Excavation Report

Harps Close Meadow Waldingfield Road Sudbury

Excavation Report

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April 2015

Client: Bellway Homes

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Harps Close Meadow, Waldingfield Road, Sudbury

Archaeological Excavation

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Summary

Between 24th November and 12th December 2015 OA East conducted an archaeological excavation at Harps Close Meadow, Sudbury, Suffolk. (TL 879 421). The work was commissioned by CgMs on behalf of Bellway Homes in advance of the proposed construction of a residential development. The excavation was carried out following an earlier trial trench evaluation, undertaken by Suffolk County Council Archaeological Service, in 2012. An open area excavation along the east edge of the site confirmed the presence of a large ditch of Roman date, previously recorded in the evaluation. This produced a few sherds of very abraded pottery of 1st to 2nd century date and a charred seed rich infill suggesting the burning of cereal processing waste in the near vicinity, perhaps indicating a corn-drier outside the limits of the development area. Also present were a truncated pit and shallow ditches of earlier Roman date. Ailt deposits located along the south east edge of the excavation, contained worked flint, and were sealed by colluvium. A smaller excavation area was located against the north west boundary of the site to investigate the context of Middle Bronze Age pottery found during evaluation. Only the truncated remains of modern post holes which cut directly into the natural were found. No evidence for prehistoric features or other finds of Middle Bronze Age date were present. All the features were sealed by a colluvium spread, containing post-medieval ceramic building material, topsoil and subsoil contained some worked flint.

1 Introduction

1.1 Location and scope of work

1.1.1 An archaeological excavation was conducted at Harps Close Meadow, Waldingfield Road, Sudbury, Suffolk (Fig. 1), between 24th November and 12th December 2015.

1.1.2 Outline planning permission for the residential development of the site was granted by Babergh District Council (application ref B/12/01198/OUT). Conditions 12 and 13 of the planning permission relate to archaeological matters, within a defined part of the site. Condition 12 required submission and implementation of a programme of archaeological works; Condition 13 prevents occupation of buildings until the archaeological site investigation and assessment has been completed and arrangements made for the post-excavation phases of work.

1.1.3 The required archaeological works were undertaken in accordance with a Brief issued by Dr Matthew Brudenell of Suffolk County Council (SCC; Planning Application B/12/01198/FUL), supplemented by a Specification prepared by Myk Flitcroft of CgMs Consulting.

1.1.4 The site archive is currently held by OA East and will be deposited with the appropriate county stores in due course.

1.2 Geology and topography

1.2.1 Generally the chalk bedrock is overlaid by superficial deposits of chalky till with outwashsands and gravels (Lowestoft Formation). Along the southern and eastern boundaries of the site superficial head deposits have been mapped. These are poorly sorted and poorly stratified deposits formed mostly by solifluction and/or hillwash and soil creep. They consist of mainly of gravels and sands with localised lenses of silt, clay, peat or organic material (www.mapapps.bgs.ac.uk/geologyofbritain/home.html). These superficial deposits support deep loam to clay soils of the Melford Series.

1.2.2 The site is on the side of a dry valley overlooking the River Stour valley to the west; ground level falls from northwest to southeast, from a maximum height of *c*. 46m OD along the western boundary to *c.* 40m OD in the south-eastern corner of the site.

1.2.3 The site is in a suburban setting but before it was engulfed by the expansion of Sudbury it was within an area of Ancient Rolling Farmlands, as defined in the Suffolk Landscape Character Assessment (www.suffolklandscape.org.uk).

1.3 Archaeological and historical background

1.3.1 The archaeological and historical background to the site has been described in detail in a desk-based assessment (Rolfe, 2010). The archaeological background was summarised subsequently in the Brief and Specification (Poppy, 2012), as follows:

> The proposed development site is located in an area of archaeological interest, identified in the County Historic Environment Record. Two cropmark ring ditches (HER refs SUY 041 and 042) are recorded immediately to the NW of the proposed development area. A desk-based assessment in 2010 identified moderate potential for remains of prehistoric and 20th century date to be encountered (SCCAS 2010/203). Moreover, the landscape setting of the proposed development site, in a dry valley overlooking the River Stour, is topographically favourable for early occupation of all periods. However, the site has not been subject to systematic archaeological survey.

1.3.2 Historic Environment Record entries mentioned above are shown on Figure 1.

1.3.3 The known history of Harp Close Meadow, taken largely from the desk-based assessment (ibid), can be summarised as follows:

1.3.4 The earliest cartographic evidence is the Tithe Map of the parishes of Sudbury St Gregory and Sudbury St Peter, dated 1841. This shows that the field boundaries have remained largely unaltered since then. At that time the field was known as 'Pig Tail Piece', and that name appeared also on a plan of the Wood Hall Estate made in 1860. The field name was fairly common in East Anglia in the 19th century and was often rendered in a dialect form as 'pightle'. It was usually applied to a small enclosure, often triangular in plan, which was left over when the boundaries of larger fields were straightened.

1.3.5 Until 1876 the Freeman of Sudbury had the right of 'shackage' over Pig Tail Piece. This meant that although they did not own the land they could use it at certain times of the year for pasturing their livestock. In 1876 they acquired the freehold to the field; the site was important to them because unlike their ancient riverside meadows it was on high ground and was not liable to flooding (Nurser 2008, 2).

1.3.6 The field appeared on the First Edition Ordnance Survey map of *c.*1880 (and all subsequent maps) with its alternative name of People's Park. 'People' was presumably a corruption of 'pightle'. The early Ordnance Survey maps show several large quarries (for chalk and clay) in the area immediately surrounding the site, together with brick works and lime kilns. During the latter part of the Second World War a searchlight and anti-aircraft guns were set up on the People's Park and an army camp was built along the western (Acton Lane) boundary of the site.

1.3.7 After the Second World War the usefulness of the site for grazing decreased as land to the east was developed for housing, the nearby industrial estate expanded and the eastern bypass (A134) was built. The field was given over to recreational use – for example, the Suffolk Show was held there on at least one occasion in the early 1950s. In 1984 the land was bought by the East Anglian Regional Health Authority and since then the southern part of the field has been developed for housing.

1.3.8 An archaeological evaluation was carried out in 2012, resulting in a total of 29 trenches being excavated. A north to south aligned ditch close to the eastern boundary of the site contained abraded prehistoric and Roman pottery with some worked flint and charred cereal remains. The only other archaeological feature was part of a pit (or ditch terminus) in the western half of the site, this produced some undiagnostic fired clay but no datable material. A total of 7 sherds of pottery, recovered from the sub soil, located towards the north edge of the site, formed part of a base of a Middle Bronze Age Rusticated Bucket Urn.

1.4 Acknowledgements

1.4.1 The author would like to thank CgMs who commissioned the work on behalf of Bellway Homes and Myk Flitcroft who prepared the specification. Dr Matthew Brudenell wrote the brief and visited and monitored the site. The project was managed by Aileen Connor. Michael Webster supervised the fieldwork, which was carried out with the assistance of Mary Andrews, Malgorzata Kwiatkowska, Alex Day and Diogo Silva. Dave Brown and Gareth Rees carried out the site survey. The illustrations were produced by Charlotte Davis and Severine Bezie.

2 Aims and Methodology

2.1 Aims

2.1.1 The original aims of the project were set out in the Brief and Written Scheme of Investigation (Suffolk County Council Archaeological Service Brief October 2014 and CgMs Consulting Specification for a Programme of Archaeological Excavation Works October 2014, respectively).

2.1.2 The main aims of this excavation were

- To mitigate the impact of the development on the surviving archaeological remains. The development would have severely impacted upon these remains and as a result a full excavation was required, targeting the areas of archaeological interest highlighted by the previous phases of evaluation.
- To preserve the archaeological evidence contained within the excavation area by record and to attempt a reconstruction of the history and use of the site.
- To determine (if possible) the date, character and function of the Prehistoric/Roman ditch identified in the east part of the site.
- To ascertain whether any associated archaeological features or monuments, including settlement evidence, survive in the immediate vicinity of the ditch.
- To determine the date, character, function and significance of any such features.
- To investigate the archaeological context of the prehistoric pottery found within the subsoil in Evaluation Trench 13, and to record any associated archaeological deposits or features

2.1.3 The aims and objectives of the excavation were developed with reference to research parameters and objectives defined by:

Research and Archaeology: A Framework for the Eastern counties: 1. Resource Assessment (Glazebrook 1997);

Research and Archaeology: A Framework for the Eastern counties: 2. Research Agenda and Strategy (Brown and Glazebrook 2000);

Research and Archaeology Revisited: a revised framework for the East of England.(Medlycott, ed, 2011) – East Anglian Archaeology Occasional Paper 24

3)

2.1.4 All of the original aims and objectives of the excavation stated above have been met by the investigation.

2.2 Methodology

2.2.1 Machine excavation was carried out by a 360º type excavator using a 2m wide flat bladed ditching bucket. under constant supervision of a suitably qualified and experienced archaeologist. The top and sub soil up-cast was initially transported to storage areas by a wheeled dumper, but subsequent rutting resulted in the dumper being stood down.

2.2.2 The methodology used followed that outlined in the Brief (Suffolk County Council Archaeological Service Brief October 2014) and detailed in the Written Scheme of

Investigation (CgMs Consulting Specification for a Programme of Archaeological Excavation Works October 2014)

2.2.3 The Areas to be excavated, A and B (Fig. 1), were targeted on the results of the previous evaluation. Area A comprised a 400m^2 open area towards the northern edge of the site and aimed at identifying the archaeological context of a small assemblage of Middle Bronze Age pottery that had been found unstratified in evaluation trench 13. Area B an open area of 1920m^2, was located along the east edge of the site, and aimed to place in a wider context and investigate further a ditch and colluvium deposits that had been found by evaluation trenches 9, 11 and 28.

2.2.4 Both exposed Areas, A (Plate 1) and B (Plate 2) were cleaned and features excavated by hand (Fig. 2).

2.2.5 Spoil, exposed surfaces and features were scanned with a metal detector. All metal-detected and hand-collected finds were retained for inspection, other than those which were obviously modern.

2.2.6 All archaeological features and deposits were recorded using OA East's *pro-forma* sheets. Trench locations, plans and sections were recorded at appropriate scales and colour and monochrome photographs were taken of all relevant features and deposits.

2.2.7 A total of 8 samples were taken from features in Area B.

2.2.8 The site was excavated during a spell of cold and wet weather.

3 Results

3.1 Introduction

3.1.1 Evidence for human activity comprised a small number of unstratified and residual finds of prehistoric, post-medieval and modern date with the majority of the evidence relating to the Roman period represented by the construction and later back filling of a large ditch as well as a scatter of other minor features. The descriptions of the contexts are presented in Appendix A. Unless otherwise described in the text all of the features referred to were found in Area B.

3.2 Site Phasing

3.2.1 As with many rural sites very little complex stratigraphy was present. The chronological phasing presented in this report is largely based on stratigraphic relationships, spatial and alignment associations. Where possible this has been combined with dating evidence provided by stratified artifacts, primarily pottery and CBM. Three main periods have been identified:

Period 1: Prehistoric (pre AD43)

Period 2: Roman (AD43-AD410)

Period 3: Post medieval to modern (AD1600-AD1950)

3.3 Period 1: Prehistoric (pre AD43)

3.3.1 A small assemblage of worked flint, probably representing later prehistoric flint knapping, was recovered from the site. The majority of the pieces were residual, however a small number were found in, and may be contemporary with, layer **37**.

3.3.2 **Layer 28** (Fig. 3 sections 12, 14, 15 and 18, Plates 7 and 8) and **37** (Fig. 3 section 16): These layers formed the basal fill of a hollow located towards the southern end and eastern side of Area B. The layers were similar in character and could be a colluvium, the result of material being washed downslope into the hollow. Only one of the depostis contained any finds; layer **37** contained three struck flints of probable later prehistoric date. The soil immediately above (**26**) which is also thought to be a colluvium, contained post-medieval pottery.

3.3.3 **Layer 31** (Fig. 2) was distinct from the colluvium, being reddish in colour, and was located along the eastern edge and northern part of Area B. It contained no finds and may be the result of natural processes, being only 0.10m thick and spread across an area approximately 8m in width. This deposit had been heavily truncated and was cut by Period 2 ditch **17**.

3.4 Period 2: Roman (AD43-AD410)

3.4.1 **Linear feature 17** (Fig. 2 and 3 section 5, Plate 3) was a shallow, short feature on a north-west to south-east alignment and cut through Period 1 layer 31. It produced one sherd of earlier Roman Sandy Oxidised Ware but was otherwise unremarkable, no other features were associated with it. Its function is uncertain, although it could represent the base of a very truncated structure.

3.4.2 **Ditch 5** (Figs 2 and 3) was the most prominent feature on the site. It was aligned north-west to south-east running along the whole length of Area B, measuring 120m long by 1.15-2m wide and 0.31-0.54m deep. The feature had previously been examined in

Evaluation Trenches 9 and 29. A further nine hand dug sections were excavated along the course of the ditch these and were issued individual cut and fill numbers (see Table 1 below). The ditch profile was generally shallow and broad with an irregular base.

Fill No	Cut No	Brief Description	Finds	Figure/Section/Plate
3	5	Mid greyish brown sandy silt	1 x Prehistoric pot	Fig. 3 section 8, Plate 4
4	5	Charred seed rich sandy silt	1 x Roman pot, Sample 6	Fig. 3 section 8, Plate 4
6	8	Charred seed rich silty sand	1 x post-medieval tile	Fig. 3 section 6
7	8	Charred seed rich silty sand	1 x Roman pot, 1 x worked flint Sample 1	Fig. 3 section 6
9	11	Mid Brown sandy silt	1 x post-medieval tile	Fig. 3 section 2, Plate 5
10	11	Very dark greyish brown silty sand	1 x post-medieval pot, 1 x worked flint	Fig. 3 section 2, Plate 5
14	15	Charred seed rich silty sand	No finds, Sample 5	Fig. 3 section 1
36	15	Redeposited gravel	No finds	Fig. 3 section 1
39	42	Mid greyish brown silty sand	No finds	Fig. 3 section 9
40	42	Charred seed rich silty sand	1 x Roman pot	Fig. 3 section 9
41	42	Redeposited gravel	No finds	Fig. 3 section 9
43	46	Charred plant rich silty sand	2 x Roman pot, 1 x post-medieval tile, Sample 4	Fig. 3 section 10
44	46	Mid brown silt sand	No finds	Fig. 3 section 10
45	46	Charred seed rich silty sand	No finds	Fig. 3 section 10
47	49	Charred seed rich silty sand	No finds, Sample 3	Fig. 3 section 11, Plate 6
48	49	Dark yellowish grey silty sand	No finds	Fig. 3 section 11, Plate 6
51	50	Dark grey silty clay	No finds, Sample 2	Fig. 3 sections 13
52	50	Redeposited gravel	No finds	Fig. 3 section 13
53	50	Charred seed rich silty sand	No finds	Fig. 3 section 13
54	55	Redeposited gravel	SF1 – Medieval horseshoe nail	Fig. 3 section 17

Table 1: Interventions in Ditch 5

3.4.3 Two or three fills were identified at each excavated section along the length of the ditch, with a very dark layer rich in charred remains consistent throughout.

3.4.4 The ditch produced a very small assemblage of finds: The pottery was predominantly Roman in date (five sherds) although all of the sherds are descried as severe or very severe abrasion suggesting they derive from manuring and may have been lying in middens for many years before reaching their final location. A single sherd of prehistoric pottery was found in context 3 and a small med/post-medieval pottery sherd came from context 10. A fragment of post-medieval tile was recovered from context 9 in this section of the ditch and, as with the pottery dating to this period, are probably intrusive from Period 3 feature **13** which lay adjacent. Similarly the post-medieval tile found in context 6 may be intrusive from Period 3 layer 58 adjacent. A single, probably medieval iron nail was recovered from context 54, the excavated section was close to an evaluation trench and it is possible that the nail was intrusive.

3.4.5 A total of 6 samples were taken from the ditch, all proved to be rich in charred plant remains, particularly cereal seeds and chaff, with wheat dominating the assemblage. The charred seed rich layer within the ditch contains the most useful evidence, as the assemblage is consistent with a Roman date and the range of burnt seeds and chaff is probably the remains of burnt crop processing waste or may indicate the presence of a corn-drier somewhere beyond the boundary of the current development site.

3.4.6 The ditch is likely to represent a boundary within an agricultural landscape some distance from settlement.

3.5 Period 3: Post-medieval to Modern (AD1600 to AD1950)

3.5.1 A number of features and layers are attributed to this broad period, they are all likely to relate to agricultural use of the landscape.

3.5.2 Ditches **19** and **30** and unnumbered (Figs 2 and 3, sections 3 and 4 respectively) formed a discontinuous line parallel with and to the west of the Period 2 ditch **5**. They comprised three short, shallow, heavily truncated features aligned north-west to south-east, they were on average 5-6m long, 0.75-1m wide and 0.15-0.20m deep. The pottery sherds and CBM recovered from the fills is a small mixed assemblage comprising both Roman and later pieces, the pottery was all severely abraded.

3.5.3 Pits **13** (Figs 2 and 3, section 19) and **21** (Figs 2 and 3, section 7) may be associated with the ditch segments. Pit **13** was elongated and as it continued the ditch alignment to the north, it could in fact be another ditch segment. Pit **21** was circular and located some 30m to the south of the southernmost ditch, and it too continued the same alignment. This group of features may together have formed a boundary (possibly a hedge) and as they followed the same alignment and were adjacent to Period 2 ditch **5** imply that the boundary continued as a feature of the landscape. Both features were heavily truncated, pit **13** intersected ditch **5** but its relationship was unclear.

3.5.4 Layer 58 (Fig 2) was located along the west side of the northern end of Period 2 ditch **5**. Its relationship to the ditch was not clear but as well as Roman pottery and tile, a small quantity of post-medieval tile was found suggesting the layer was later than the Period 2 ditch. Its location on the same side of ditch **5** as the segmented linear features described above suggests that it may have been the remnant of the same feature.

3.5.5 At the southern end of the excavation area were layers of probable colluvium; 26 (Fig 3, sections 12, 14,15 and 16, Plates 7 and 8), 56 and 57 (Fig. 3, sections 17 and 8 respectively). Layers 56 and 57 sealed Period 2 ditch **5**, whilst layer 26 sealed a gravel deposit 27 (Fig 3, sections 12 and 14) that in turn sealed Period 1 layer 28. A layer of colluvium was observed to run from the north limits of Area B, to the south-east corner of the development area, progressively getting thicker further down slope. Occasional pottery and CBM pieces dating to the post-medieval period were recovered from these layers.

3.5.6 Ditch **23** (Fig. 3 section 12) cut through the colluvium (26), it was aligned approximately north to south and followed a slight curve, following the edges of a slight hollow. This ditch was 2.50m wide and 0.40m deep and produced residual worked flint along with post-medieval CBM. It was cut by ditch **25** (Fig 3, sections 12, 15 and 18, Plate 7), which measured 0.92m wide by 0.28m deep, the fill of which (24) also contained CBM dating to the post-medieval period. The later ditch followed a similar alignment and is likely to be a smaller recut of the original.

3.5.7 Post holes **33** and **35** were roughly circular and the only features located in Area A (Fig. 2), they measured at 0.30-0.40m diameter, were very shallow at 0.08m deep and cut

into the natural ground. Post hole **33** contained some very modern pottery which was discarded.

3.6 Finds Summary

Pottery

3.6.1 This is a small assemblage pottery comprising a single prehistoric and twenty four sherds of Romano-British pottery, primarily comprised of locally produced utilitarian coarse wares, with a small amount of imported fine table wares also present. This pottery assemblage is similar in sherd quantity and composition to material recovered during the evaluation of the site (Fawcett 2012). The assemblage is in poor condition suggesting it has been subject to extensive post-depositional disturbance and has not remained in its primary place of deposition. Certainly none of the pottery had been deliberately placed, rather it had found its way into the ditch and pit fills, also layers, probably in association with other small amounts of detritus which originated from a nearby rural farming community. The assemblage, therefore, although small is an interesting glimpse into Romano-British life at Sudbury and adds to the growing corpus of data from Suffolk pertinent to this period.

Worked Flint

3.6.2 The flint is all struck from a mid to dark greyish-brown to brownish-grey semi-translucent material with occasional mid and dark grey and greyish-brown inclusions. Cortex where present is largely abraded. Flints show severe signs of abrasion suggesting they have been heavily ploughed at some point and are residual in nature. The range of debitage suggests later prehistoric flint working, although no truly diagnostic pieces, such as cores or specific tool forms, were recovered. The scars on the dorsal surface of the flint tend to indicate unstructured working using single platform cores. The flakes are generally quite thick and squat and largely struck with a hard hammer.

Small finds

3.6.3 A total of three metal objects were found consisting an iron horse shoe nail of post conquest to medieval date, a copper alloy coin/token of post medieval/modern date and an iron nail of unknown date.

Ceramic Building Material

3.6.4 The small redeposited Roman assemblage is derived from a moderately high status building which had a tiled roof, possible hypocaust system and walls. All of this is very abraded and small suggesting that it has been subject to significant post depositional disturbance, comparable with that exhibited by the contemporary pottery assemblage and may have traveled some distance from its original point of deposition. It may even have been re-used in another structure such as a putative corn-drier before reaching its final location. The post Roman ceramic building material is largely derived from post medieval tiled buildings and consisted largely of flat roof tile fragments with smaller quantities of flooring and walling also being recovered.

Animal Bone

3.6.5 The assemblage consisted of 40 fragments of which 11 were identifiable to species. All fragments were identified as cattle aside from a horse 1st molar and axis.

3.7 Environmental Summary

3.7.1 Eight bulk samples were collected from features on the site; six samples were taken from the ditch and two colluvial layers were also sampled. The environmental samples have produced significant charred plant assemblages. Carbonised hulled wheat chaff elements predominate in the assemblage from the ditch, indicating that substantial burning of cereal processing waste has taken place in the near vicinity.

4 Discussion and Conclusions

4.1 Introduction

4.1.1 The excavation provided evidence of limited later prehistoric activity within the local vicinity and although no features were positively dated to this period, worked flint and a sherd of prehistoric pottery were found. The Roman period was represented by the presence of a single long boundary ditch. The ditch probably silted up towards the end of the Roman period but the boundary may have continued, possibly as a hedge, into the post-medieval period. Evidence of soil movement was provided by the presence of hillwash (colluvium) deposits.

4.2 Prehistoric activity

4.2.1 The single sherd of pottery and the quantity of worked flint recovered from Area B suggest that activity from that period is close by. Previous work in the local vicinity has recorded evidence of barrows and other features dating from the Early Bronze Age to Late Iron Age. No burials or features were found in Area A, where a quantity of Middle Bronze Age pottery was recovered during the evaluation. A large hollow at the southern end of Area B may have been open in later prehistory, as suggested by the fact that flint of this date was found in its lowest fills. The evaluation had also found evidence for prehistoric activity.

4.3 Roman activity

4.3.1 The excavation provided evidence for agricultural Roman activity, the earliest being the partial survival of shallow pits and ditches, which indicate rural activity associated with farming. The main feature of the site, the boundary ditch with its uniform burnt fill, may represent a field boundary. The date of backfilling of the ditch is not certain as it is based on a very few pottery sherds most of which were severely abraded, however, those that are datable are no later than 2nd century. The ditch contained evidence of cereal processing waste that may have been used as fuel, perhaps in a corn drier. Although extensive evaluation trenching and geophysics survey provided no evidence that a corn-drier was located within the development area it is possible that one or more lay beyond the site, perhaps to the east. Fosberry (Appendix C2 below) notes that corn-driers were a common feature of the Roman agricultural landscape, often sited within fields and at a distance from settlement to minimise transportation of the harvested crop prior to processing. Another, perhaps less likely possibility is that the site was subject to an attack during the Antonine period when there was a period of unrest. Several sites in nearby Essex have produced fire damaged Samian dating to the later Antonine period (later 2nd century) and this has given rise to the idea that some Trinovantian rural sits were burned at about this time; the so called 'Antonine fires' (Going and Plouviez 2000). Fosberry (Appendix C2 below) notes that the assemblage is clearly not derived from a growing crop but rather one that has already been harvested and processed; if an 'Antonine fire' were the cause, it must have taken place post-harvest on an already processed crop.

4.4 Post-medieval activity

4.4.1 The colluvium deposits in Area B probably occurred during the post-medieval period as a result of cultivation activity. The possible linear features which cut into the large hollow towards the southern end of Area B may form some part of the drainage system in this low lying part of the site.

4.5 Modern

4.5.1 The two post holes recorded in Area A were possibly of 1950's date and if so were probably related to the field being used at that time for the county show or with military activity that was present in the vicinity during The Second World War (Rolfe 2010).

4.6 Conclusion

4.6.1 This excavation contributes to the growing body of archaeological evidence in Sudbury and its surrounding area. The site was clearly used for agriculture during the Roman period and later. No settlement remains were found but small fragments of pottery and building materials imply settlement related middens that were spread on to the fields during manuring. A layer of burnt cereal processing waste suggests there may have been a corn-drier beyond the limits of the development area.

4.7 Significance

4.7.1 The main purpose of the excavation was to test for Bronze Age burials, to date the large ditch and place it in context and to find evidence of any settlement activity. The ditch can be dated as being filled in during or just after the Roman period. There was no evidence for Bronze Age or later settlement activity.

Appendix A. Context Inventory

Trench	Context	Cut	Category	Length	Breadth	Depth	Feature Type	Colour	Fine component	Period	Group
Area B	1	0	layer	0		0.25	Top soil	mid greyish brown	silty sand	3	0
Area B	2	0	layer	0		0.25	Sub soil	mid grey reddish brown	sandy silt	3	0
Area B	3	5	fill	0	1.52	0.52	ditch	mid greyish brown	sandy silt	2	5
Area B	4	5	fill	0	0.78	0.16	ditch	very dark brownish grey	sandy silt	2	5
Area B	5	5	cut	0	1.52	0.54	ditch			2	5
Area B	6	8	fill	0	1.3	0.3	ditch	very dark grey brown	silty sand	2	5
Area B	7	8	fill	0	1.08	0.15	ditch	very dark greyish brown	silty sand	2	5
Area B	8	8	cut	0	1.3	0.45	ditch			2	5
Area B	9	11	fill	0	1	0.1	ditch	mid brown	sandy silt	2	5
Area B	10	11	fill	0	2	0.33	ditch	very dark grey brown	silty sand	2	5
Area B	11	11	cut	0	2	0.44	ditch			2	5
Area B	12	13	fill	2.2	1.4	0.12	pit	mid-dark brown	clay silt	3	0
Area B	13	13	cut	2.2	1.4	0.12	pit			3	0
Area B	14	15	fill	0	1.4	0.42	ditch	very dark grey brown	silty sand	2	5
Area B	15	15	cut	0	1.4	0.42	ditch			2	5
Area B	16	17	fill	6.6	1	0.2	ditch	mid grey reddish brown	silty clay	2	0
Area B	17	17	cut	6.6	1	0.2	ditch			2	0
Area B	18	19	fill	0	0.79	0.15	ditch	mid grey	sandy silt	3	0
Area B	19	19	cut	6	0.79	0.15	ditch			3	0
Area B	20	21	fill	1.32	0.91	0.07	pit	pale brownish grey	sandy silt	3	0
Area B	21	21	cut	1.32	0.91	0.07	pit			3	0
Area B	22	23	fill	0	2.52	0.4	ditch	pale yellowish brown	silty clay	3	0

Trench	Context	Cut	Category	Length	Breadth	Depth	Feature Type	Colour	Fine component	Period	Group
Area B	23	23	cut	0	2.52	0.4	ditch			3	0
Area B	24	25	fill	0	0.92	0.28	ditch	pale greyish brown	silty sand	3	0
Area B	25	25	cut	0	0.92	0.28	ditch			3	0
Area B	26	0	layer	0		0.35	spread	dark grey	silty sand	3	0
Area B	27	0	layer	0		0.14	spread	mid grey brown	silty sand	3	0
Area B	28	0	layer	0		0.36	?colluvium	mid greyish brown	silty sand	1	0
Area B	29	0	fill	0	0.82	0.18	ditch	mid grey brown	silty sand	3	0
Area B	30	30	cut	7	0.82	0.18	ditch			3	0
Area B	31	0	layer	0		0.1	spread	mid reddish brown	silty clay	1	0
Area A	32	33	fill	0.36	0.31	0.06	post hole	pale brownish grey	sandy silt	3	0
Area A	33	33	cut	0.36	0.31	0.06	post hole			3	0
Area A	34	35	fill	0.4	0.42	0.08	post hole	same as 32		3	0
Area A	35	35	cut	0.4	0.42	0.08	post hole			3	0
Area B	36	15	fill	0	0.6	0.2	ditch	mid orange brown	sandy silt	2	5
Area B	37	0	layer	0			?colluvium	similar to 28		1	0
Area B	38	not	used	0						0	0
Area B	39	42	fill		1.04	0.18	ditch	similar to fill 9		2	5
Area B	40	42	fill	0	1.48	0.26	ditch	very dark grey brown	silty sand	2	5
Area B	41	42	fill	0	1.14	0.16	ditch	dark grey brown	sandy silt	2	5
Area B	42	42	cut	0	1.48	0.46	ditch			2	5
Area B	43	46	fill	0	1.66	0.22	ditch	very dark grey	silty sand	2	5
Area B	44	46	fill	0	1.22	0.16	ditch	mid brown	silty sand	2	5
Area B	45	46	fill	0	0.62	0.08	ditch	very dark grey	silty sand	2	5
Area B	46	46	cut	0	1.66	0.4	ditch			2	5
Area B	47	49	fill	0	1.4	0.27	ditch	dark greyish brown	silty sand	2	5
Area B	48	49	fill	0	0.6	0.04	ditch	dark greyish yellow	silty sand	2	5
Area B	49	49	cut	0	1.4	0.31	ditch			2	5
Area B	50	50	cut	0	1.15	0.35	ditch			2	5

Trench	Context	Cut	Category	Length	Breadth	Depth	Feature Type	Colour	Fine component	Period	Group
Area B	51	50	fill	0	1.15	0.3	ditch	very dark grey	silty clay	2	5
Area B	52	50	fill	0	0.5	0.2	ditch	mid grey brown	sandy silt	2	5
Area B	53	50	fill	0	1.15	0.15	ditch	mid grey brown	sandy silt	2	5
Area B	54	55	fill	0	1.65		ditch			2	5
Area B	55	55	cut	0	1.65		ditch			2	5
Area B	56	0	layer	0		0.23	colluvium	mid yellowish brown	sandy silt	3	0
Area B	57	0	layer	0		0.2	colluvium	mid reddish yellow brown	sandy silt	3	0
Area B	58	0	layer	0		0.2	colluvium	mid brown	sandy clay silt	2	0
Area B	59	0	layer	0			coluvium				0

Appendix B. Finds Reports

B.1 Prehistoric Pottery

By Sarah Percival

Nature of the assemblage

B.1.1 A single sherd of flint-tempered pottery weighing 3g was recovered from context 3, the fill of ditch **5**, Period 2, Area B. The sherd is probably of Earlier Iron Age date, and is therefore residual in this context.

B.2 Roman Pottery

By Alice Lyons

Introduction

B.2.1 A total of 24 sherds, weighing 225g, of Romano-British pottery were recovered primarily from ditches, but also from layers and a pit (RB pot Table 2;). The pottery is in a fragmentary and severely abraded condition with an average sherd weight of only *c*. 9g.

Feature Type	Sherd Count	Sherd Weight (g)	Sherd Weight (%)
Ditch	13	142	63.11
Layer	10	80	35.56
Pit	1	3	1.33
Total	**24**	**225**	**100.00**

Table 2: The Roman pottery from features (listed in descending order of weight)

Methodology

B.2.2 The Roman pottery was analysed following the guidelines of the Study Group for Roman Pottery (Darling 2004). The total assemblage was studied and a full catalogue was prepared (below). The sherds were examined using a hand lens (x10 magnification) and were divided into fabric groups defined on the basis of inclusion types present using the Suffolk fabric series (SCCAS). Broad forms (jar and bowl) were recorded. The sherds were counted and weighed to the nearest whole gram and recorded by context; abrasion was also noted. OA East curates the pottery and archive.

Fabrics and Forms

B.2.3 The majority of the pottery comprises utilitarian coarse ware the most common of which was a sandy grey or reduced fabric (GX) found in a limited range of undecorated jar/bowl and storage jar forms. Only one diagnostic vessel type was recognised which is a small globular medium mouthed jar with an everted rim. Pottery of this type, although almost certainly produced locally, was influenced in design by the Black Burnished Ware 2 industry prevalent within the Thames Estuary (Tyers 1996, 186-89, fig 232: IIF5 and IIF6) and fashionable between the mid 2nd and 3rd centuries AD. Although the source of this material is not known, that some sherds have high levels of silver mica present as a natural component, may suggest an origin in north Suffolk within the Waveney Valley (Tomber and Dore 1998, 184).

B.2.4 Also found were a small number of jar/bowl, possibly flagon, vessel fragments produced in a similar fabric but fired in an oxidised atmosphere (WX). It is likely that these vessels were also produced locally.

B.2.5 All other pottery fabrics were found in smaller quantities, but notably include a fine sandy red ware which was found as both undiagnostic jar/bowl pieces and also as a shallow straight-sided dish or platter. This red ware fabric contains well-sorted inclusions and is characterized by common fine, silver (sometimes gold) mica and common to abundant quartz. This material is not slipped (or at least no slip survives). It may have been used to produce local copies of Samian and/or Oxfordshire wares, such as those produced at the Obelisk kilns at Harston in South Cambridgeshire (Young 1982) and more locally at Colchester (Going 1987, 6; no 21).

B.2.6 Two distinct later Roman pottery fabrics were found. They consist of two utilitarian coarse ware jar fragments manufactured from clay containing fossilised shell fragments. A jar with a rolled and underscored rim was recorded in this fabric, typical of material produced in the Harrold kilns in Bedfordshire although other sources are also known (Tomber and Dore 1998, 115; Tyers 1996, 192-193). Also diagnostic of the later Roman era are two pieces of Oxfordshire red ware jar/bowl fragments (Tomber and Dore 1998, 176; Tyers 1996 175-178).

B.2.7 Fine wares were not well represented within the group as only two pieces of imported samian were retrieved. This distinctive red glossy table ware was imported into the region between the mid 1st and mid 3rd centuries AD (Tyers 1996, 105-116). One south Gaulish undiagnostic piece and another central Gaulish dish (Dr18/31; Webster 1996, 33) were recorded.

B.2.8 Absent from this assemblage are any specialist wares such as amphora (Tyers 1996 85-105) or mortaria (Tyers 1996, 116-135).

Fabric	CODE	Sherd count	Sherd weight (g)	Sherd weight (%)
Sandy grey ware	GX	8	111	49.33
Sandy red ware	RF	7	40	17.78
Sandy oxidised ware	WX	3	40	17.78
Shell tempered ware	SG	2	11	4.89
Samian, central Gaul	SACG-LEZOUX	1	11	4.89
Oxfordshire red colour coat	OX	2	11	4.89
Samian, southern Gaul	SASG	1	1	0.44
Total		**24**	**225**	**100.00**

Table 3: The Roman Pottery fabrics, listed in descending order of weight

Summary

B.2.9 This is a small assemblage of Romano-British pottery, primarily comprised of locally produced utilitarian coarse wares, with a small amount of imported fine table wares also present. This pottery assemblage is similar in number of sherds and composition to material recovered during the evaluation of the site (Fawcett 2012).

B.2.10 The assemblage is in poor condition suggesting it has been subject to extensive post-depositional disturbance and has not remained in its primary place of deposition. Certainly none of the pottery had been deliberately placed, rather it had found its way

into the ditch and pit fills, also layers, probably in association with other small amounts of detritus which originated from a nearby rural farming community.

Area	Cxt	Cut	Type	Sherd Count	Sherd Weight (g)	Fabric Family	Form	Dsc	Abrasion	Spot Date
B	1	0	Layer	1	4	GX	MJAR	R	SEVERE	E/MC2
B	1	0	Layer	1	10	GX	SJAR	U	SEVERE	C2-C3
B	4	5	Ditch **5**	1	11	SACG		U	MILD	C2
B	7	8	Ditch **5**	1	4	GX	MJAR	R	SEVERE	E/MC2
B	12	13	Pit	1	3	OX	JAR/BOWL	U	SEVERE	MC3-EC5
B	16	17	Ditch	1	21	WX	JAR/FLAG	B	SEVERE	MC1-C2
B	18	19	Ditch	1	6	RF	JAR/BOWL	U	SEVERE	C2-C4
B	18	19	Ditch	1	8	SG	JAR	R	SEVERE	MC3-EC5
B	18	19	Ditch	2	9	GX	JAR/BOWL	U	SEVERE	LC1-C4
B	18	19	Ditch	1	7	GX	JAR	U	SEVERE	LC1-C4
B	29	30	Ditch	1	61	GX	JAR	B	SEVERE	MC1-C2
B	29	30	Ditch	1	10	RF	JAR/BOWL	U	SEVERE	MC1-C2
B	40	42	Ditch **5**	1	3	SG	JAR/BOWL	U	SEVERE	C1-C4
B	43	46	Ditch **5**	1	1	SASG	DISH	U	SEVERE	M/LC1
B	43	46	Ditch **5**	1	1	WX	JAR/BOWL	U	VERY SEVERE	NCD
B	57		Layer	1	1	RF	JAR/BOWL	U	VERY SEVERE	C2
B	58		Layer	1	16	GX	JAR/BOWL	U	SEVERE	MC1-C2
B	58		Layer	1	8	OX	JAR/BOWL	U	SEVERE	MC3-EC5
B	58		Layer	3	14	RF	JAR/BOWL	U	SEVERE	C2-C4
B	58		Layer	1	9	RF	DISH/PLATTER	R	SEVERE	MC1-MC2
B	58		Layer	1	18	WX	JAR	R	MILD	C2-C3

Table 4 Roman pottery catalogue

Key: B = base, C= century, E = early, FLAG = flagon, L= Late, Mid = mid, MJAR = medium mouthed jar, R = rim, SJAR = storage jar, U = undecorated body sherd. (For fabric codes see RB pot Table 2)

B.3 Flint

By Anthony Haskins

Introduction

B.3.1 A small assemblage of forty-nine struck flints was submitted for analysis.

Methodology

B.3.2 For the purposes of this report individual artefacts were scanned and then assigned to a category within a simple lithic classification system (Table 5). Unmodified flakes were assigned to an arbitrary size scale in order to identify the range of debitage present within the assemblage. Edge retouched and utilised pieces were also characterised.

Context number			Subsoil Area A	Topsoil Area B	Subsoil Area B	7 <1>	10	12	26	27	37	58	Totals
Phase			NA	NA	NA	2	2	3	3	3	1	3	
TYPE	**SUB TYPE**	**CLASSIFICATION**											
flakes (>50mm)	*secondary*				1								1
flakes (>25mm <50mm)	*secondary*		2	11	5		1	1	1	1	1	1	24
	tertiary		1	1	5			1	1	1	1		11
flakes (>10mm <25mm)	*Primary*												0
	secondary			1							1		2
	tertiary			1	1	1				2			5
Small flakes <10mm						1							1
blades	*secondary*				2								
retouched tools		Edge wear flake		1									1
		Misc. retouched Flake		1									1
		Scraper		1									1
Totals			3	17	14	2	1	2	2	4	3	1	49

Table 5: Flint catalogue

Results

B.3.3 The flint is all struck from a mid to dark greyish-brown to brownish-grey semi-translucent flint with occasional mid and dark grey and greyish-brown inclusions. Cortex where present is largely abraded. Flints show severe signs of abrasion suggesting they have been heavily ploughed at some point and are residual in nature.

B.3.4 The range of debitage suggests later prehistoric flint working, although no truly diagnostic pieces, such as cores or specific tool forms, were recovered. The scars on the dorsal surface of the flint tend to indicate unstructured working using single platform cores. The flakes are generally quite thick and squat and largely struck with a hard hammer.

B.3.5 A single possible end-scraper was recovered. The scraper was poorly made with abrupt retouch on a thick, squat flake.

Discussion

B.3.6 The material recovered seems to be largely residual in nature and heavily abraded suggesting it derived from a ploughed out surface scatter. The flint work is characteristic of a later prehistoric date and although two blade fragments were recovered this is unlikely to be a multi-period assemblage.

B.4 Small Finds

By Chris Faine

B.4.1 The small finds assemblage comprises three objects; an iron horseshoe nail of a type that is likely to be medieval, a second nail that is hand-made but otherwise undiagnostic and a copper alloy coin or token that is work blank and therefore unidentifiable.

B.4.2 SF **1** (Context **54**) Iron horseshoe nail. Badly preserved but probably a “fiddle key type”. Length: 28.9mm. Post-Conquest-Medieval.

B.4.3 SF **2** (Context **1**) Copper alloy coin/token. Worn blank on both sides. Diameter: 26.9 mm. Post-Medieval/Modern

B.4.4 SF **3** (Context **2**) Square section iron nail. Length: 84.9mm Head width: 15.9mm

B.5 Ceramic Building Material

By Sarah Percival

Introduction

B.5.1 A total of 59 pieces of ceramic building material weighing 3.185kg were collected from ten excavated contexts and from unstratified surface collection, subsoil, and natural deposits. The assemblage comprises eighteen pieces of Roman building material including roof and bonding tiles, five fragments of medieval to post medieval date and 35 post medieval pieces, mostly roof tile fragments. One piece is not closely datable, The CBM is fragmentary and mostly small and poorly preserved.

Area	Feature	Context	Feature Type	Spotdate	Quantity	Weight (g)
Area A	33	32	Post Hole	Roman	1	10
Area B	0	2	Sub Soil	Post Medieval	12	190
				Roman	2	101
		26	Spread	Post Medieval	5	282
		56	Natural	Post Medieval	2	24
				Roman	1	4
		58		Medieval/Post Medieval	1	113
				Post Medieval	1	35
				Roman	6	698
	1	1	Topsoil	Post Medieval	8	110
	8	6	Ditch	Post Medieval	1	5
	11	9	Ditch	Post Medieval	1	10

Area	Feature	Context	Feature Type	Spotdate	Quantity	Weight (g)
	13	12	Pit	Medieval/Post Medieval	1	410
				Not closely datable	1	6
				Post Medieval	1	15
				Roman	1	241
	19	18	Ditch	Post Medieval	1	186
				Roman	2	17
	21	20	Pit	Post Medieval	1	82
	23	22	Ditch	Medieval/Post Medieval	3	356
				Post Medieval	1	56
	25	24	Ditch	Post Medieval	1	5
				Roman	2	13
	30	29	Ditch	Roman	2	189
	46	43	Ditch	Roman	1	27
Total					59	3185

Table 6: Quantity and weight of ceramic building material by feature

Methodology

B.5.2 The CBM was counted and weighed by form and fabric and any complete dimensions measured. Abrasion, re-use and burning were also recorded following guidelines laid down by the Archaeological Ceramic Building Materials Group (ACBMG 2002). Terminology follows Brodribb (1987).

Roman

B.5.3 The small Roman assemblage includes fragments from three imbrex and thirteen flat roof or bonding tiles in two pale silty orange fabrics (Table 7). The imbrex are 34mm and 44mm thick. A curved fragment from a possible shaped tile was also recovered.

Fabric	Type	Quantity	Weight (g)
Soft pale orange fine sandy fabric	Bonding tile	1	89
	Imbrex	3	295
Soft pale orange fine sandy fabric with rare quartz	Bonding tile	12	723
	Imbrex	2	193
Total		18	1300

Table 7: Quantity and weight of Roman CBM by fabric

Medieval and Post-medieval

B.5.4 A total of 40 pieces of medieval to post medieval brick and tile were recovered weighing 1.879kg. The assemblage is characterised by the use of dense hard-fired orange sandy fabrics with sparse inclusions (Table 8). One brick is made of a dark purple brown fabric with small white quartz inclusions and may represent an over-fired version of the conventional orange bricks.

B.5.5 The roof tile fragments are flat, almost certainly deriving from peg-tiles and are mostly 11-14mm thick. Floor tile fragments were recovered from four contexts but are too fragmentary to show wear or other signs of use. The floor tiles are between 22mm and 24mm thick.

B.5.6 Five incomplete brick fragments were recovered. The bricks are between 60mm and 63mm thick. One example has mortar and possible limewash adhering.

Spotdate	Fabric	Type	Quantity	Weight (g)
Med/post medieval	Dark pink/purple fine sandy fabric with rare small white quartz inclusions	Brick	1	410
	Dense, hard orange sandy fabric with occasional orange grog and rare red oxide inclusions	Early Brick	3	356
	Hard orange sandy fabric with common fine white quartzite occasionally grey core	Floor Tile	1	113
Post medieval	Hard orange sandy fabric with common fine white quartzite occasionally grey core	Floor Tile	3	324
		Roof tile	17	271
	Hard orange sandy fabric with occasional rounded voids	Roof tile	13	385
	Hard orange sandy fabric with occasional rounded voids and rare red oxide inclusions	Roof tile	1	15
	Poorly mixed fine sandy orange fabric with cream swirls	Brick	1	5
Total			40	1879

Table 8: Quantity and weight of Post Roman CBM by fabric

Discussion

B.5.7 The small redeposited Roman assemblage is derived from a moderately high status building which had a tiled roof, possible hypocaust system and walls. All is abraded and small suggesting that it has been subject to significant post depositional disturbance, comparable with that exhibited by the contemporary pottery assemblage (Lyons above) and may have travelled some distance from its original point of deposition.

B.5.8 The post Roman ceramic building material is largely derived from post medieval tiled buildings consisting largely of flat roof tile fragments with smaller quantities of flooring and walling also recovered.

Appendix C. Environmental Reports

C.1 Animal Bone

By Chris Faine

C.1.1 The animal bone assemblage comprises 1.2kg made up of 40 fragments of which only 11 were identifiable to species. Contexts 10 and 26 contained no identifiable fragments. All fragments were identified as cattle aside from a horse 1st molar and axis from contexts 47 and 58 respectively. Cattle remains consisted almost entirely of tibiae and other lower limb elements (metapodia/phalanges etc), along with a partial adult mandible from context 20 and femur from context 12. This a small assemblage representing general settlement waste, possibly derived from a midden that had later been spread on fields as manure.

C.2 Environmental samples

By Rachel Fosberry

Introduction

C.2.1 Eight bulk samples (260 litres) were taken in order to assess the quality of preservation of plant remains, samples were 40 litres in size or smaller where insufficient soil was present. Features sampled include a Roman linear ditch 120m in length; six samples were taken from features **8**, **50**, **49**, **46** and **5**. Two colluvium layers 26 and 28 were also sampled and are thought to be post-medieval or modern in date.

Methodology

C.2.2 One bucket (8 litres) of each bulk sample was processed by water flotation (using a modified Siraff three-tank system) for the recovery of charred plant remains, dating evidence and any other artefactual evidence that might be present. The floating component (flot) of the samples was collected in a 0.3mm nylon mesh and the residue was washed through 10mm, 5mm, 2mm and a 0.5mm sieve. Both flot and residues were allowed to air dry. A magnet was dragged through each residue fraction prior to sorting for artefacts. Any artefacts present were noted and reintegrated with the hand-excavated finds. The dried flots were subsequently sorted using a binocular microscope at magnifications up to x 60 and an abbreviated list of the recorded remains are presented in Table 9. Four samples from ditch **5** were subsequently chosen for a more detailed study of the ratios of grains to chaff and to determine whether the distribution of this material within the ditch was uniform along its length. The results of this full quantification are presented in Table 10.

C.2.3 Identification of plant remains is with reference to the *Digital Seed Atlas of the Netherlands* and the author's own reference collection. Nomenclature is according to Zohary and Hopf (2000) for cereals and Stace (1997) for other plants. Carbonized seeds and grains, by the process of burning and burial, become blackened and often distort and fragment leading to difficulty in identification. Plant remains have been identified to species where possible. The identification of cereals has been based on the characteristic morphology of the grains and chaff as described by Jacomet (2006).

Quantification

C.2.4 For the purpose of the initial assessment, items such as seeds, cereal grains and legumes have been scanned and recorded qualitatively according to the following categories

= 1-10, ## = 11-50, ### = 51+ specimens #### = 100+ specimens

Items that cannot be easily quantified such as charcoal and magnetic residues have been scored for abundance

+ = rare, ++ = moderate, +++ = abundant

C.2.5 For the samples that have been fully quantified, individual cereal grains, chaff elements and seeds have been identified according to their morphology and counted. Fragmented cereal grains have been counted if over half of the grain has survived (embryo ends only).

Results

C.2.6 All of the five samples taken from ditch **5** contain similar charred assemblages of spelt (*Triticum spelta*) wheat grains and chaff with occasional weed seeds. The grains are less frequent than the chaff elements and occasional grains have a shrunken appearance with a dorsal groove that is characteristic of a grain that has germinated. Detached embryos are also present and they have the trident-shaped morphology typical of spelt. The chaff elements of these assemblages are mainly comprised of glume bases of a hulled wheat variety. Some are identifiable as spelt wheat but the degraded nature of many of the glume bases and spikelet forks precludes identification between emmer (*T. dicoccum*) and spelt wheat, although the absence of any identified emmer chaff suggests that the degraded chaff is likely to be that of spelt. Rachis (stem) fragments are similarly difficult differentiate. Charred stems (usually present as charred culm nodes) are notably absent.

C.2.7 Charred weed seeds occur occasionally and only small seeds (<3mm) are present. These include docks (*Rumex* sp.), clover (*Trifolim* sp.), grasses (Poaceae) vetch/tare (*Vicia/Lathyrus* sp.) and stinking mayweed (*Anthemis cotula*).

C.2.8 Sample 7 from colluvial layer 26 spread over ditch **5** contained molluscs only. Sample 8 from colluvial layer 28 contains a single charred spelt grain and a spikelet fork both of which are likely to be residual.

Sample No.	Context No.	Cut No.	Feature Type	Sample Size (L)	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Weed Seeds	Snails from flot	Charcoal <2mm	Charcoal > 2mm	Large animal bones	Pottery	Flake hammerscale	Spheroidal hammerscale
1	7	8	Ditch group 5	20	8	40	##	###	#	0	++	+	#	0	+	+
2	51	50	Ditch group 5	40	8	20	##	###	#	0	+++	+	0	0	+	0
3	47	49	Ditch group	20	8	15	##	###	#	0	++	+	0	0	+	0

Sample No.	Context No.	Cut No.	Feature Type	Sample Size (L)	Volume processed (L)	Flot Volume (ml)	Cereals	Chaff	Weed Seeds	Snails from flot	Charcoal <2mm	Charcoal > 2mm	Large animal bones	Pottery	Flake hammerscale	Spheroidal hammerscale
			5													
4	43	46	Ditch group 5	40	8	15	##	###	#	0	++	0	0	#	+	0
5	14	15	Ditch group 5	20	8	20	##	###	#	0	++	+	0	0	+	0
6	4	5	Ditch group 5	40	8	40	##	###	#	0	+++	+	#	#	+	0
7	26		Layer	40	8	10	0	0	0	###	+	0	0	0	+	+
8	28		Layer	20	8	10	#	#	0	0	+	0	0	0	0	0

Table 9: Environmental samples from SUY139

Sample No.		2	4	5	6
Context No.		51	43	14	4
Cut No.		50	46	15	5
Cereals					
Hordeum vulgare L. caryopsis	domesticated Barley grain		4		
Triticum cf. spelta L. caryopsis	Spelt Wheat grain	19	37	33	35
Triticum cf. spelta L. germinated caryopsis	Germinated Spelt Wheat grain	2	1	1	4
cereal indet. Caryopsis	unidentified cereal grain	9	34	15	7
Cereal chaff					
Triticum dicoccum Schübl./ spelta L. spikelet fork	Emmer or Spelt Wheat chaff		2		3
Triticum spelta L. glume base	Spelt Wheat chaff	132	168	27	106
Triticum dicoccum Schübl./ spelta L. glume base	Emmer or Spelt Wheat chaff	484	936	81	210
Triticum dicoccum Schübl./ spelta L. rachis internode	Emmer or Spelt Wheat chaff	544	496	33	43
cereal indet. germinated embryo		3	18	9	13
cereal indet. Awn		4		3	
Dry land herbs					
Anthemis cotula L. achene	Stinking mayweed		3	2	4
Bromus spp. caryopsis	Bromes	1	3	7	1
Fallopia convolvulus L.Á. Löve achene	Black-bindweed			1	1
medium Poaceae indet. [3-4mm]	medium-seeded Grass		8	3	13

Sample No.		2	4	5	6
Context No.		51	43	14	4
Cut No.		50	46	15	5
	Family				
Polygonaceae sp. Achene	Knotgrass			1	
Rumex sp. achene	small-seeded Docks	1	12	1	7
small Trifolium spp. [<1mm] seed	small-seeded Clovers		1		1
small Vicia/Lathyrus sp. [<3mm] seed	small-seeded Vetches/Peas		1		1

Table 10: Quantification of selected samples from ditch 5

Discussion

C.2.9 The environmental samples have produced significant charred plant assemblages that can contribute to the interpretation of this site. Carbonised hulled wheat chaff elements predominate in the assemblages taken from the entire length of the 120m long Roman ditch indicating that substantial burning of cereal processing waste has taken place in the near vicinity. The chaff is comprised of glume bases, rachis fragments and occasional spikelet forks, all of which are the elements that enclose the grain and the attachment the spikelet to the cereal stem. There are two species of hulled wheat; spelt and emmer and, although they have since been found to be genetically quite different the chaff elements have very similar morphology. Spelt glume bases can usually be distinguished through their prominent veins than run longitudinally along the length of the glume, a keel on the third vein and a distinctive attachment scar. Emmer glume bases tend to be narrower, have less pronounced veins and two acute-angled keels (as described by Jacomet, van der Veen). Both emmer and spelt wheat are known as hulled wheats because the grain is enclosed in tight outer chaff that needs to be removed to release the grain. This was achieved by lightly parching and then pounding the spikelets resulting in a substantial amount of fine, dry chaff that could subsequently be used as fuel.

C.2.10 Whilst the large quantity of glume bases present in ditch **5** is indicative of the mass processing and separation of glumes following the dehusking of spelt wheat, the charred assemblage present is likely to be the result of the subsequent use of the cereal processing waste as fuel, most probably in a corn-drier, although no structures were identified by a geophysics survey that was undertaken on the site so any such structure would be beyond the limits of the development area. Corn-driers are features that are often found close to areas of cultivation, but some distance from settlement, in the Roman period. The structures of the driers vary in design from elaborate T-shapes to simple oblongs and their function is likely to be multi-purpose including the drying of freshly-harvested grain for storage, the parching of spiklets prior to processing, the parching of cleaned grain prior to grinding and also for the malting of grain for brewing (van der veen,303). Germinated grains and detached embryos are present in all of the assemblages and are likely to represent the use of spelt for malting.

C.2.11 A possible interpretation of the charred assemblage being a result of the crop having been burnt prior to harvest is unlikely since if this had been the case, the resultant charred assemblage would be expected to comprise a ratio of grain to glume of 1:2 and the assemblage would include numerous charred cereal stems (straw) along with the seeds of any weeds that would have been growing amongst the cereal crop.

Experiments on the charring of modern cereals (Boardman and Jones) has shown that cereal straw is highly likely to be destroyed in a fire although the culm nodes (stem joints) are usually well preserved. No culm nodes were noted within any of the samples. The ratios of grain to glumes averages at 1:10 although there is variation in these ratios along the length of the ditch; the samples from the southern end of the ditch are greatest at 1:20 (Sample 2) and 1:15 (Sample 5). Assemblages of fine chaff, fewer grains and small weed seeds are described by Hillman (through ethnographic observations) as the fine-sievings cleaned from the grain after dehusking (Hillman 1981, 136). This is further evidence that the cereal crop has not been burnt prior to harvest.

Appendix D. Bibliography

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APPENDIX E. OASIS REPORT FORM

All fields are required unless they are not applicable.

Project Details

OASIS Number	oxfordar3-194413		
Project Name	Archaeological Excavation Harps Close Meadow Waldingfield Road Sudbury Suffolk		
Project Dates (fieldwork) Start	22-11-2014	Finish	11-12-2014
Previous Work (by OA East)	No	Future Work	Unknown

Project Reference Codes

Site Code	SUY 139	Planning App. No.	B/12/01198/FUL
HER No.	SUY 139	Related HER/OASIS No.	SUY 117/ suffolkc1-132948

Type of Project/Techniques Used

Prompt: Direction from Local Planning Authority - PPS 5

Please select all techniques used:

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

Monument Types/Significant Finds & Their Periods

List feature types using the NMR Monument Type Thesaurus and significant finds using the MDA Object type Thesaurus together with their respective periods. If no features/finds were found, please state "none".

Monument	Period	Object	Period
Ditch	Roman 43 to 410	Pottery/CBM	Roman 43 to 410
	Select period...		Select period...
	Select period...		Select period...

Project Location

County	Suffolk	Site Address (including postcode if possible)	
District	Babergh	Harps Close Meadow, Waldingfield Road, Sudbury, Suffolk.	
Parish			
HER	Suffolk		
Study Area	0.84ha	National Grid Reference	TL 879 421

Project Originators

Organisation	OA EAST
Project Brief Originator	Dr Matthew Brudenell Suffolk County Council
Project Design Originator	Myk Flitcroft CgMs Limited
Project Manager	Aileen Connor
Supervisor	Michael Tam Webster

Project Archives

Physical Archive	Digital Archive	Paper Archive
OA East	OA East	OA East
SUY 139	SUY 139	SUY 139

Archive Contents/Media

	Physical Contents	Digital Contents	Paper Contents
Animal Bones	☒	☐	☐
Ceramics	☒	☐	☐
Environmental	☒	☐	☐
Glass	☐	☐	☐
Human Bones	☐	☐	☐
Industrial	☐	☐	☐
Leather	☐	☐	☐
Metal	☒	☐	☐
Stratigraphic		☐	☐
Survey		☒	☒
Textiles	☐	☐	☐
Wood	☐	☐	☐
Worked Bone	☐	☐	☐
Worked Stone/Lithic	☒	☐	☐
None	☐	☐	☐
Other	☐	☐	☐

Digital Media	Paper Media
☒ Database	☐ Aerial Photos
☒ GIS	☒ Context Sheet
☐ Geophysics	☒ Correspondence
☒ Images	☐ Diary
☒ Illustrations	☒ Drawing
☐ Moving Image	☐ Manuscript
☐ Spreadsheets	☐ Map
☒ Survey	☒ Matrices
☒ Text	☐ Microfilm
☐ Virtual Reality	☐ Misc.
	☐ Research/Notes
	☒ Photos
	☒ Plans
	☒ Report
	☒ Sections
	☒ Survey

Notes:

The Excavation was carried out after a previous evaluation by Suffolk County Council. The results were possible pre historic layers, Roman Ditches, Pits and Spreads, post medieval drainage ditches/gully and post holes

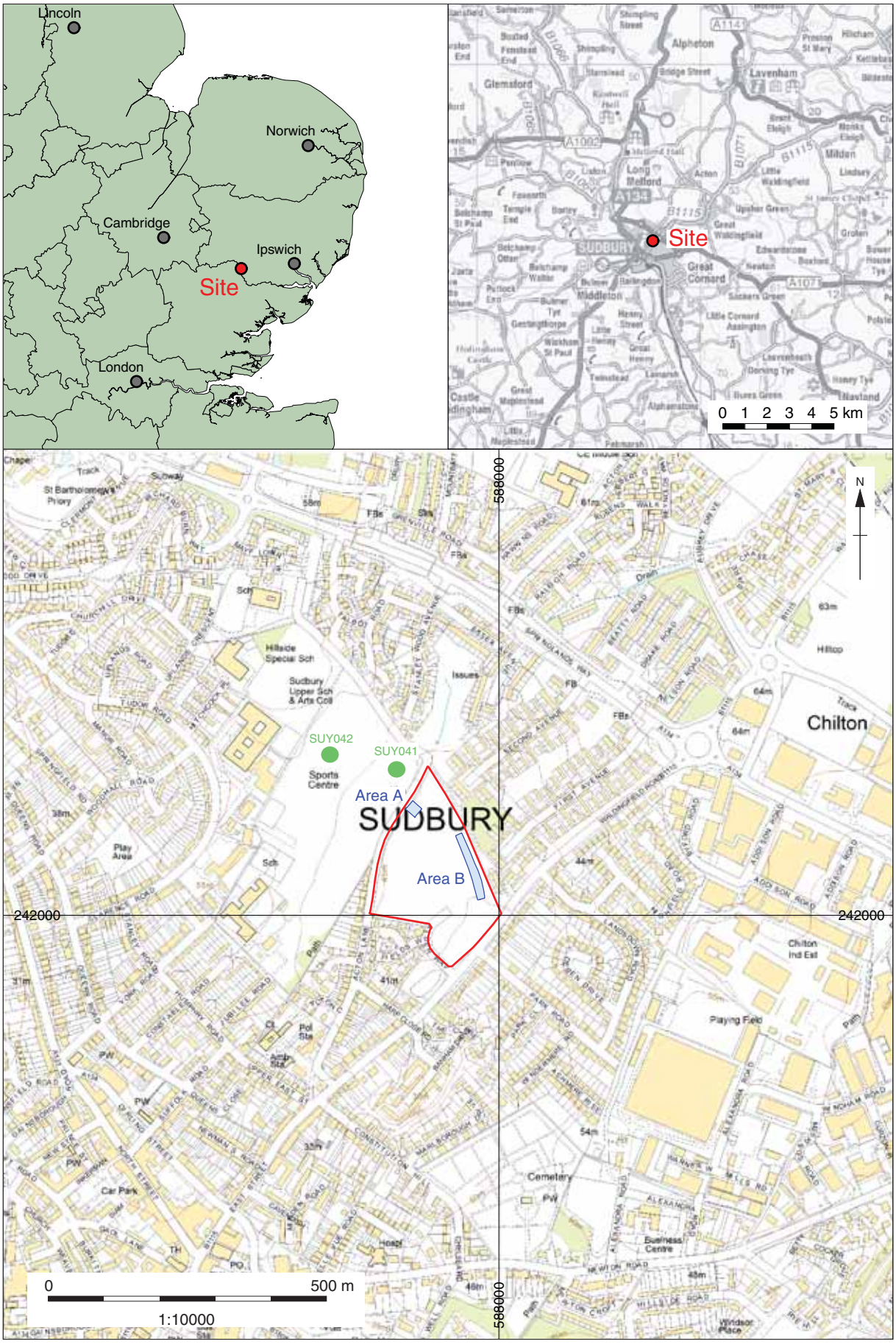

Figure 1: Site location showing areas of excavation (blue) in development area (red) and HER data

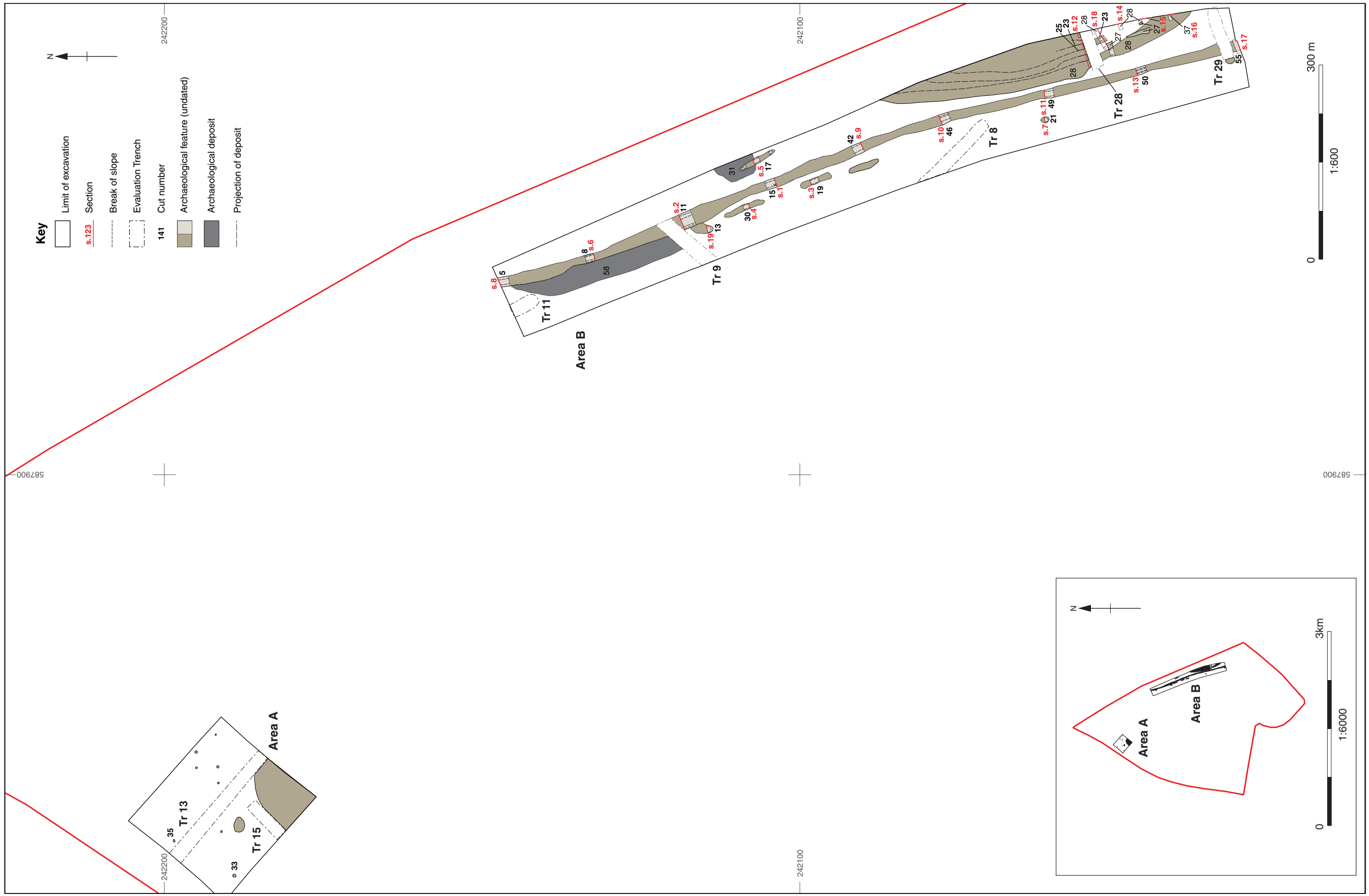

Figure 2: Detail plan of Areas A and B

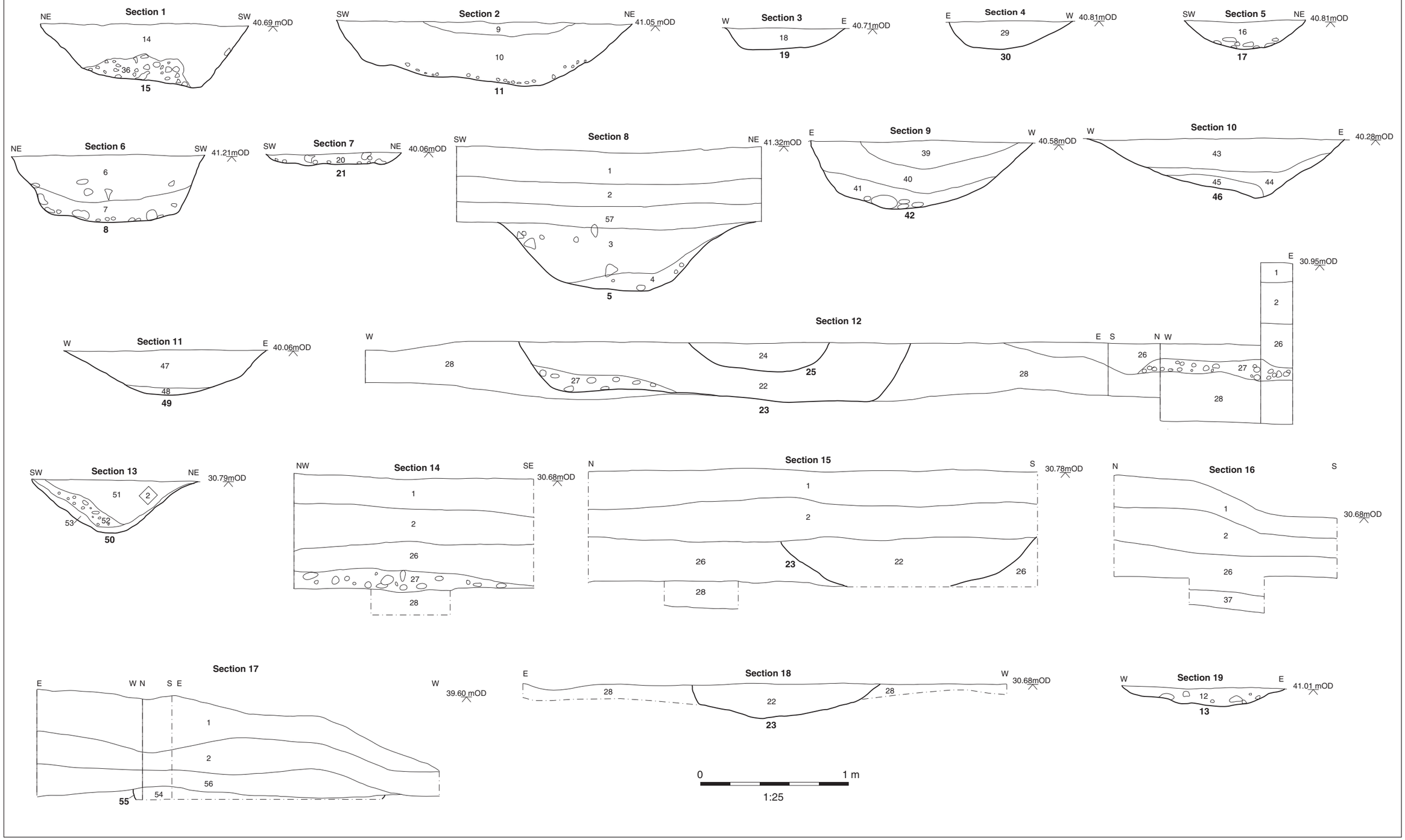

Figure 3: Sections

Plate 1: General shot of Area A

Plate 2: General shot of Area B showing Ditch **5**

Plate 3: Detail of Ditch **17**

Plate 4: Section across Ditch **5**

Plate 5: Section across Ditch **11**

Plate 6: Section across Ditch **49**

Plate 7: Section across hollow feature showing layers **26** & **28**, and ditches **23** & **25**

Plate 8: Section detail of south east side of Area B showing colluvial layer **26**

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