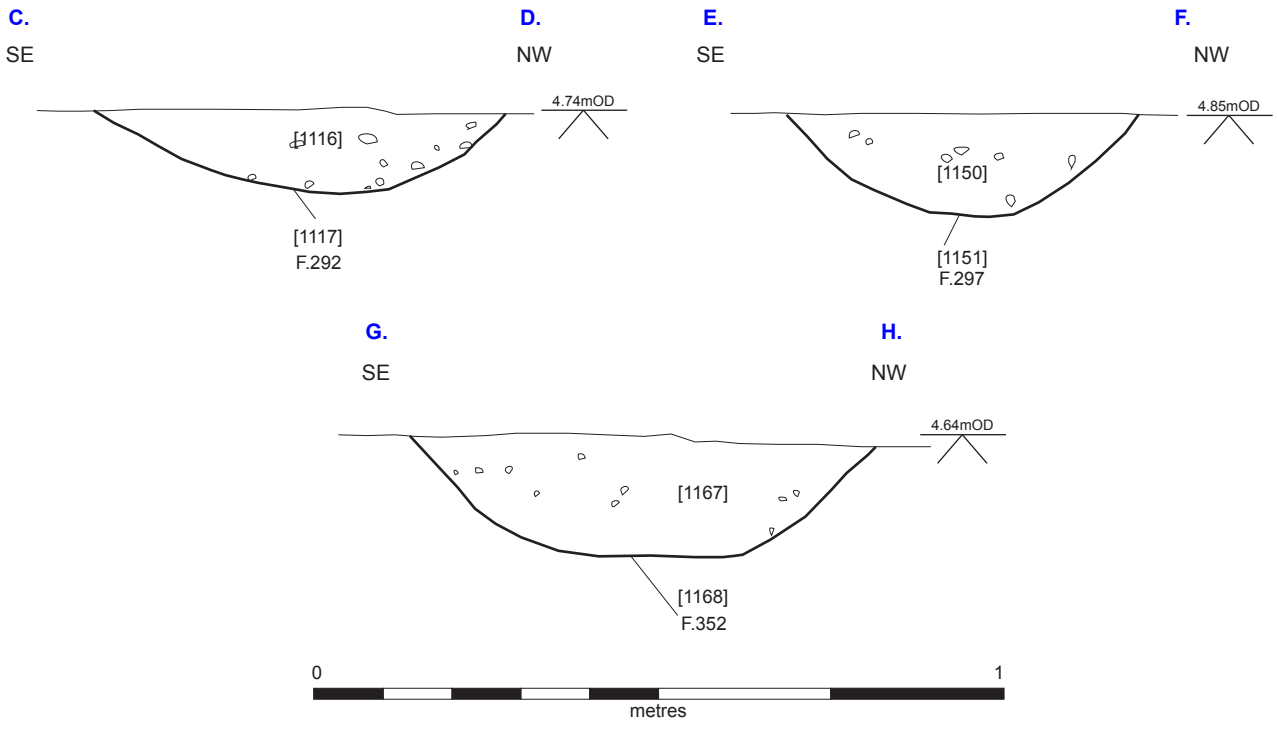
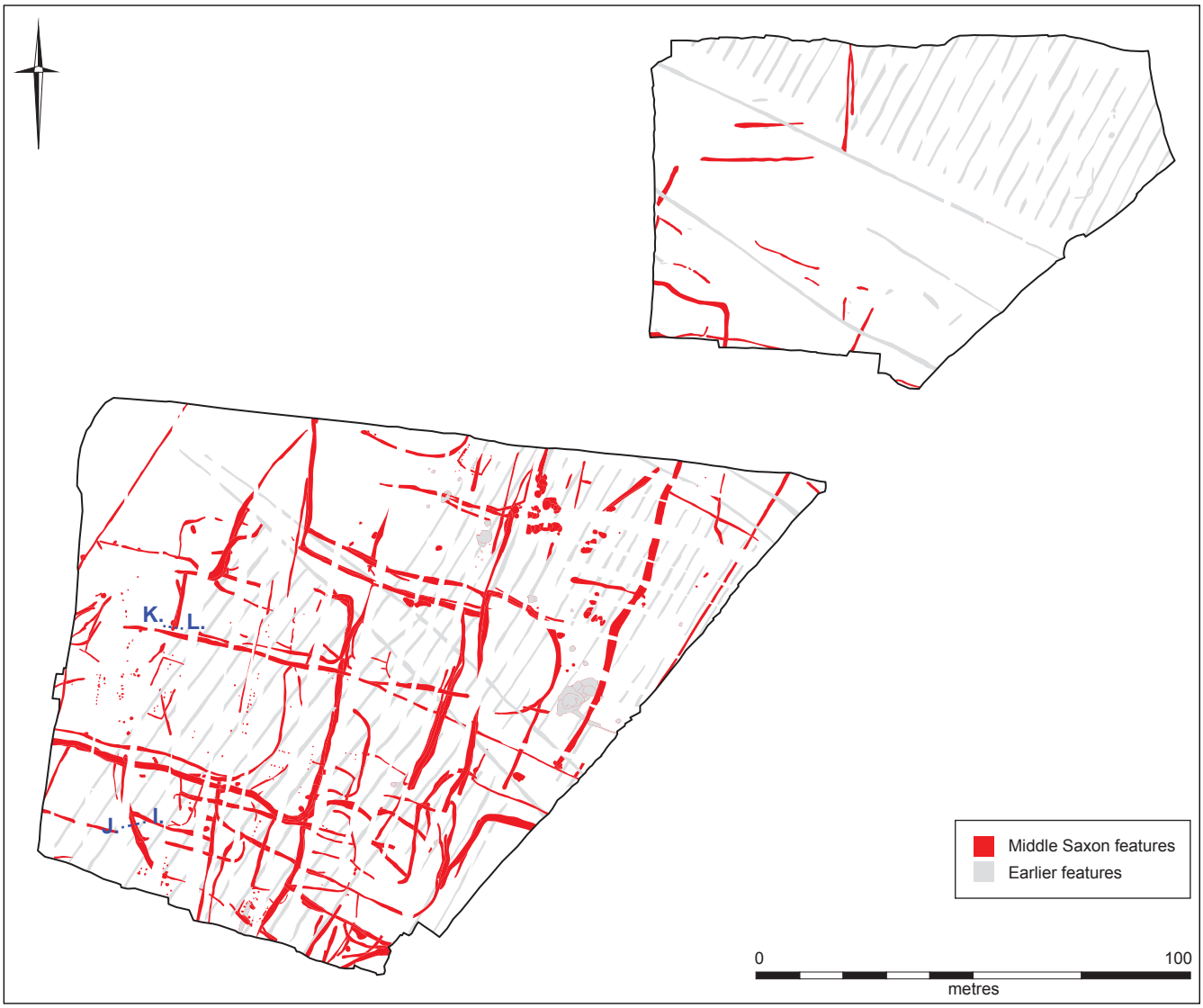


Figure 8. Roman planting beds and sections

Figure 9. Late Roman to Middle Saxon features



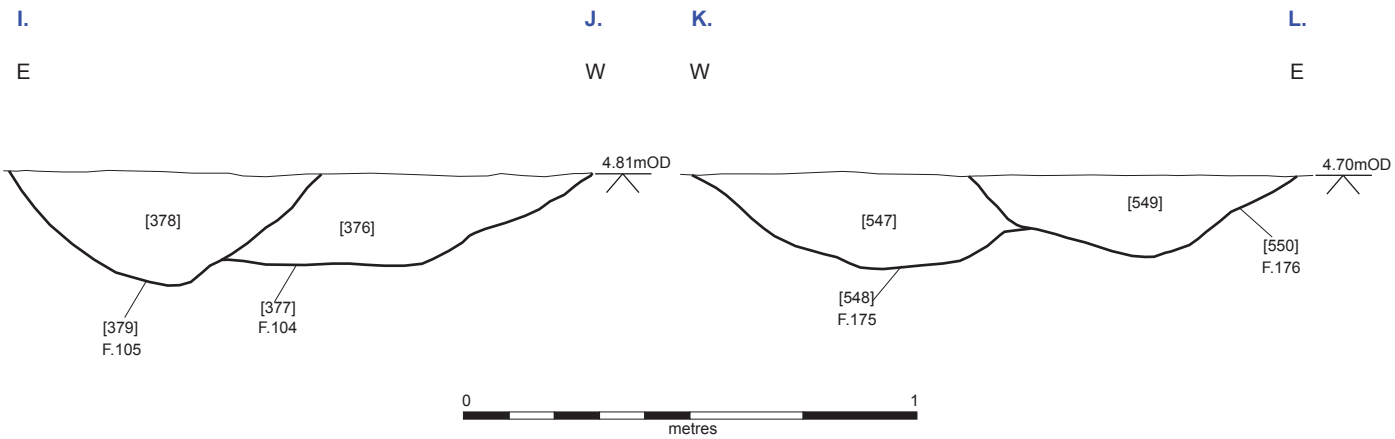


Figure 10. Middle Saxon features and sections

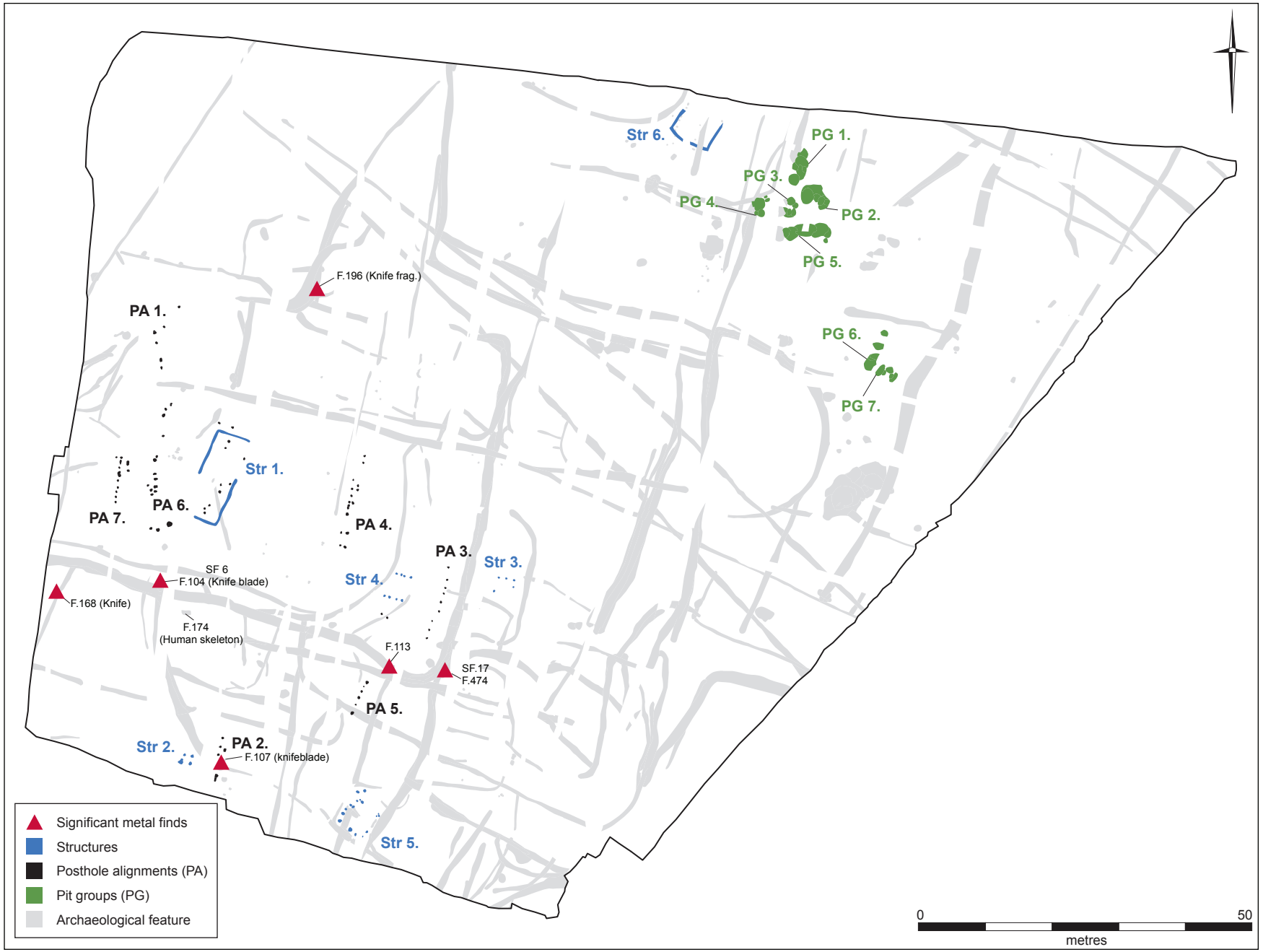


Figure 11. Significant Saxon features - structures, post alignments and pit groups

Figure 12. Structure 1 looking southwest partial skeletal remains F.174

OASIS DATA COLLECTION FORM: England

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OASIS ID: cambridg3-302069

Project details

Project name	East Cambs District Leisure Village, Downham Road
Short description of the project	Archaeological investigations were undertaken by the Cambridge Archaeological Unit (CAU) at East Cambs District Leisure Centre site situated on Downham Road, Ely. The work was carried out over the course of four months between May 2016 and September 2016, and was a continuation of excavations undertaken previously by the CAU at this site. The investigation area, comprising excavations in two almost contiguous areas (Area 3 and Area 4) and totalling 2.26ha, was machine stripped revealing archaeology ranging in date from the Late Bronze Age through to the Post-Medieval period, including Iron Age pit clusters, Early Roman planting beds and a multi-phase enclosure system with several post- and beam-slot built ancillary structures dating to the Middle Saxon period.
Project dates	Start: 18-05-2016 End: 10-05-2017
Previous/future work	Yes / No
Any associated project reference codes	DRE15 - Sitecode
Any associated project reference codes	ECB4570 - HER event no.
Type of project	Recording project
Site status	None
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	PIT ALIGNMENT Iron Age
Monument type	PIT Iron Age
Monument type	WATERING HOLE Iron Age
Monument type	DITCH Iron Age
Monument type	FIELD SYSTEM Roman
Monument type	ENCLOSURES Early Medieval
Monument type	PIT Early Medieval
Monument type	STRUCTURE Early Medieval
Monument type	POST ALIGNMENT Early Medieval
Significant Finds	SHERDS Late Bronze Age

Significant Finds	SHERDS Early Iron Age
Significant Finds	SHERDS Middle Iron Age
Significant Finds	LOOMWEIGHT Iron Age
Significant Finds	QUERN STONE Roman
Significant Finds	QUERN STONE Iron Age
Significant Finds	SHERDS Roman
Significant Finds	SHERDS Early Medieval
Significant Finds	LOOMWEIGHT Early Medieval
Significant Finds	KNIFEBLADE Early Medieval
Significant Finds	RING Medieval
Significant Finds	HUMAN REMAINS Uncertain
Significant Finds	ANIMAL REMAINS Iron Age
Significant Finds	SPINDLE WHORL Early Medieval
Significant Finds	ICE SKATE Medieval
Significant Finds	ANIMAL REMAINS Early Medieval
Investigation type	""""Full excavation"""""
Prompt	Direction from Local Planning Authority - PPS

Project location

Country	England
Site location	CAMBRIDGESHIRE EAST CAMBRIDGESHIRE ELY East Cambs District Leisure Village, Downham Road, Ely
Postcode	CB6 2FE
Study area	2.26 Hectares
Site coordinates	TL 53132 81323 52.408041970708 0.251493129081 52 24 28 N 000 15 05 E Point
Height OD / Depth	Min: 3.5m Max: 5.5m

Project creators

Name of Organisation	Cambridge Archaeological Unit
Project brief originator	Local Planning Authority (with/without advice from County/District Archaeologist)
Project design originator	Emma Beadsmoore
Project director/manager	Emma Beadsmoore
Project supervisor	Leanne Zeki
Type of sponsor/funding body	Developer
Name of sponsor/funding body	East Cambs District Council

Project archives

Physical Archive recipient	Cambridgeshire County Archaeology Store
Physical Archive ID	DRE16
Physical Contents	"Animal Bones","Ceramics","Environmental","Human Bones","Industrial","Metal","Wood","Worked bone","Worked stone/lithics"
Digital Archive recipient	Cambridgeshire County Archaeology Store
Digital Archive ID	DRE16
Digital Contents	"Stratigraphic","Survey"
Digital Media available	"GIS","Images raster / digital photography","Spreadsheets","Survey","Text","Database"
Paper Archive recipient	Cambridgeshire County Archaeology Store
Paper Archive ID	DRE16
Paper Contents	"Stratigraphic","Survey"
Paper Media available	"Context sheet","Drawing","Plan","Report","Section"

Project bibliography 1

Publication type	Grey literature (unpublished document/manuscript)
Title	EAST CAMBS DISTRICT LEISURE CENTRE, DOWNHAM ROAD, ELY, CAMBRIDGESHIRE (AREAS 3 and 4): Post-Excavation Assessment
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