Cotswold Archaeology

Land East of Halstead Road
Kirby Cross
Essex

Archaeological Excavation

for
Linden Limited, Wellbeck Strategic Land II LLP and Elizabeth Honor Clarke

CA Project: 661074
CA Report: 661074_1
Accession Number: COLEM: 2017.97

January 2019

Andover Cirencester Exeter Milton Keynes Suffolk

Land East of Halstead Road
Kirby Cross
Essex

Archaeological Excavation

CA Project: 661074
CA Report: 661074_1
Accession Number: COLEM: 2017.97

Document Control Grid						
Revision	Date	Author	Checked by	Status	Reasons for revision	Approved by
A	31/05/18 05/01/19	Emily Stynes/ Anna Moosbauer	APS	DRAFT	-	APS

CONTENTS

LIST OF ILLUSTRATIONS

SUMMARY

Project Name:	Land east of Halstead Road, Kirby Cross
Location:	Kirby Cross, Essex
NGR:	TM 22314 21126
Type:	Excavation
Date:	28 February to 21 March 2018
Planning Reference:	15/01234/OUT
Location of Archive:	To be deposited with Colchester & Ipswich Museum Service
Accession Number:	COLEM: 2017.97
Site Code:	FWHR18

An archaeological excavation was undertaken by Cotswold Archaeology in February and March 2018 on land east of Halstead Road, Kirby Cross, Essex. The work was carried out at the request of Linden Limited, Wellbeck Strategic Land II LLP and Elizabeth Honor Clarke, and comprised the excavation of six areas, totalling 1035m2, within the overall 18.86ha development site. Remains of prehistoric, possible late prehistoric to Roman or Roman to Early Saxon, medieval and post-medieval date were identified.

A single unurned cremation of Middle Bronze Age date represents the earliest activity encountered on the site. Possible late prehistoric to Roman or Roman to Early Saxon activity comprised two intercutting ditches that produced a single sherd of possible Late Iron Age or Early Saxon pottery from each ditch, and a small pit containing two sherds of worn and abraded Romano-British grey ware. However, the small quantity of artefactual material recovered coupled with its undiagnostic and abraded nature raises the potential for the material to be residual and these remains to be later, possibly medieval, in date.

Medieval activity, focused in the eastern part of the site, appears to have begun around the beginning of the 12th century, with a lack of later pottery forms indicating that it had ceased by the end of the 13th or very early 14th century. Ditches, possibly forming part of a trackway or enclosure system, and a cluster of small pits and postholes were encountered. Waste from a variety of crops indicates that processing was taking place nearby while the pottery assemblage, including cooking pots, jugs and jars in both local and finewares, is suggestive of settlement in the immediate vicinity.

Post-medieval ditches encountered within the Site correspond with now-removed field boundaries depicted on historic maps.

1. INTRODUCTION

1.1 In February and March 2018, Cotswold Archaeology (CA) carried out an archaeological excavation at the request of Linden Limited, Wellbeck Strategic Land II LLP and Elizabeth Honor Clarke, on Land east of Halstead Road, Kirby Cross, Essex, CO13 0L (centred at NGR: TM 22314 21126; Fig. 1).

1.2 Planning permission has been granted on appeal (Appeal Ref: APP/P1560/W/15/3140113) for residential development comprising *the erection of up to 240 dwellings with a community hub including either a 40-bed space care home (Class C2) or a healthcare facility (Class D1), together with access from Halstead Road, Woburn Avenue and Buckfast Avenue; along with parking, green infrastructure, structural landscaping, biodiversity enhancements, drainage and other related infrastructure and services provision*. Permission is subject to a suite of conditions, one of which pertains to a programme of archaeological works. Condition 15 states:

15) No development shall take place on the site until a Written Scheme of Archaeological Investigation shall have been submitted to and approved in writing by the local planning authority. The scheme shall include:
a) the programme, including phasing, and methodology of site investigation and recording;
b) the programme for post investigation assessment;
c) the provision to be made for analysis of the site investigation and recording;
d) the provision to be made for publication and dissemination of the analysis and records of the site investigation;
e) the provision to be made for archive deposition of the analysis and records of the site investigation; and
f) the nomination of a competent person or persons/organization to undertake the works set out within the Written Scheme of Investigation.

1.3 Following the completion of a trial trench evaluation undertaken in December 2017 that identified archaeological remains in a number of areas (CA 2018a and section 2 below), the requirement for mitigation works was identified by Essex County Council Place Services (ECC Place Services – Teresa O'Connor), in their capacity as archaeological advisors to the local planning authority, Tendring District Council. This comprised a requirement for archaeological excavation in six areas where

remains would be damaged or destroyed by the development. A detailed *Written Scheme of Investigation* (WSI) for these works was subsequently produced by CA (2018b) and approved by ECC Place Services. The fieldwork also followed the *Standard and guidance for archaeological excavation* (CIfA 2014); the *Management of Research Projects in the Historic Environment (MORPHE): Project Manager's Guide* and accompanying *PPN3: Archaeological Excavation* (Historic England 2015). The project was monitored by ECC Place Services, including a site visit during the fieldwork element of the project, on 8 March 2018.

The site

1.4 The development site comprises part of a single, large arable field (until recently, two separate fields), encompassing an area of approximately 18.86ha. The site is bordered to the north and east by agricultural and open land, to the south by various residential developments fronting onto Frinton Road (the B1033), and to the west by the gardens of properties fronting Halstead Road. The site stands at a general elevation of 23m above ordnance datum (AOD) dropping to 20m AOD at its northern edge, on a flattish plateau also containing the settlement of Kirby Cross to the south, Frinton-on-Sea to the east and Great Holland to the south-west. To the north the land drops towards The Wade, part of an extensive tract of tidal creeks and salt marsh.

1.5 The underlying geology is mapped as part of the Thames Group; silty clay/mudstone, sandy silts and sandy clayey silts of marine origin of Eocene date. These deposits are overlain by occasional capping of Quaternary Cover Sand comprising windblown sand and sand and gravel of the Kesgrave Catchment Subgroup. The site itself is almost entirely underlain by the Thames Group formation comprising clay and silt (SLR 2015).

2. ARCHAEOLOGICAL BACKGROUND

2.1 The archaeological and historical background of the site has been presented in an Historic Environment Assessment produced by SLR Consulting (SLR 2015). The following section is summarised from this source and reference to the Essex Historic Environment Record (HER) and other historical records via online sources (HER numbers in parenthesis). Cropmark features are recorded within a large part of the site, with a further, notable, concentration beyond the eastern boundary, and air

photo mapping and interpretation has also been undertaken (Deegan 2017). The development area was also subject to a field evaluation by trial trenching (CA 2018a), in December 2017, and the results of this work are also outlined below.

Prehistoric and Roman

2.2 The sands and gravel of the Kesgrave Catchment subgroup that are present in the wider vicinity of the site have the potential to contain artefactual material and palaeoenvironmental remains of Palaeolithic date and worked flint of Late Upper Palaeolithic date has been found approximately 1km north of the site. Early prehistoric activity in the wider vicinity of the site is also evidenced by the discovery of flint tools of Mesolithic, Neolithic and Bronze Age date, mainly chance/ isolated discoveries from areas/ deposits exposed as a result of coastal erosion, also to the north. Further stray finds of flint tools have been made to the south of the site, loosely clustered around Great Holland.

2.3 Numerous cropmarks are recorded within the site and adjacent areas, elements of which have been interpreted as evidence of an extensive field system and trackway. A ring-shaped feature approximately 17m diameter and further ditches defining part of a series of rectangular enclosures are recorded to the east of the site. While some of the cropmarks correspond with field boundaries and trackways shown on historic maps of the site others are likely to be earlier in date and evidence for later prehistoric and Roman activity. To the east of Great Holland a cluster of cropmarks includes possible, irregular, roughly rectilinear enclosures, two ring ditches and two small rectangular features that may be large buildings or small enclosures associated with four small penannular features. Intersections and orientations suggest that more than one phase of activity is represented and the form suggests a late prehistoric or Roman date. A single Roman coin has been found within the site.

Medieval

2.4 Domesday Book indicates tenurial centres within the locality at The Naze (Walton-on-the-Naze), Birch Hall, Great Holland and Frinton.

2.5 The names of the ancient parishes within a 1km radius of the site reflect ancient estate fragmentation: ‘Great’ and ‘Little’ Oakley, Clacton and Holland, two parts of Frinton (Frinton hamlet and Frinton Lodge on the historic mapping) and a series of names ending in ‘le-Soken’: Kirby, Thorpe and Walton. It is likely that these parishes reflect sub-divisions of earlier, larger Domesday estates.

2.6 The settlement pattern was dispersed: the documentary evidence is supplemented by the distribution of listed buildings of this period: church, public house and dwellings in Kirby le Soken, dwellings in Kirby Cross and Wolton Ashes, churches in Great Holland and Frinton, which was a tiny hamlet in this period. The distribution of medieval buildings in Kirby Cross along the east to west road (and less clearly in Kirby-le-Soken) and indicates their importance of as far back as medieval times.

2.7 The 1st series Ordnance Survey map names the roads passing through these settlements 'Upper Street' (passing through Kirby Cross) and 'Lower Street' (passing through Kirby-le- Soken).

Post-medieval and modern

2.8 The cropmarks indicative of a field system and trackway coincide with boundaries depicted on late-19th century maps of the site. Elsewhere within a 1km radius of the site fragments of similar fields are thought to have originated in the medieval or post-early medieval period and survived into the 19th century.

Archaeological evaluation (trial trenching)

2.9 An archaeological evaluation was undertaken by Cotswold Archaeology in December 2017 (CA 2018a). Undated activity comprised an unurned cremation burial (Trench 22) in the western part of the site. A single feature of probable late prehistoric date was identified in trench 48 together with an area of medieval activity in the eastern part of the site, in trenches 46 and 53, comprising agricultural boundary ditches and a cluster of pits. The trackway and field system ditches noted above were, as expected, generally found to date to the post-medieval and modern periods.

3. AIMS AND OBJECTIVES

3.1 The objectives of the archaeological mitigation were to:

- record the nature of the main stratigraphic units encountered;
- assess the overall presence, survival and potential of structural and industrial remains;

- assess the overall presence, survival, condition, and potential of artefactual and ecofactual remains.

3.2 The specific aims of the work were to:

- record any evidence of past settlement or other land use;
- recover artefactual evidence to date any evidence of past settlement that may be identified;
- sample and analyse environmental remains to create a better understanding of past land use and economy.

4. METHODOLOGY

4.1 The fieldwork followed the methodology set out within the WSI (CA 2018b). The location of the excavation areas was agreed with ECC Place Services, informed by the results of the preceding evaluation (CA 2018b). The excavation areas, 1 to 6 and totalling 1035m^2, were set out on OS National Grid (NGR) co-ordinates using Leica GPS and surveyed in accordance with CA Technical Manual 4: *Survey Manual*. The excavation areas were scanned for live services by trained CA staff using CAT and Genny equipment, in accordance with the CA *Safe System of Work for avoiding underground services*.

4.2 Topsoil and subsoil was removed from the excavation areas using a mechanical excavator equipped with a toothless grading bucket, working under archaeological supervision. Archaeological features thus exposed were hand-excavated and all features were planned and recorded in accordance with CA Technical Manual 1: *Fieldwork Recording Manual*. A minimum of 10% by length of each ditch was excavated. Discrete features such as pits and postholes were half-sectioned (50% excavation). No archaeological remains were exposed in Area 2. An unurned cremation exposed in Area 5 was fully excavated and 100% sampled.

4.3 Deposits were assessed for their environmental potential and suitable features (see Appendix C) were sampled in accordance with CA Technical Manual 2: *The Taking and Processing of Environmental and Other Samples from Archaeological Sites*.

4.4 All artefacts recovered from the excavation were retained in accordance with CA Technical Manual 3: *Treatment of finds immediately after excavation*.

5. RESULTS (FIGS 3–9)

5.1 This section provides an overview of the excavation results; detailed summaries of the contexts, finds and environmental samples (biological evidence) are to be found in Appendices A-F.

5.2 Based on the available dating evidence and stratigraphical analysis of the features, a total of four distinct phases of activity have been identified. Some features could not be definitively assigned a phase based on stratigraphy or dating evidence and remained unphased. The overall phasing comprises:

- Geology
- Phase 1: Early Prehistoric
- Phase 2: Late prehistoric – Roman/ Roman – Early Saxon(?)
- Phase 3: Medieval
- Phase 4: Post-medieval
- Unphased/ undated

Geology

5.3 The geological substrate was encountered across the site at depths of up to 0.61m, and comprised light grey brown sandy clay with occasional patches of mottled yellow gravel rich deposits. Across the site, the geological substrate and the majority of archaeological features were sealed by subsoil deposits of varying thicknesses, with a maximum thickness towards the west of 0.31m. The subsoil was in turn sealed by topsoil measuring 0.30m thick.

Phase 1, Early Prehistoric (Figs 5 and 7)

5.4 The earliest phase of archaeological activity within the site comprised the isolated, unurned cremation burial of a single adult, encountered in Area 5. Pit 5002, located near the southern limit of excavation, just to the west of modern ditch 5005, measured 0.35m long, 0.32m wide and 0.04m deep with a shallow bowl shape profile. The single fill, 5003, comprised a dark brown grey sandy clay deposit with frequent burnt bone and charcoal inclusions, but contained no other finds. A

radiocarbon age of 3039 ± 25 yr (calibrated radiocarbon age 95.4% probability 1393–1336 cal. BC (32.3%) 1324–1219 cal. BC (63.1%)BP) indicates a Middle Bronze Age date (see Appendix G). A detailed analysis of the cremated remains can be found in Appendix E.

Phase 2: Late prehistoric – Roman/ Roman – Early Saxon(?) (Figs 5 and 8)

5.5 Dating for this phase of activity, comprising two intercutting ditches and a single pit is problematic, consisting of only four sherds of pottery, two of which are noted to be either late prehistoric or Early Saxon(?) and two Roman but heavily abraded and possibly residual in their context of origin (see below and Appendix B).

5.6 Pit 6005 was located in the western half of the excavation area, measuring 1.15m long, 1.15m wide and 0.30m deep with a bowl-shaped profile. The single fill, 6006, comprising mid brown-grey sandy clay with occasional charcoal inclusions, produced two fragments of heavily abraded Romano-British pottery.

5.7 Two intercutting ditches, 6007 and 6009, were also encountered in the western part of Area 6, running on a roughly north-south alignment. The earlier of the two ditches, 6009, measured 1.25m wide and 0.35m deep with a U-shaped profile and a pale brown grey clay silt fill (6010). A single fragment of probable late prehistoric pottery was recovered from the fill. Ditch 6009 was truncated by likely recut 6007, which measured 1.3m wide and 0.39m deep, with a slightly uneven U-shaped profile, and was filled by a single deposit of light brown grey clay silt, 6008, that produced a sherd of probable Early Saxon/ possible late prehistoric pottery (see Appendix B).

Phase 3, Medieval (Figs 3, 4, 6 and 7)

5.8 Medieval activity within the site was centred on Area 1, where a number of boundary ditches and pits were encountered.

5.9 Ditch 3 extended from the southwest corner of Area 1 for a length of 30m, running on a northeast-southwest alignment, near-parallel to the southern limit of excavation, before terminating. The feature measured 1.4m wide and a maximum of 0.35m deep with a shallow and slightly uneven U-shaped profile filled with a mid brown grey sandy clay. A small assemblage of 13th to 14th century pottery was recovered from three interventions along the line of the ditch.

5.10 Approximately 4m to the north and running parallel to Ditch 3, Ditch segment 4 extended 16.5m across the centre of Area 1. The feature was 1.13m wide and 0.36m deep with a U-shaped profile, filled by a primary deposit of light brown grey clay sand overlain by a possible deliberate backfill of dark brown grey sandy clay with a high proportion of charcoal inclusions. This produced fragments of 11th to 13th century pottery.

5.11 Ditch 5 appears to be a continuation of the line demarcated by Ditch 4, being orientated on the same alignment, with a gap of 1.5m separating the two ditches suggesting a possible entranceway. Ditch 5 measured 1.3m wide and 0.5m deep with a U-shaped profile, very flat base and steep sides. Two fills were recorded, the lower fill being dark black brown sandy clay with occasional charcoal inclusions, and the upper fill a mid grey brown sandy clay. Interventions along the ditch also produced pottery of the 11th – 13th century date.

5.12 Ditch segment 6 was observed running on a north-west/south-east alignment, situated in the gap between Ditches 4 and 5. The feature was 0.85 wide by 0.33 deep, with a V-shaped profile, and filled by a single deposit of mid grey clay silt with some pebble inclusions that again produced pottery of 12th to 13th century date.

5.13 Ditch segment 7 was observed on a parallel alignment to that of Ditch 6, approximately 7.5m further east. The southern end was cut by Ditch 3, and the terminus at the northern end appeared to respect Ditch 4. Ditch 7 measured 0.85m wide by 0.09m deep, with a shallow U-shaped profile filled by a single deposit of mid grey clay silt containing pottery of 11th to 14th century date. Given the stratigraphic relationship with Ditch 3 a 13th century date for the feature seems likely. Bulk environmental samples taken from ditches 3, 4 5 and 6 suggest that they had been used to dump crop processing waste from a number of crops and processing episodes, possibly as they were close to the areas where the processing was taking place (see Appendix F).

5.14 Three shallow pits, 1023, 1025 and 1051, were found in the small space partially enclosed by Ditches 3, 4 and 7, in the eastern half of Area 1 (see Fig 3). The features comprised circular cuts measuring up to 1.25m in diameter and surviving to maximum depths of 0.2m. All contained similar fills, consisting of mid brown grey silt clay, and all contained pottery of 11th to 13th century date.

5.15 Posthole 1031 was located adjacent to the western side of Ditch 7. Measuring 0.41m in diameter, it was filled by a mid blue grey silt clay deposit that contained 11th to 13th century pottery. The feature appears to be mirrored by undated posthole 1027, with a very similar size and shape (see 5.22 below), located on the eastern edge of Ditch 7. It is likely that the two features are contemporary and may indicate the location of posts/ supports for a simple structure or framework over the north end of the ditch. The north terminus of Ditch segment 6 (1029) and posthole 1031 produced cross-fitting sherds from the same early medieval ware vessel, indicating that they were backfilled at the same time.

5.16 In Area 3, north–south orientated ditch 3003 measured 1.25m wide by 0.28m deep, with gradual sloping sides and a concave base. It contained a single fill of light brown grey sandy clay that produced a sherd of medieval pottery of 13th/14th century date. The ditch extended out of the Area to the south and north, where it had also been investigated in Trench 53 as ditch 5303, again producing medieval pottery, but was not seen in Area 2, further to the north. A second ditch in Trench 53, ditch 5305, running parallel to ditch 5303, was not seen in either Area 2 or 3.

Phase 4, Post-medieval

5.17 A number of ditches in Areas 1, 4 and 5 were observed to cut the subsoil deposits, suggesting a relatively recent date. Several match cropmarks of late 19th century field boundaries that are recorded on historic mapping of the period (see SLR 2015).

5.18 Ditch 2 was observed crossing the centre of Area 1 on a northwest-southeast alignment parallel to Ditch 1. Measuring 1m wide and 0.23m deep with a shallow U-shaped profile, the feature contained a lower fill of mid yellow grey sandy clay, overlain by an upper fill of dark brown grey sandy clay. Pottery of 13th/14th century date was recovered from the fill but is likely to derive from underlying medieval features given that Ditch 2 cuts across Ditches 3 and 4.

5.19 Ditch 4003 was only partially exposed, running on a northeast-southwest alignment along the northern limit of excavation of Area 4. No finds were recovered from the feature.

5.20 Ditch 4005 in Area 4 and ditch 5007 in Area 5 form part of the same north-south aligned boundary, which had also been recorded previously during the evaluation of

the site (Trench 22, see Ca 2018a). The ditch measured 1.6m wide and 0.35m deep, with a single fill comprising dark grey brown silty sandy clay.

5.21 In Area 5, ditch 5005 ran parallel to ditch 5007, approximately 5m to the east, and measured 0.76m wide by 0.36m deep. It contained a single deposit of mid grey sandy clay.

Unphased/ undated

5.22 Ditch 1, measuring 2.29m wide by 0.65m deep and with a slightly uneven U-shaped profile was observed crossing Area 1 on a northwest-southeast alignment, parallel to post-medieval Ditch 2. Toward the northern limit of excavation the feature contained a single deposit of mid brown grey clay sand. Further south, three fills were recorded, the earliest comprising a brown grey sandy clay, the second a light yellow grey sandy clay that appeared to have slumped into the ditch from the north-east and may represent the original upcast from the excavation of the feature, and a final fill of dark brown grey sandy clay with occasional charcoal inclusions and a very small fragment (5g) of undiagnostic CBM (from which a very broad medieval to post-medieval date can be inferred). Although not firmly dated, Ditch 1 appears to be respected by ditch 3 and 5, with the slumped fill material from section 1042 suggesting that a bank may have been situated along the northeast edge of the feature and the area of medieval activity to the west therefore “inside” the area demarcated by Ditch 1.

5.23 Posthole 1027, located within Area 1 on the eastern edge of Ditch 7, measured 0.41 wide and 0.11 deep with a bowl shaped profile and contained a single dark blue grey silty clay fill. While no dating evidence was recovered from the feature, its similar profile and location compared to posthole 1031 suggests that the two features are contemporary.

5.24 Posthole 6003 was observed near the centre of Area 6, approximately 3m to the north-east of pit 6005, and measured 0.32m wide by 0.09m deep. The feature contained a single light grey sandy clay fill with manganese mottling throughout but contained no finds

6. THE FINDS

6.1 Finds recovered are listed in the table below. Details are to be found in Appendices B to D.

Type	Category	Count	Weight (g)
Pottery	Iron Age	2	9
	Roman	2	14
	Medieval	337	3735
	Total	*341*	*3758*
CBM		6	205
Fired clay		18	95

6.2 Possible pre-medieval pottery from the site comprised two small, essentially undiagnostic fragments of pottery for which, based on fabric, either a late prehistoric or Early Saxon date can be suggested, and two sherds of generic Romano-British grey micaceous wares.

6.3 The majority of pottery recovered during the excavation, as with the evaluation, was of broad 11th to 14th century date. Much of the pottery was in typical Essex Fabric 13, with a few sherds of slightly later transitional early medieval ware and a shell-dusted vessel also recovered. Analysis suggests that activity did not start until around the beginning of the 12th century, while the lack of later medieval forms indicates that most of this activity had ceased by the end of the 13th century.

6.4 A total of six fragments (205g) of ceramic building material (CBM) was recovered from five deposits, including likely roof tile fragments. A medieval date for all of the material is confirmed by associated artefactual material or stratigraphic relationships.

6.5 Eighteen fragments (95g) of fired clay were recovered from three deposits across the site. While two of the fragments exhibited flat surfaces, one with organic straw impressions. As with the CBM, a medieval date for all of the material is confirmed by associated artefactual material or stratigraphic relationships.

7. THE BIOLOGICAL EVIDENCE

7.1 Biological evidence recovered is listed in the table below. Details are to be found in Appendices E and F.

Type	Category	Count
Cremation	Human remains	253.9g
Samples	Environmental	6

Human remains

7.2 A single cremation deposit 5003 from an earth-cut pit 5002 was recovered from Area 5. The deposit is radiocarbon dated to the Middle Bronze Age (SUERC-90685) with no associated features, nor finds. It was a single adult individual. The total recovered weight of bone was 253.9g, which is an adequate quantity when compared to the average for the time period (500g). The bone was white in colour indicating that it had been consistently cremated, suggesting an adequate pyre (see Appendix F & G for further information).

Environmental remains

7.3 The wood charcoal assemblage recovered from soil samples taken from features of medieval date in area 1 indicates that a range of different environments were exploited for fuel. Oak predominadted, much of which was from sapwood or roundwood and may represent a mixture of material, from trimmings, immature trees and underwood. Typical hedgerow/ scrub and heathland species were also represented, indicating that fuel was procured from a variety of source environments.

7.4 It is likely that a variety of crops were cultivated locally, in various soil conditions, including wheat, rye and barley, together with pea, small horse/broad beans and possibly oats. From the weed seeds associated with the crops, it also seems likely that different areas were cultivated, including damper low-lying ground (e.g. for bread wheat) and lighter, neutral to acid areas (e.g. for rye). The medieval ditches in Area 1 appear to have been used to dump processing waste from a number of crops and processing episodes, presumably as they were close to the areas where processing was taking place.

8. DISCUSSION

8.1 The excavation revealed low levels of activity predating the medieval period and provided evidence for the agricultural exploitation of the site between the early 12th

and late 13th or very early 14th century, at which point activity appears to cease completely until the establishment of new field systems in the post-medieval period.

Early Prehistoric

8.2 The archaeological works revealed evidence for early prehistoric activity in Area 5, in the form of the unurned cremation burial of a single adult. A radiocarbon date obtained from a fragment of bone provides a Middle Bronze Age date for the cremation. The seemingly isolated burial would fit with a recognised pattern of unurned full or token cremation burials from across the county, either in small cemetery groups or as isolated examples, with similar examples being recorded from Lower Nazeing (Archaeology South-East 2015), Tiptree (Cotswold Archaeology 2019) and Takeley (ECCFAU 2009). Due to the isolated nature of the cremation and the absence of any other associated features or artefactual material it has little potential to contribute to our understanding of Bronze Age funerary practice. Its presence does however suggest that further remains of this period are likely to be present in the vicinity.

Late prehistoric – Roman/ Roman – Early Saxon(?)

8.3 As noted above, dating for this phase of activity, comprising two intercutting ditches and a single pit is problematic, consisting of only four sherds of pottery, two of which are noted to be either late prehistoric or Early Saxon(?) and two Roman but heavily abraded and possibly residual in their context of origin. However, it is clear that the ditches extend north and south and further, associated remains are likely to be present outside the excavation area. Due to the limited evidence available, the results do not have any potential to contribute to research framework objectives.

Medieval

8.4 Medieval activity was centred within Area 1, near the eastern end of the site, and comprised an east – west orientated boundary consisting of two contemporary ditch sections (ditches 4 and 5) separated by a probable entranceway, and two short, north - south orientated ditch segments (ditches 6 and 7) and a small cluster of pits and postholes, located immediately to the south of ditches 4 and 5. Postholes to either side of the north end of ditch 7 may suggest some form of simple structure or frame over the ditch, the purpose of which is unknown. The south end of ditch 7 had been truncated by another east – west orientated ditch (3) and it is therefore unknown whether a similar set of postholes were originally present at that end.

8.5 The ditches appear to have been used to dump processing waste from a number of crops and processing episodes, presumably as they were close to the areas where processing was taking place. It is likely that a variety of crops were cultivated locally including wheat, rye and barley, together with pea, small horse/broad beans and possibly oats. From the weed seeds associated with the crops, it seems likely that different areas were cultivated for different crop types. Oak predominated the wood charcoal assemblage, much of which was from sapwood or roundwood and may represent a mixture of material, from trimmings, immature trees and underwood. Typical hedgerow/ scrub and heathland species were also present, indicating that fuel was procured from a variety of source environments.

8.6 The majority of pottery recovered during the excavation, as with the evaluation, was of broad 11th to 14th century date, although analysis suggests that activity did not start until around the beginning of the 12th century, with a lack of later medieval forms indicating that most of this activity had ceased by the end of the 13th. Much of the pottery was in typical Essex Fabric 13, with a few sherds of slightly later transitional early medieval ware and a shell-dusted vessel also recovered. The range of vessels includes types which are paralleled in nearby Colchester, although their actual source is unknown.

8.7 Due to the small size of the area investigated and limited artefactual assemblage, the results have limited potential to contribute to research objectives for the medieval period beyond seemingly highlighting the expansion of human activity into the site area in the early 12th century, a period of population growth and land hunger that saw expansion onto previously marginal land and widespread assarting of woodland in order to increase agrarian output. The sudden end to this activity by the end of the 13th, or perhaps early 14th century, is potentially of note in that it seemingly predates the national trend of widespread settlement failure and abandonment in the mid-14th century, stemming from the famines, animal pestilence and plague that resulted in the population crises/ decline of that period. However, the cessation of activity in Area 1 may simply be the result of the undocumented vagaries of local economic or tenurial changes.

8.8 Ditch 3003, in Area 3, most likely represents an infilled field boundary ditch and forms part of a wider network of fields and trackways in the area primarily recorded as cropmarks on aerial photographs (Deegan 2017).

Post-medieval

8.8 The post-medieval ditches encountered within the site match the recorded orientation of now-removed field boundaries depicted on historic and modern maps. Post-medieval Ditch 2, which traverses Area 1 and was also investigated during the evaluation, corresponds with a linear cropmark and is marked on OS maps spanning the period 1897 to 1971. Ditch 4005/5007, in the western half of the site, also corresponds with a linear cropmark and the course of a field boundary depicted on late 19th century mapping. Ditch 4003 matches the line of a now-removed modern ditch and associated bank recorded during aerial photograph plotting (Deegan 2017; also see Fig 2).

9. CA PROJECT TEAM

9.1 Fieldwork was undertaken by Emily Stynes (Cotswold Archaeology), assisted by Alice Amabilino (CA), Steve Bush (CA), Rhiannon Gardiner (Suffolk Archaeology), Nathan Griggs (SA) and Cameron Bate (SA). The report was written by Emily Stynes and Anna Moosbauer. The pottery report was written by Sue Anderson, and the other finds were reported on by Pete Banks. The cremated remains report was written by Sharon Clough and the wood charcoal and charred plant remains report by Sheila Boardman. The illustrations were prepared by Esther Escudero. The archive has been compiled and prepared for deposition by Hazel O'Neill. The project was managed for CA by Adrian Scruby.

10. STORAGE AND CURATION

10.1 The archive is currently held at CA offices in Andover whilst post-excavation work proceeds. Upon completion of the project, and with the agreement of the legal landowners, the site archive and artefactual collection will be deposited with Colchester & Ipswich Museum Service, which has agreed in principle to accept the complete archive upon completion of the project (accession no.: COLEM: 2017.97). A summary of information from this project, set out within Appendix g, will be entered onto the OASIS online database of archaeological projects in Britain.

11. REFERENCES

ASE 2015 *Archaeological evaluation and excavation at Valley Grown Nurseries, Paynes Lane, Lower Nazeing, Essex: Post-excavation assessment and Updated Project Design.* ASE Report No: 2015036

BGS (British Geological Survey) 2019 *Geology of Britain Viewer* http://mapapps.bgs.ac.uk/geologyofbritain/home.html Accessed 05 November 2019

CA (Cotswold Archaeology) 2018a *Land East of Halstead Road, Kirby Cross, Essex: Archaeological Evaluation* CA Typescript Report 18008

CA (Cotswold Archaeology) 2018b *Land East of Halstead Road, Kirby Cross, Essex: Written Scheme of Investigation for a Programme of Archaeological Investigation* CA Project 661074

CA (Cotswold Archaeology) 2019 *Land off Barbrook Lane, Tiptree, Colchester, Essex: Archaeological Evaluation*. CA Report: MK0019_4

Deegan, A. 2017 *Air Photo Mapping and Interpretation: Land East of Halstead Road, Kirby Cross, Essex*

ECCFAU 2009 *Priors Green (Phase 3), Takeley, Essex. Archaeological evaluation and excavation assessment*. Essex County Council Field Archaeology Unit Report No. 1795

Medlycott, M. (ed.) 2011 *Research and Archaeology Revisited: A Revised Framework for the East of England,* East Anglian Archaeology Occasional Paper 24

MHCLG (Ministry for Housing, Communities and Local Government) 2019 *National Planning Policy Framework*

SLR (SLR Consulting) 2015 *Historic Environment Assessment: The Willows, Halstead Road, Kirby Cross*

APPENDIX A: CONTEXT DESCRIPTIONS

Context Number	Context Type	Fill of	Context Description	Feature Label	Spot Date
1000	layer		Topsoil. Dark brown grey sandy silty clay with common large gravel inclusions		
1001	layer		Subsoil. Mid grey brown sandy clay with rare gravel inclusions		M.12th-13th c
1002	layer		Natural. Light grey brown sandy clay with common gravel and occasional patches of light brown grey clay sand		
1003	cut		Linear cut of ditch terminus with steep concave sides and a concave base on NW-SE alignment	6	
1004	fill	1003	Mid grey sandy silt clay, compact with small angular stone inclusions	6	M.12th-13th c
1005	cut		Linear cut of ditch with gentle convex sides and a concave base on a N-S alignment	1	
1006	fill	1005	Mid brown grey with orange mottling clay sand, friable with rare gravel inclusions and rare charcoal	1	
1007	cut		Cut of tree throw with irregular and uneven sides and base		
1008	fill	1007	Mid grey with orange mottling sandy clay, friable with common gravel inclusions		
1009	cut		Cut of tree throw with uneven convex sides and an uneven base		
1010	fill	1009	Mid grey with orange mottling clay sand, friable with common gravel inclusions		
1011	cut		Cut of linear with steep sides to a flat base on a NE-SW alignment	4	
1012	fill	1011	Light brown grey clay sand, friable with common gravel inclusions	4	11th-13th c
1013	fill	1011	Dark brown grey with patches of redeposited natural, friable with rare gravel inclusions and common charcoal flecks	4	11th-13th c
1014	cut		Cut of linear with steep sides and a flat base on an E-W alignment	5	
1015	fill	1014	Dark black brown sandy clay, friable with occasional charcoal flecks	5	11th-13th c
1016	fill	1014	Mid grey brown sandy clay, friable with occasional flint inclusions	5	M.12th-13th c

Context Number	Context Type	Fill of	Context Description	Feature Label	Spot Date
1017	cut		Cut of linear with shallow concave sides and a rounded flat base on a NE-SW alignment	4	
1018	fill	1017	Mid brown grey sandy clay, compact	4	13th c
1019	cut		Cut of linear terminus with steep concave sides to a rounded concave base on a NW-SE alignment	6	
1020	fill	1019	Mottled mid orange grey and mid blue grey	6	12th-13th c
1021	cut		Cut of linear with gradual sloping sides to an irregular base no a NE-SW alignment	3	
1022	fill	1021	Mid brown grey sandy clay, friable with frequent gravel inclusions	3	13th-14th c
1023	cut		Cut of sub circular pit with rounded concave sides to a concave base		
1024	fill	1023	Dark blue grey silty clay, firm with rare gravel inclusions		12th-13th c
1025	cut		Cut of sub angular pit with rounded gentle sloping sides to a flat base		
1026	fill	1025	Mid blue grey silty clay, firm with occasional gravel inclusions		11th-13th c
1027	cut		Cut of sub circular pit with rounded moderately sloping sides and a concave base		
1028	fill	1027	Dark blue grey silty clay, friable with rare gravel inclusions		
1029	cut		Cut of linear terminus with gently sloping sides to a shallow concave base on a N-S alignment	7	
1030	fill	1029	Dark blue grey silty sand, friable with occasional gravel inclusions	7	11th-13th c
1031	cut		Sub circular cut with gently sloping sides to a flat base		
1032	fill	1031	Mid blue grey silty clay, friable with rare gravel		11th-13th c
1033	cut		Cut of linear with steep sides to a flat base on a NE-SW alignment	3	
1034	fill	1033	Mid brown grey with brown mottling sandy clay, friable with occasional gravel	3	13th-14th c
1035	fill	1033	Mid brown grey sandy clay, friable with rare charcoal and rare gravel inclusions	3	
1036	cut		Linear cut of ditch with steep sides to a concave base on a N-S alignment	2	

Context Number	Context Type	Fill of	Context Description	Feature Label	Spot Date
1037	fill	1036	Dark brown grey sandy clay, friable with rare gravels and rare charcoal	2	13th-14th c
1038	cut		Cut of linear with steep sides and a flat base on a N-S alignment	7	
1039	fill	1038	Mid grey brown clay silt, firm with occasional gravel	7	12th-13th c
1040	cut		Cut of linear with steep sides to a concave base on a NE-SW alignment	3	
1041	fill	1040	Mid brown grey sandy silt, firm with occasional gravel	3	11th-13th c
1042	cut		Cut of linear with steep sides and a concave base, sloping deeper in the NE. on a SE-NW alignment	1	
1043	fill	1042	Dark brown grey sandy clay with occasional charcoal and gravel inclusions	1	
1044	fill	1042	Light yellow grey sandy clay, friable with rare gravel inclusions	1	
1045	fill	1042	Dark brown grey sandy clay, friable with occasional charcoal, CBM and gravel inclusions	1	
1046	cut		Cut of linear terminus with convex sides and a sharp right-angle at base, flat base on E-W alignment	5	
1047	fill	1046	Mid grey sandy silty clay, friable with common manganese mottling, rare flint and rare charcoal inclusions	5	12th-13th c
1048	cut		Cut of linear with gradually sloping sides to a concave base on a N-S alignment	2	
1049	fill	1048	Mid yellow grey sandy clay, friable with rare charcoal and gravel inclusions	2	
1050	fill	1048	Dark brown grey sandy clay, friable with rare charcoal, shell and gravel inclusions	2	
1051	cut		Cut of sub circular pit with gentle sloping sides to a concave base		
1052	fill	1051	Mid grey brown silty clay, firm with occasional gravel inclusions		11th-13th c
1053	cut		Cut of linear terminus with steep sides and a flat base on a NE-SW alignment	3	
1054	fill	1053	Mid brown grey mottled with patches of red grey clay silt, firm with occasional gravel	3	
1055	cut		Cut of tree throw with irregular sides and base		

Context Number	Context Type	Fill of	Context Description	Feature Label	Spot Date
1056	fill	1055	Light yellow grey with red brown mottling sandy clay, friable with occasional gravel inclusions		
1057	fill	1055	Dark brown grey sandy clay, friable with common gravel inclusions		
2000	layer		Topsoil. Dark grey brown sandy clay with rare charcoal inclusions and occasional small rounded stones		
2001	layer		Subsoil. Mid grey brown sandy clay with rare sub-rounded stones		
2002	layer		Natural. Light grey brown sandy clay with patches of mottled yellow grey gravel rich deposits and frequent sub rounded stones		
3000	layer		Topsoil. Dark grey brown sandy clay with rare charcoal inclusions and occasional gravel		
3001	layer		Subsoil. Mid grey brown sandy clay with rare gravel		
3002	layer		Natural. Light grey brown sandy clay with patches of mottled yellow grey gravel. Frequent gravel		
3003	cut		Cut of linear with gradual sloping sides and a concave base on a NW-SE alignment		
3004	fill	3003	Light brown grey sandy clay, friable with rare charcoal and frequent gravel		13th-14th
4000	layer		Topsoil. Dark brown grey sand silt clay with occasional gravel inclusions		
4001	layer		Subsoil. Mid brown grey sand silt clay with rare sub angular gravel inclusions		
4002	layer		Natural. Light grey brown sand clay with occasional rounded stones and patches of light grey sand		
4003	cut		Cut of modern linear		
4004	fill		Dark grey brown silty clay with rare charcoal and occasional gravel, CBM and modern waste present		
4005	cut		Cut of modern linear		
4006	fill		Dark grey brown silty clay with rare charcoal and occasional gravel, CBM and modern waste present		
5000	layer		Topsoil. Dark grey brown silty clay with frequent gravel		

Context Number	Context Type	Fill of	Context Description	Feature Label	Spot Date
5001	layer		Subsoil. Mid grey brown sandy clay with rare gravel inclusions		
5002	cut		Circular cut of cremation with gradual sloping sides and a shallow rounded base		
5003	fill	5002	Dark brown grey sandy clay, friable with frequent burnt bone and occasional charcoal inclusions		
5004	layer		Natural. Light grey brown sandy clay with frequent gravel inclusions		
5005	cut		Cut of linear with steep concave sides and a rounded concave base on N-S alignment		
5006	fill	5005	Mottled mid grey orange and mid blue grey compact sandy clay with small gravel inclusions		
5007	cut		Cut of linear with concave sides and a concave base on a N-S alignment		
5008	fill	5007	Dark grey brown silt sand clay, friable with occasional flint and manganese mottling		
6000	layer		Topsoil. Dark grey brown silty clay with frequent gravel		
6001	layer		Subsoil. Mid grey brown sandy clay with rare gravel inclusions		
6002	layer		Natural. Light grey brown sandy clay with frequent gravel inclusions		
6003	cut		Circular cut of posthole with shallow rounded sides and concave base		
6004	fill	6003	Light grey sandy clay, firm with manganese mottling		
6005	cut		Circular pit with steep sides on SW edge and gradual on NE edge with flat base		
6006	fill	6005	Mid brown grey sandy clay, friable with occasional charcoal flecks and rare gravel inclusions		Rom+
6007	cut		Linear cut with moderate slope to west side and sharp in the east to a concave base on a N-S alignment		
6008	fill	6007	Light brown grey clay silt firm with rare gravel inclusions		IA/Esax?
6009	cut		Linear cut with moderate sloping sides with concave base on NW-SE alignment		
6010	fill	6009	Light brown grey clay silt, firm with rare gravel inclusions		

Context Number	Context Type	Fill of	Context Description	Feature Label	Spot Date
6011	cut		Cut of ditch		
6012	fill	6011	Mid grey brown sandy clay, friable with rare gravel and charcoal		
6013	layer		Light brown grey clay silt, firm with occasional flint		
6014	cut		Linear cut with steep sides and concave base		
6015	fill	6014	Light brown grey with red grey mottling clay silt, firm with occasional gravels		

APPENDIX B: FINDS CONCORDANCE

Table 1: Finds concordance

Context	Sample no.	Category	Description	Fabric Code/ NRFRC*	Count	Weight (g)	Spot-date
1001		Medieval Pottery	Early medieval ware shell-dusted	13S	2	59	MC12-
		Medieval Pottery	Early medieval ware	13	5	66	EC13
		Medieval Pottery			2	24	
1004		Medieval Pottery	Early medieval ware	13	70	620	MC12-
		Medieval Pottery	Unprovenanced glazed	98	5	41	EC13
	104	Medieval Pottery			4	44	
1012		Medieval Pottery	Early medieval ware	13	3	21	
1013		Medieval Pottery	Early medieval ware	13	3	47	C11-
		Fired clay		Sandy	5	14	C13
	100	Medieval Pottery			1	9	
1015		Medieval Pottery	Early medieval ware		1	6	C11- C13
1015		Fired clay		Sandy	12	71	
1016		Medieval Pottery	Early medieval ware	13	118	1199	MC12-
		Medieval Pottery	Early medieval ware transitional	13T	2	45	C13
		Medieval Pottery	Medieval coarseware gritty	20	1	15	
		Medieval Pottery	Hedingham Ware	22	8	431	
1018		Medieval Pottery	Early medieval ware	13	28	201	C13
		Medieval Pottery	Early medieval ware transitional	13T	32	252	
		Medieval Pottery	Colchester Ware	21A	1	10	
1020		Medieval Pottery	Early medieval ware	13	5	79	C12-C13
1022		CBM	Tile frag 10 mm	Sandy	1	58	C13-C14
		Medieval Pottery	Medieval coarseware gritty	20	2	15	
1022		Medieval Pottery	Colchester Ware	21A	1	22	
1024		Medieval Pottery	Early medieval ware	13	2	7	C12-C13
		Medieval Pottery	Early medieval ware transitional	13T	1	8	
1026		Medieval Pottery	Early medieval ware	13	2	6	C11- C13
1030		Medieval Pottery	Early medieval ware	13	16	84	C11- C13
1032		Medieval Pottery	Early medieval ware	13	10	62	C11- C13
		Fired clay	1 x flat surface, organic impressions	Sandy	1	10	
1034		Medieval Pottery	Colchester Ware	21A	1	5	C13-C14
1037		Medieval Pottery	Colchester Ware	21A	1	4	C13-C14
		Medieval Pottery	Early medieval ware	13	1	6	
		CBM	Tile frag 15mm	Sandy	1	74	
1039		Medieval Pottery	Early medieval ware	13	1	10	C13-C14
		Medieval Pottery	Medieval coarseware gritty	20	1	17	
1041		Medieval Pottery	Early medieval ware	13	1	25	C11- C13
1043		CBM		Sandy	1	5	
1045		CBM		Sandy	2	22	
1047		Medieval Pottery	Early medieval ware	13	11	153	C11- C13
	102	Medieval Pottery			1	15	

1052		Medieval Pottery	Early medieval ware	13	1	11	C11- C13
3004		CBM	Brick frag 25mm	Sandy	1	46	C13-C14
3004		Medieval Pottery	Colchester Ware	21A	1	14	
6006		Roman Pottery	RB Grey Micaceous		2	14	RB
6008		Anglo Saxon Pottery?	Early Saxon grass and sand-tempered?	1C?	1	5	ESAX?
6010		Late Prehistoric Pottery?	Unidentified handmade		1	4	IA?

APPENDIX C: POTTERY

By Sue Anderson

Introduction

The excavation produced 341 sherds (3758g) of pottery from 22 contexts. Table 1 shows the quantification by fabric. The evaluation of this site produced a further 30 sherds (Anderson 2018).

Methodology

Quantification was carried out using sherd count, weight and estimated vessel equivalent (eve). The minimum number of vessels (MNV) within each context was also recorded, but cross-fitting was not attempted unless particularly distinctive vessels were observed in more than one context. A full quantification by fabric, context and feature is available in the archive. All fabric codes were assigned from the Suffolk post-Roman fabric series, which includes East Anglian and Midlands fabrics, as well as imported wares (equivalent Essex fabrics were noted). Form terminology follows MPRG (1998) and rim forms follow the Essex type series (e.g. Drury 1993; Cunningham 1985). Local wares were identified based on Cotter (2000), and Hedingham wares (Walker 2012) from kiln samples supplied by Helen Walker. Recording uses a system of letters for fabric codes. The results were input directly onto an Access database, which forms the archive catalogue.

Pottery by period

Pre-medieval?

All pottery of possible or confirmed pre-medieval date was recovered from three features in Area 6. Pit 6005 contained two sherds of Roman grey micaceous wares including a ?jar rim, but both were heavily abraded. Ditch 6007 contained one small, abraded handmade body sherd in a grass-tempered fabric while ditch 6009 produced a single sherd in a soft silty black fabric with oxidised external surface and possible decoration or impressions externally. Both of these sherds may be of Iron Age or Early Anglo-Saxon date.

Early and high medieval

The largest proportion of this assemblage comprised early medieval wares, the majority in Fabric 13, as described by Cotter (2000). Identifiable forms comprised nine jars, two bowls and two possible jugs (one represented by a handle only). Rim forms represented in the group were types B1b (plain thickened everted), B2 (thickened flat-topped), B2a (B2 with internal bead), C1 (beaded; Fig. 9.1) and H1 (flanged and upright neck; Fig. 9.2). Between them, these types span the whole early medieval date range (11th–E.13th c.), although B2/B2a and H1 are dated slightly later than the other types. Also recovered were a jar in Fabric 13S with an H1 rim, and three vessels of Fabric 13T, including a number of sherds from a jar with a type C1 rim. Several vessels can be paralleled in the Colchester corpus (e.g. Cotter 2000, figs 20.4, 23.18, 24.31, 33.11).

High medieval wares in this assemblage were relatively rare. Four body sherds of medieval sandy greywares (Fabric 20) were found. Five sherds of Colchester-type ware (Fabric 21A) included a body fragment decorated with combed wavy lines and copper green glaze, and a type B2 jar rim (cf Cotter 2000, fig. 58.1). Seven sherds

of a Hedingham fineware jug with a flat-topped everted (H1) rim and light green glaze were found, and there was also a red-painted body sherd in this fabric. Five sherds of two unprovenanced glazed wares were also recovered; these were both in very fine fabrics and may simply be Hedingham ware variants.

Pottery by area and site phase

Area 1

The majority of pottery was recovered from Area 1. Evaluation trenches 45 and 46 in this area produced a further 17 sherds, most of which were early medieval (Anderson 2018). Table 2 shows the distribution of pottery in this area by site phase and fabric. The majority of the assemblage was recovered from features assigned to Phase 3, with most of the pottery originating from ditch fills.

Phase 3

Ditch 4: A total of 67 sherds were recovered from three segments of this ditch (fills 1012, 1013, 1018), the majority from segment 1017 (west end terminal). Apart from a single sherd of Colchester-type ware with a B2 rim, all pottery from this group was early medieval. This included 32 sherds of a Fabric 13T jar with a C1 rim.

Ditch 5: Two segments of this ditch produced 141 sherds. The majority came from segment 1014 (fills 1015 and particularly 1016), with only 11 sherds from segment 1046 (fill 1047). This group contained most of the identifiable vessel forms described above, and alongside the large quantity of early medieval wares, there were also sherds of both Hedingham fineware vessels and a single sherd of medieval sandy greyware.

Ditch 6: Eighty sherds were recovered from fills 1004 and 1020, although the latter only contained five of them. This is perhaps surprising given the large quantity of sherds recovered from the adjacent terminal of Ditch 4, and may suggest that the two features were backfilled at different times. The 75 sherds from the southern terminal (1003) included 64 sherds of a jar with a C1 rim. A B1b jar rim was also found, and there was a bowl with a C1 rim in fill 1020. All unprovenanced glazed sherds were also recovered from this feature.

Ditch 7: Eighteen sherds were recovered, including twelve from a single early medieval ware vessel in fill 1030 (terminal 1029). This vessel was also represented by sherds in adjacent pit 1031. Other sherds comprised Fabric 13, and one gritty medieval greyware.

Pit 1023: Two sherds of Fabric 13 and one of Fabric 13T were recovered from fill 1024.

Pit 1025: Two sherds of Fabric 13 were found in fill 1026.

Pit 1031: Fill 1032 contained nine sherds of a Fabric 13 jar with B1b rim (also in Ditch 7) and one other body sherd.

Pit 1051: A single sherd of Fabric 13 was recovered from fill 1052.

Ditch 3: Three segments of this ditch produced only five sherds in total. These comprised two pieces of Fabric 20 medieval greywares, two sherds of Colchester-type ware and a late Fabric 13 jar rim (type H1). This group suggests that the ditch was infilled no earlier than the 13th century.

Phase 4

Ditch 2: One sherd of early medieval ware and one of Colchester-type ware were recovered from segment 1036, which cut Phase 3 Ditch 3. These sherds could therefore have been redeposited from the underlying fill.

Unphased

Subsoil: Layer 1001 produced five sherds of Fabric 13 and two fragments of a Fabric 13S jar with H1 rim.

Area 3

A single sherd of decorated Colchester-type ware was recovered from ditch fill 3004 (Phase 3). This suggests a 13th/14th-century date for the fill. Two ditches excavated during the evaluation in adjacent trench 53 also produced Colchester-type ware (Anderson 2018).

Area 6

Dating of the features in this area, those producing artefactual material comprising two intercutting ditches and a pit, is problematic. The combined assemblage consisted of only four sherds of pottery, two of which, from ditch 6007 and 6009, are noted to be either late prehistoric or Early Saxon(?), while two sherds of heavily abraded and therefore possibly residual Roman greyware was recovered from pit 6005. Given the small sherd size and abraded condition it is possible that all of the material is residual in their context of origin and the features are later (medieval?) in date.

Discussion

The majority of pottery recovered during the excavation, like the evaluation, was of broadly early medieval date. Much of the pottery was in typical Essex Fabric 13, with a few sherds of slightly later transitional early medieval ware and a shell-dusted vessel also recovered. The range of vessels includes types which can be paralleled in nearby Colchester, although their actual source is unknown. As noted for the evaluation assemblage, comparable forms were made at the kilns excavated at Middleborough, outside Colchester, but the fabric there was finer (Cotter 2000) and it is likely that there were several pottery production centres for this material in both Essex and Suffolk.

This material was concentrated in a group of ditches and pits in Area 1 and may indicate the presence of a dwelling of this period in the near vicinity. The rim forms present include several types which span the whole early medieval period, but these were generally found with rim forms with shorter date ranges and this may suggest that activity did not start until around the beginning of the 12th century. The presence of only a few high medieval wares perhaps indicates that most of this activity had ceased by the end of the 13th century.

Table 1: Pottery quantification by fabric

Description	Date range	Essex Fabric	Count	Wt/g	Eve	MNV
Unidentified handmade		-	1	4		1
RB Grey Micaceous	RB	-	2	13		2
Early Saxon grass and sand-tempered	ESax	1C	1	4		1
Early medieval ware	11th-12th c.	13	277	2784	1.47	95
Early medieval ware gritty	11th-12th c.	13	1	15		1
Early medieval ware shell-dusted	11th-13th c.	13S	2	59	0.10	1
Early medieval ware transitional	11th-12th c.	13T	35	305	0.07	3
Medieval coarseware	L.12th-14th c.	20	3	28		3
Medieval coarseware gritty	L.11th-13th c?	20	1	17		1
Colchester Ware	L.13th-M.16th c.	21A	5	55	0.08	5
Hedingham Ware	M.12th-M.13th c.	22	8	431	1.00	2
Unprovenanced glazed	L.12th-14th c.	98	5	43		2
Totals			*341*	*3758*	*2.72*	*117*

References

Anderson, S. 2018 *Halstead Road, Kirby Cross, Essex (FHRW17): pottery*. Archive report for Cotswold Archaeology.

Cunningham, C.M. 1982 'Medieval and later pottery' in Drury, P.J. 'Aspects of the origins and development of Colchester Castle' *Archaeol J.* **139** 302–419.

Cotter, J. 2000 *Post-Roman Pottery from Excavations in Colchester 1971-85*. Colchester Archaeol. Rep. **7**. Colchester Archaeol. Trust.

Drury, P.J. 1993 'The later Saxon, medieval and post-medieval pottery', in Rodwell, W. and Rodwell, K. *Rivenhall. Investigations of a Villa, Church and Village, 1950-1977, Vol. 2*. Chelmsford Archaeol Trust Rep 4.2 CBA Res Rep **80**.

MPRG, 1998 *A Guide to the Classification of Medieval Ceramic Forms* Medieval Pottery Research Group Occasional Paper 1.

Walker, H. 2012 *The Medieval Hedingham Ware Pottery Industry*. E. Anglian Archaeol. **148**.

APPENDIX D: CERAMIC BUILDING MATERIAL AND FIRED CLAY

By Pete Banks

Ceramic Building Material

A total of six fragments (205g) of ceramic building material are recorded from five deposits. All fragments are made in sandy fabrics. Tile fragments from ditch 1021 (fill 1022) and ditch 1036 (fill 1037) are both 'sanded', the lower surfaces with embedded coarse sand resulting from the addition of sand to the wooden 'formers'. That from deposit 1022 (58g) is 10mm thick, and that from deposit 1037 (74g) is slightly thicker at 15mm. Based on the thickness and fabric of both they are most likely flat roof tiles that can be broadly dated to the medieval or post-medieval period. Pottery recovered from the same contexts indicates a medieval date. One fragment (46g) of brick is recorded from deposit 3004, the fill of ditch 3003. The fragment is 25mm thick and made in a sandy fabric. Pottery from the same context again suggests a medieval date. The remaining fragments of ceramic building material did not exhibit any distinguishing features.

Fired clay

Eighteen fragments (95g) of fired clay are recorded from three deposits. The majority of fragments did not exhibit distinguishing marks or features. One fragment from deposit 1015, the fill of ditch 1014, had a one flat (smoothed) surface. One fragment (10g) of fired clay, from deposit 1032, the fill of pit 1031, had a flat surface with organic straw impressions. A medieval date is confirmed (context 1015 and 1032) or implied (1013) for all of the material by associated artefactual material or stratigraphic relationship.

APPENDIX E: CREMATED HUMAN REMAINS

By Sharon Clough

Summary

A single cremation deposit 5003 from an earth-cut pit 5002 was recovered from Area 5. The deposit is radiocarbon dated to the Middle Bronze Age (SUERC-90685) with no associated features, nor finds. It was a single adult individual. The total recovered weight of bone was 253.9g, which is an adequate quantity when compared to the average for the time period (500g). The bone was white in colour indicating that it had been consistently cremated, suggesting an adequate pyre.

Methodology

Analysis methodology followed McKinley's standard procedure (McKinley 1997, 2004) and the recommendations by Brickley and McKinley (2004) and Mays, Brickley and Dodwell (2004). Further works by McKinley (1993, 1994, 1997, 2004, 2006 and 2008) provide detail for the process of cremation, background and research conducted in this area.

Results

Weight of cremated bone

The total weight of bone recovered can be a useful indicator of the collection practices employed after cremation and the secondary effects of the burial environment. In this instance the total weight was 253.9g, which when compared to the total weight of an adult cremation from a modern crematoria (1000 to 3600g, McKinley 2000) would suggest that this deposit did not comprise the majority of the individual and that it represented c.7-25%. It must be noted that there was some bone observed mixed in the >2mm fraction size and this is not normally extracted and would contribute only slightly to the total weight. It was noted during excavation that the feature was very shallow 0.04m deep and was likely to have been subjected to vertical truncation. The total recovered weight of bone therefore does not represent the original deposited weight, which is likely to have been a greater quantity.

Experiments (McKinley 1997) have found that it is fairly easy to collect all the bones from an undisturbed pyre, which often remain in anatomical order. The quantity collected may reflect the status of the individual. However, it is frequently found that 50% or less of the bone available after cremation is included in the burial (McKinley 2000), so it is probable that the complete cremated individual was never originally buried.

Table 1: Weight of cremated bone by skeletal area

Context	(5003)
Total Weight (g)	253.9
Cranial (g)	38.4
Cranial (%)	*15.1*
Axial (g)	2
Axial (%)	*0.78*
Upper limb (g)	14
Upper limb (%)	*5.5*

Lower limb (g)	15
Lower limb (%)	*5.9*
Unidentified (g)	184.5
Unidentified (%)	*72.6*

It is expected that in a complete dry skeleton (which is approximately the same as a cremated skeleton) the percentages by weight of the different elements are as follows:

Skull: 18.2% (cranium, facial bones and jaw)
Upper Limbs: 23.1% (shoulders, arms and hands)
Axial Skeleton: 20.6% (vertebrae, ribs, pelvis)
Lower Limbs: 38.1% (legs and feet)

For the cremated bone deposit 5003 72% of the bone fragments were not identified, so any results are tentative. This is mostly due to the high fragmentation levels. There does not appear to be any significant collection bias within the cremation deposits (see Table 1), however there were more cranial and limb bones identified. The higher amount of long bone and cranial bone observed probably has more to do with the ease with which they are identified compared to other bones. These bones also have thicker cortical bone than those of the axial skeleton and it is thought that areas of high trabecular bone content (vertebral bodies, epiphyses and os coxae) will disintegrate easily (McKinley 1998). It must be noted though, that some spongy bone was present, a cervical vertebral body and fragments of long bone epiphyses. Smaller bones were present, though under-represented with only one hand phalanx identified and one tooth root present, which indicates that the smaller bones were collected, as well as larger ones such as long bones.

Fragmentation

Fragmentation levels were quite high (Table 2), which has affected the identification of some elements (see above). There was more weight of bone in the 5-10mm fraction than the greater than 10mm fraction. The majority of fragmentation occurs after burial and then excavation. Fragmentation occurs along the dehydration fissures which formed during the cremation process. McKinley (1994, 340-1) observed that in a sample of over 4000 cremations over 50% of bone fragments were in excess of 10mm in size with the largest fragment 134mm, with an average maximum fragment size of 45.2mm (including immature and disturbed cremations). As the largest fragment was 42mm, similar to the average found by McKinley, this suggests that some of the bone had average fragmentation. It has been observed that post-depositional protection offered by a ceramic urn has resulted in larger recorded fragment sizes (McKinley 1994, 341). This burial was without a ceramic urn and this would suggest that the high fragmentation levels observed are most likely to be caused by post-depositional disturbance, which increased the fragmentation of the brittle cremated bone. Deliberate fragmentation as part of the post-cremation process cannot be ruled out, but as all the fragments were white in colour indicating complete cremation, the pieces would be brittle with frequent fissures making them more likely to fragment under pressure.

Table 2: Weight of bone by fraction to determine level of fragmentation

Context	>10 mm weight (g)	5-10 mm weight (g)	5-2 mm weight (g)
5003	103.2 (40.6%)	140.7 (55.4%)	10 (3.9%)

Pyre technology

The efficiency of a cremation is influenced by the following factors: the construction of the pyre, quantity of wood, position of the body, tending of the pyre, weather, duration of the cremation and pyre temperature (McKinley 2000, 407; McKinley 1994, 82-84). The cremated bone after the cremation pyre has finished reflects the temperatures achieved during the process. Cremated bone may range in colour from brown or black (slightly charred), through hues of blue and grey and the brilliant white associated with full oxidisation (temperature over 645°C quoted by McKinley 2000: 405, over 750°C quoted by Lyman 1994 and greater than 800°C Schmidt and Symes 2008).

The cremated bone in the burial 5002 was consistently white in colour. There was only very occasional grey. This suggests that the pyre was sufficient to completely calcine the bone.

Ageing, Sex, pathology and animal bone

There were no multiple elements identified and the low total weight suggest this was a single individual. All the elements were adult sized and the single tooth root was also adult-sized dimensions. There were no elements present which indicated the sex of the individual and no pathological lesions identified. No animal bone was observed.

Discussion

This seemingly isolated burial lies within a pattern of burials located on the outer boundaries of territorial areas. The uniform white colour, high fragmentation and low weight is consistent with other burials of Bronze Age date. The total weight, 253.9g, recovered for this burial is less than the average for the Bronze Age at 500g, but since the level of truncation is not known this is may not be the original quantity deposited. Selection of elements appears to be across the body, with no deliberate bias, which may indicate a general collection from the pyre. The high fragmentation may be from deliberate breakage, or rapid cooling of the pyre material which increases the fragmentation along fissure lines.

Other Bronze Age sites in Essex have found similar results. At Barbrook Lane,Tiptree (CA 2019) another seemingly isolated unurned cremation burial dated to Middle Bronze Age comprised only 8.8g of cremated bone recovered. This very low weight has also been observed at Valley Garden Nurseries site at Paynes Lane, Lower Nazing (ASE 2014). Here there were recovered in total 34 cremation burials from these were and three radiocarbon dates which indicated that the burials spanned from the Middle Bronze Age to Late Bronze Age. The recovered weight of bone for 11 of these burials was 20g or less, so similar to Tiptree and 11 burials 100g or more, similar to the current site. The only burial from Valley Gardens which was radiocarbon dated to the Middle Bronze Age had 773g cremated bone in total which is much greater than at Halstead Road. There were similarly

high fragmentation levels and consistent white colour indicating good pyre technology at Valley Gardens, to that found at the present site.

Further sites in Essex with small numbers of MBA burials have been identified at Harlow and Harlowbury (RPS 1998) and North Shoebury (Wymer and Brown 1995). This indicates that Halstead road cremation burial is consistent with a regional pattern of burial in the Middle Bronze Age period.

The cremated bone has provided information relating to the age of the individual and the amount of investment which went into the pyre and subsequent burial of this person.

Inventory of identified bone

<10mm – elements identified: cranial fragments, patella, femur, tibia, rib, humerus, epiphyses of long bone, cervical body (CV3 or 4).

5-10mm – elements identified: cranial, hand phalanx x1, first metatarsal, tooth root (?pre molar)

5-2mm –none

>2mm - none

Total weight 253.9g

References

Brickley, M. and McKinley, J. 2004 *Guidelines to the standards for recording of human remains.* IFA Paper No 7

CA (Cotswold Archaeology) 2019 Land off Barbrook Lane, Tiptree, Essex: Archaeological Evaluation. CA typescript report **MK0019_1**

Lyman, R. L. 1994 *Vertebrate taphonomy: Cambridge manuals in archaeology*. Cambridge

Mays, S., Brickley, M. and Dodwell, N. 2004 *Human Bones from Archaeological Sites - Guidelines for producing assessment documents and analytical reports.* Centre for Archaeology Guidelines, Swindon, English Heritage

McKinley, J. I. 1993 'Bone fragment size and weights of bone from modern British cremations and its implications for the interpretation of archaeological cremations'. *International J. Osteoarchaeology* 3: 283-287

McKinley, J. 1994 'Bone fragment size in British cremation burials and its implications for pyre technology and ritual'. *Journal of Archaeological Science* **21**, 339-342

McKinley, J. 1997 'Bronze Age 'barrows' and funerary rites and rituals of cremation' *Proceedings of the Prehistoric Society* **63**, 129-145

McKinley, J. 2000 'The analysis of cremated bone' in *Human Osteology in Archaeology and Forensic Science*, (eds) M Cox and S Mays, 403-421 London

McKinley, J. I. 2004 'The human remains and aspects of pyre technology and cremation rituals'. In: Cool HEM *The Roman cemetery at Brougham Cumbria: excavations 1966–67*, Britannia monograph 21, Society for the Promotion of Roman Studies, London, pp 283–309

McKinley, J. I. 2006 'Human bone'. In: Chadwick, A. M. *Bronze Age burials and settlement and an Anglo-Saxon settlement at Clay Pit Lane, Westhampnett, West Sussex, Sussex* Archaeological Collections 144. Sussex Archaeological Society, Lewes, pp 7–50

McKinley, J. I. 2008. 'In the Heat of the Pyre: Efficiency of oxidation in Romano-British cremations - Did it really matter?' In *The Analysis of Burned Remains e*ds Christopher W. Schmidt and Steven A. Symes. Academic press

RPS (Masefield, R) 1998 Harlowbury Evaluation Trenching Report (unpublished)

Schmidt, C. W and Symes S. A. (eds) 2008 *The Analysis of Burned Human Remains*. Academic Press, London

Wymer, J. and Brown, N. 1995, Excavations at North Shoebury: settlement and economy in south-east Essex 1500BC to AD1500. *E. Anglian Archaeol*. **75**

APPENDIX F: THE PALAEOENVIRONMENTAL EVIDENCE

By Sheila Boardman

Introduction

Six samples (6-20 litres in volume) were investigated for wood charcoal and charred plant remains. Five came from medieval ditch fills and one was from a possible cremation deposit. The ditch fill samples had moderate to large quantities of wood charcoal. Four (samples 100, 102, 103 and 104) were fully analysed (with 108-115 charcoal fragments examined per sample) and one (sample 105) was rapidly analysed (60 charcoal fragments examined). A few charcoal fragments from the sixth sample (101) were identified, to assess the likelihood that this was from a cremation fill. The main aims of the charcoal investigation were to identify the fuels used at the site and any evidence these provide for the local tree and shrub vegetation. All six samples also produced identifiable charred plant material and three were very plant rich. Sample 103 from ditch 1014 (context 1015) had over 5600 quantifiable plant remains, sample 100 from ditch 1011 (context 1013) had more than 1600 remains and sample 102 from ditch terminus 1046 (context 107) had 400 plus remains. Samples 104, 105 and 101 had very small to moderate quantities of plant material. All six samples were examined. The main aims of the charred plant investigation were to identify which crops and other plants were used at the site and how many were locally grown.

Methods

The soil samples were processed in the standard Cotswold Archaeology manner, with the flots collected in sieves with 1 mm and 0.25 mm meshes, and the residues, on 0.5 mm meshes. Samples were received for analysis in the form of unsorted flots, plus wood charcoal and charred plant remains previously extracted from the greater than 2 mm residues. The residues were also received for checking.

Wood charcoal*:* Ten to 117 charcoal fragments per sample were randomly extracted from the greater than 2 mm flot and residue fractions. Individual fragments were fractured by hand and sorted into groups based on features observed in the transverse sections, at x10 - x40 magnifications. The fragments were then fractured along their radial and tangential planes and examined at magnifications of up to x400 using a Lomo Biolam-Metam P1 metallurgical microscope. Identifications were made using keys in Hather (2000), Gale and Cutler (2000) and Schweingruber (1990), and by comparison with a modern reference material. Plant nomenclature follows Stace (2010).

Charred plant remains: The entire flots (plus any residue finds) from four samples were fully examined. For samples 100 and 103, the greater than 2 mm flots were completely sorted, but the 0.25 – 2 mm flot fractions were divided using a riffle sample splitter, and 25% from each was examined. The remains from the greater than and less than 2 mm flots are listed separately in results Table 2. Identifications took place using modern seed reference material and standard reference manuals (e.g. Beijerinck 1947; Berrgren 1981; Jacomet 2006; Cappers *et al* 2006). Low power Leica and Brunel binocular microscopes, with magnifications of x10 - x45, were used. Nomenclature follows Zohary and Hopf (2000) for the cultivated species, and Stace (2010) for the other remains.

Results

Anatomical features observed on charcoal fragments from Kirby Cross are consistent with the following taxa groups. Full results (as fragment counts per taxon, by sample) are listed in Table 1. Wood charcoal can only rarely be identified to a single species and many related genera may be impossible to distinguish. The charcoal remains from Kirby Cross were generally poorly preserved. Many fragments were so crumbly or silt infiltrated, meaning only narrow areas of the sections could be examined. Up to a sixth of the charcoal fragments per sample were indeterminate.

Fabaceae

Cytisus/Ulex, broom/gorse.

Rosaceae

Subfamily Pomoideae - includes *Crataegus* spp., hawthorn, *Malus* sp. apple, *Pyrus* sp., pear and *Sorbus* spp., rowan, whitebeam and/service. One or more of these anatomically similar taxa may be represented.

Subfamily Prunoideae – *Prunus spinosa/domestica* type, blackthorn/plum type; *Prunus avium/padus* type, wild/bird cherry type; *Prunus* sp., blackthorn/cherry.

Ulmaceae

Ulmus spp., elm.

Fagaceae

Quercus spp., oak (either *Q. robur* L., *Q. petraea,* or their hybrids).

Betulaceae

Corylus avellana L., hazel, and *Alnus/Corylus*, alder/hazel.

Salicaceae

Salix/Populus, willow/poplar.

Sapindaceae

cf. *Acer campestre,* cf. field maple.

Ericaceae

Calluna vulgaris/Erica sp., heather/heath.

Araliaceae

Lonicera sp., honeysuckle.

Table 1: *Wood charcoal*

Feature label		**4**	**5**	**5**	**6**	**3**	**-**
Feature type		**Ditch**	**Ditch**	**Ditch terminus**	**Ditch**	**Ditch terminus**	**Cremation**
Cut		**1011**	**1014**	**1046**	**1003**	**1053**	**5002**
Context No.		**1013**	**1015**	**1047**	**1004**	**1054**	**5003**
Sample No.		**100**	**103**	**102**	**104**	**105**	**101**
Period		**Medieval**	**Medieval**	**Medieval**	**Medieval**	**Medieval**	
Volume		**20**	**18**	**18**	**20**	**19**	**6**
Fabaceae							
Cytisus/Ulex	broom/gorse	-	3r	1r	-	-	-
Rosaceae							
Prunus spinosa/domestica type	blackthorn/plum type	4r	-	5r	-	-	-
Prunus avium/padus type	wild/bird cherry type	-	-	3r	-	-	-
Prunus sp.	blackthorn/cherry	6r	-	10r	2r	-	-
Pomoideae	hawthorn group	3r	-	1	-	2	-
cf. Pomoideae	cf. hawthorn group	1r	1	-	1	-	-
Ulmaceae							
Ulmus	elm	1r	-	-	5	-	-
Fagaceae							
Quercus	oak	79rsh	68srh	62srh	79srhb	49rsh	**X**
Betulaceae							
Corylus avellana	hazel	6r	16r	9r	3r	1r	-

Alnus/Corylus	alder/hazel	-	-	3	5r	1	-
Salicaceae							
Salix/Populus	willow/poplar	2	7r	3	3	-	-
cf. *Salix/Populus*	cf. willow/poplar	-	-	1	-	-	-
Sapindaceae							
cf. *Acer campestre*	cf. field maple	1	1	-	-	-	-
Ericaceae							
Calluna vulgaris/Erica	heather/heath	-	3r	-	-	-	-
Caprifoliaceae							
Lonicera	honeysuckle	-	1	-	-	-	-
cf. *Lonicera*	cf. honeysuckle	-	1	-	-	-	-
Indet. charcoal		5b	9rb	17b	19b	7	-
Fragments analysed/assessed		108	110	115	107	60	<10

KEY: Counts include: h - heartwood; s - sapwood; r - roundwood; b- bark. Assessed sample - **X** - taxon dominant.

Pomoideae may include: *Pyrus* (pear), *Malus* (apple), *Crataegus* (hawthorn) &/or Sorbus (rowan, service, whitebeam) species.

Table 2: *Charred plant remains*

Feature label		**4**		**5**		**5**	**6**	**3**	**-**
Feature type		**Ditch**		**Ditch**		**Ditch terminus**	**Ditch**	**Ditch terminus**	**Cremation**
Cut		**1011**		**1014**		**1046**	**1003**	**1053**	**5002**
Context No.		**1013**		**1015**		**1047**	**1004**	**1054**	**5003**
Sample No.		**100**		**103**		**102**	**104**	**105**	**101**
Period		**Medieval**		**Medieval**		**Medieval**	**Medieval**	**Medieval**	
Volume		**20**		**18**		**18**	**20**	**19**	**6**
Fraction(s)		**>2 mm Flot & Residue**	**0.25 - 2 mm Flot**	**>2 mm Flot**	**0.25 - 2 mm Flot**	**>0.25 mm**	**>0.25 mm Flot**	**>0.25 mm**	**>0.25 mm**
Percentage examined		**100**	**25%**	**100**	**25**	**100**	**100**	**100**	**100**
Cereal grain									
Hordeum vulgare L.	barley, hulled asymmetric	7		10	1	1			
Hordeum vulgare L.	barley, hulled symmetric	4		5					
Hordeum vulgare L.	barley, hulled	20	Fs	16	5		1		
Secale cereale L.	rye	15		24					
cf. *Secale cereale* L.	rye	2		9		1	1		
Secale/Triticum	rye/wheat	1	2	6		2			
Avena sp.	oats	38	34	32	82	18	8		
cf. *Avena* sp.	cf. oats	3	1	4	20		3		
*Triticum*sp.	wheat	291	2	203	1	29	10		2
cf. *Triticum* sp.	cf. wheat	6	1	42	1		1	1	
Cerealia	indet. cereal	64	23+Fs	161+Fs	76	6	3		
Cerealia/Poaceae	cereal/large grass	1			1F	3	1		
Chaff & straw									
Secale cereale L.	rye, rachis internode		4		6				

Secale cereale/Hordeum sp.	rye/barley, rachis internode		3		5				
Triticum aestivum/durum	breadwheat/durum wheat type, rachis internode	1	6		3	1			
Triticum sp.	free threshing wheat, rachis internode	1	7+F		7	1+Fs			
Cerealia	cereal, rachis internode		13+Fs		5	1+3F			
Cerealia	cereal, basal rachis internode		2						
Cerealia	cereal, culm node	24	11	26	12	3	2+F		
Cerealia	cereal, culm base	5+F	3+F	12	7				
Cerealia/Poaceae	cereal/grass, culm/straw node	2			4	1	2		
Legumes, oil/fibre crops, fruits & nuts									
Vicia faba L. var. *minor*	broad/horse bean	0.5		1.5					
cf. *Vicia faba* var. *minor*	cf. broad/horse bean	0.5		3.5					
Pisum sativum L.	pea			2					
cf. *Pisum sativum*	cf. pea	1		4					
Vicia sp./*Lathyrus* sp./*Pisum* sp.	vetch/wild pea/pea	12	3F	5.5		1F	2.5		
cf. *Crataegus* sp.	cf. hawthorn, stone fragment						1		
Rubus sp.	bramble, raspeberry, etc.				1F				
Corylus avellana L.	hazelnut shell/fragments (F)			3F	1F				
Linum usitatissimum L.	linseed/flax					1			
Wild species									
Ranunculus sp.	buttercup		1		1F				
Vicia sp./*Lathyrus* sp., 3-4 mm	vetch/wild pea	7		13					
Vicia sp./*Lathyrus* sp., 2-3 mm	vetch/wild pea	34	21	24	13	6	4		
Vicia sp./Lathyrus sp., <2 mm	vetch/wild pea		16	1	85	5	2		
*Vicia sp./Lathyrus sp.,*mixed size seeds, with pod frags. attached	vetch/wild pea			8					
Fabaceae	pea family		4	1	5	1	1		
Raphanus raphanistrum L.	wild radish, capsule/pod (with seed)	4 (5)		4 (4)		1 (1)			

Raphanus raphanistrum	wild radish, capsule/pod			1	1F				
Brassicaceae	cabbage family		1						
Rumex sp.	dock		6		21	5	1		
cf. *Rumex* sp.	cf. dock		1		1				
Persicaria sp.	persicaria				1				
Polygonum aviculare L.	knotgrass						1		
cf. *Spergula arvensis*	cf. corn spurrey		1						
Stellaria media (L.) Vill.	common chickweed		2						
Agrostemma githago L.	corncockle			2					
Caryophyllaceae indet.	pink family								2
Prunella vulgaris L.	self heal								1
Calluna vulgaris (L.) Hull.	heather, shoot tip				1F	1F			
Galium aparine L.	goosegrass, cleavers								1
cf. *Galium* sp.	cf. bedstraw		1F						
Lamiaceae	dead-nettle family					1			
Centaurea cyanus L.	cornflower		2		2				
Anthemis cotula L.	stinking chamomile		62	2	500+	257	6	1+F	14
Anthemis cotula	seed heads (with approx. no. of seed)	4 (85+)	1 (6)	88 (1326)					
cf. *Anthemis cotula*	cf. stinking chamomile		2		23	28			2
Glebionis segetum (L.) Fourr.	corn marigold		2						
Asteraceae	daisy family, small		6		3	14	1		1
Poa sp./*Agrostis* sp. *type*	meadow-grass/bents					5			
Poa sp./*Agrostis* sp./*Phleum*sp. Type	meadow-grass/bents/cat's tail					1			
Bromus sp.	brome				1F				
Anisantha sterilis (L.) Nevski	barren brome				1				
Poaceae	grass, small				2	4			1
Poaceae	grass, medium								
Poaceae	grass, large					1			

Poaceae	grass, culm node		2	1	8	1			
Poaceae	grass, culm base		1						
Indet.	seed/fruit	1	1	1	4	8	1+Fs	1	4+Fs
Indet.	leaf bud	2	8	3	6		1		
Indet.	root/tuber	2		2+Fs	1	1F			
Quantifiable remains (by fraction)		639+	257	1960+	913+	407	54	3	28
Total quantifiable remains			**1670+**		**5600+**	**407**	**54**	**3**	**28**

Key: F - fragment(s)

Individual cereal grains, rachis internodes, and cereal straw nodes or bases (if complete), plus whole seeds and fruits, were each counted as one. Fragments (e.g. of nut shells) are suffixed by an 'F' and their numbers are not included in the sample totals. Samples 100 and 103 had several or many fragmentary 'seed heads' of stinking chamomile (*Anthemis cotula*), each of which included many seeds that were fused together. The seed heads are listed separately in Table 2, with the overall number of seeds per sample (based on counts and estimates). Only the numbers of seeds (in brackets) are included in the sample totals.

Discussion

Wood charcoal (Table 1)

All the analysed samples were oak (*Quercus*) dominated and assessed sample 101 also had solely oak. Much of the oak was from sapwood or roundwood, so this may represent a mixture of material, from trimmings, immature trees and underwood. The fully analysed samples (100, 102, 103, 104) each had six or seven other, non-oak taxa. This fairly wide range may point to some post depositional mixing of refuse within the ditches, or to fuel procurement strategies. In samples 100 (from context 1013) and 103 (context 1015), almost all the non-oak remains were from narrow roundwood, suggesting underwood, hedgerows and/or scrub were predominantly exploited. The presence of blackthorn/plum (*Prunus spinosa/ domestica*), blackthorn/cherry (*Prunus*) and hawthorn group (Pomoideae) charcoal in sample 100 also points to the exploitation of hedgerows and scrub for fuel. Fragments of willow/ poplar (*Salix/Populus*) charcoal in samples 100 and 103 point to the collection of some material from damper ground. Hazel (*Corylus avellana*) was the main non-oak taxon in sample 103, followed by willow/poplar. Broom/gorse (*Cytisus/Ulex*) and heather/heath (*Calluna/Erica*) charcoal point to use of heathland resources. Honeysuckle (*Lonicera*), which occurs only sporadically in archaeological assemblages (cf. Smith 2002; Murphy *et al* 2001), is found today in woods, hedgerows and scrub, and growing over rocks and walls.

Narrow roundwood accounted a half or third of non-oak remains in samples 104 (context 1004) and 102 (context 1047). In sample 104, this was mainly hazel (*Corylus avellana*), alder/ hazel (*Alnus/Corylus*) and elm (*Ulmus*), while in sample 102, the non-oak taxa included hazel, blackthorn/plum (*Prunus spinosa/domestica*), wild cherry/bird cherry (*Prunus avium/padus*) type, blackthorn/cherry (*Prunus*) and elm (*Ulmus*). Willow/poplar (*Salix/ Populus*) charcoal was again present in both samples. Heathland resources are represented by a single broom/gorse (*Cytisus/Ulex*) roundwood fragment in sample 102.

Sample 105 (context 1054) was very much dominated by oak, with one or two fragments of hawthorn group (Pomoideae), hazel and alder/hazel (*Alnus/Corylus*) charcoal. Alder, if present, may again point to the collection of fuel wood from damper ground. This sample was rapidly analysed but a quick scan of the unidentified material reveals that this was similarly composed, almost entirely of oak roundwood and sapwood fragments.

Sample 101 (context 5003) was originally thought to represent a possible cremation deposit. The charcoal evidence does not support this interpretation as there were so few remains. All the fragments were of oak (*Quercus*). It is not possible to say anything further on the basis of so few remains.

Charred plant remains (Table 2)

Cultivated species

Most numerous among the cereal grains was wheat (*Triticum* sp.). These were largely of the broad, free threshing type. Wheat chaff in samples 100 and 103 indicate hexaploid wheat, of which bread wheat (*Triticum aestivum*) is the most likely species. This was the main grain used for bread in the medieval period so it had greatest economic value (Hammond 1995). Tetraploid wheat chaff, indicating possible rivet wheat (*Triticum turgidum*), was not seen at Kirby Cross. The latter was a minor crop in the medieval period, used for bread (with a different texture to that from bread wheat) and the straw was highly valued for thatch (Greig 1991; Moffett 2006).

It is more difficult to assess the economic importance of oats (*Avena* sp.), the second most numerous cereal in terms of grain from Kirby Cross. No oat chaff was present, so it is unclear whether cultivated oats (*Avena sativa*) or wild species (e.g. *Avena fatua, A. ludovicana*) only were present. The latter are a common weed of other cereals. The presence of oat grains mixed with processing waste of bread wheat and rye (*Secale cereale*) (see below) points to predominantly the latter. In the medieval period, oats were used for fodder. Oats and barley were also sometimes cultivated together in a spring-sown, stock-feed crop or 'dredge' (Slicher von Bath 1963). There is no evidence for this here.

Similar quantities of hulled barley (*Hordeum vulgare*) and rye (*Secale cereale*) grains were recovered and in samples 100 and 103 and these were accompanied by rye and rye/barley (*Secale* sp./*Hordeum* sp.) rachis internodes. The presence of twisted barley grains indicates six row barley, but it is not possible to say whether the two-row variety was also present. Barley was the second most important crop of the medieval period and it was used in bread, to brew ale and sometimes for animal fodder (Greig 1991; Moffett 2006; Hammond 1995). No germinated barley grains were seen at Kirby Cross. It is not possible to say for definite that rye was grown as a separate crop at Kirby Cross. Some typical rye weeds do seem to be present (see below). Rye was mostly a minor crop in the medieval period, used in some breads, for animal fodder/bedding and for thatch. Rye straw was sometimes used on roofs with the spikelets and grain attached (Letts 1999), emphasising its generally low value as a grain crop.

Small broad or horse beans (*Vicia faba* var *minor*) and pea (*Pisum sativum*) seeds and fragments were present in samples 100 and 103, suggesting their local cultivation. Both crops may have been more important than their numbers suggest. In contrast to cereal crops, legumes rarely come into contact with fire during processing, so they are more likely to underrepresented in charred assemblages. Many legume grains here were poorly preserved, fragmentary or lacking seed testa, so they could not be identified beyond vetch/ wild pea/pea (*Vicia* sp./ *Lathyrus* sp./ *Pisum* sp.). The latter category, and the smaller vetch/ wild pea (*Vicia* sp./*Lathyrus* sp.) seeds, may include additional economically important crops such as forage vetch (*Vicia sativa* var. *sativa*), which has been tentatively identified elsewhere (Greig 1991; Moffett 2006). The cultivated legumes were used mostly for animal feed but were more widely consumed by humans after failed harvests (Hammond 1995). Archaeobotanical and historical evidence point to an increase in the cultivation of vetches from *circa* 1300 (Greig 1991).

A single flax (*Linum usitatissimum*) seed was present in sample 102, which could be a remnant from a previous harvest.

Wild species

Wild fruits and nuts are represented by single fragmentary remains of possible hawthorn (cf. *Crataegus* sp.) and bramble/raspberry (*Rubus* sp.), plus a few hazelnut (*Corylus avellana*) shell fragments. This is a very narrow range of fruits and nuts, as compared to those found at typical medieval urban settlements (Greig 1991; Moffett 2006; Boardman 2015).

The plant rich samples (100 and 103) were swamped by two groups of wild plants: small legumes, including vetch/wild pea (*Vicia* sp./*Lathyrus* sp.), and stinking chamomile (*Anthemis cotula*). As noted above, the small seeded legumes may include other crops, but if mostly from cultivated fields, they may point to problems with soil fertility at this time. Legume plants also may have come onto site with material collected as animal fodder and bedding that was later burnt. Many grasses, some docks (*Rumex* spp.), wild radish (*Raphanus raphanistrum*) and self-heal (*Prunella vulgaris*) are all found in grasslands. The very large numbers of stinking chamomile (*Anthemis cotula*) seeds can be accounted for by the presence of seed heads and fragments, some of which included 50-100 plus individual seeds. Stinking chamomile is a common cornfield weed, predominantly on heavier (often calcareous) ground suited to bread wheat cultivation. Other cornfield weeds include cornflower (*Centaurea cyanus*), corncockle (*Agrostemma githago*), corn marigold (*Glebionis segetum*) and cleavers (*Galium aparine*). Most have large seeds or seed heads that are not easily removed by sieving, so tend to persist in processed crops unless removed by hand. The latter is especially important if they are noxious (as is corncockle). Many seeds were probably replanted, leading to the distinct medieval weed floras seen across much of southern Britain (Greig 1991). Several weeds are associated with autumn sown crops, including stinking chamomile, corncockle, cornflower and cleavers. Cornflower and corn spurrey (*Spergula arvensis*) grow mostly on light, neutral to acidic sandy soils, suited to rye production. Cleavers is found in similar conditions stinking mayweed (above).

The other group of wild species was catholic weeds which grow on disturbed, nitrogen rich ground around settlements, in garden type cultivation or with spring sown crops. At Kirby Cross, this was fairly small and included dock (*Rumex* sp.), knotgrass (*Polygonum aviculare)*, persicaria (*Persicaria* sp.) and chickweed (*Stellaria media*).

In summary, the wild plant remains from Kirby Cross seem to be largely cornfield weeds, from a variety of environments (and several different crops), and grassland plants. The latter also may have grown in and around cultivated fields. The narrow range of plants more typical of nitrogen rich areas around settlements hints that the main buildings were located some distance away..

Conclusions

The wood charcoal from Kirby Cross, Essex indicates that a range of different environments were exploited for fuel, including hedgerows or scrub, woodland, heathland and damp ground. The dominance of oak in all six samples indicates that the inhabitants probably had fairly easy access to oak trees. However, the use predominantly of oak roundwood and sapwood, and immature wood from other taxa (from a range of environments), point to mature woodlands being in short supply locally, or at least hints that mature timbers were reserved for more important purposes (e.g. buildings, industrial fuels). Only native trees and shrubs are represented in the Kirby Cross assemblage, in contrast to wood and charcoal assemblages from some other sites which include exotic taxa and possible imported timbers (Murphy *et al* 2001; Smith 2002).

It is probable that bread wheat, rye and barley were cultivated locally during the medieval period, together with pea, small horse/broad beans and possibly oats. From the weed seeds associated with the crops, it also seems likely that different areas were cultivated, including damper low-lying ground (e.g. for bread wheat) and lighter, neutral to acid areas (e.g. for rye). The ditches seem to have been used to dump crop processing waste from a number of crops and processing episodes, possibly as they were close to the areas where the processing was taking place. However, they contained little other domestic type debris, hinting that the main settlement was located further away.

Bibliography

Beijerinck, W. 1947 *Zaden Atlas der Nederlandsche Flora.* Wageningen, Biol. Stat Wijster 30.

Berggren, G. 1981 *Atlas of seeds and small fruits of Northwest-European plant species with morphological descriptions. Part 3, Salicaceae- Cruciferae*. Berlings

Boardman, S. 2015 Charred and mineralised plant remains from Lincoln College Garden Building area (OXLG12). Unpublished Oxford Archaeology report.

Cappers, R. T. J., Bekker, R. M. and Jans, J. E. A. 2006 *Digital Seed Atlas of the Netherlands*, Groningen Archaeological Studies Vol. 4, Groningen, Barkhuis Publishing and Groningen University Library.

Gale, R. & Cutler, D. 2000 *Plants in Archaeology: Identification manual of vegetative plant materials used in Europe and the southern Mediterranean to c.1500*. Westbury and Kew.

Greig J, 1991 The British Isles, in W. van Zeist, K. Wasylikowa, K-E. Behre (eds) *Progress in Old World Palaeoethnobotany*, Rotterdam: Balkema, pp. 229-334.

Hammond, P. W. 1995 *Food and Feast in Medieval England*. Stroud: Alan Sutton.

Hather, J. G. 2000 *The Identification of Northern European Woods: A Guide for Archaeologists and Conservators*. London: Archetype Publications.

Jacomet, S. 2006 *Identification of Cereal Remains from Archaeological Sites*, (2nd ed. trans. by James Greig), Basel, Archaeobotany Laboratory, IPAS, Basel Unviersity.

Letts, J. B. 1999 *Smoke Blackened Thatch. A unique sources of late medieval plant remains from Southern England*. London & Reading: English Heritage and the University of Reading.

Moffett, L. 2006 'The Archaeology of Medieval Plant Food. In C M Woolgar, D Serjeantson & T Waldron (eds): *Food in Medieval England. Diet and Nutrition*. Oxford: Oxford University Press. pp. 41-55.

Murphy, P. with Hillam, J. and Groves, C. 2001 *Review of Wood and Macroscopic Wood Charcoal from Archaeological Sites in the West and East Midland Regions and the East of England*. Centre of Archaeology Report 23/2001. English Heritage.

Schweingruber, F. H. 1990 *Microscopic wood anatomy*. 3rd Edition. Birmensdorf: Swiss Federal Institute for Forest, Snow and Landscape Research.

Smith, W. 2002 *A review of archaeological wood analyses in southern England*. Centre of Archaeology Report 75/2002. English Heritage.

Stace, C. 2010. *New Flora of the British Isles*, (3rd edition), Cambridge, Cambridge University Press.

Slicher van Bath, B. H. 1963 *The Agrarian History of Western Europe 500-1850*. London: Edward Arnold.

Zohary, D. and Hopf, M. 2000 *Domestication of plants in the Old World: The origin and spread of cultivated plants in West Asia, Europe and the Nile Valley*, (3rd ed.), Oxford, Clarendon Press.

APPENDIX G: RADIOCARBON DATING CERTIFICATE

Scottish Universities Environmental Research Centre
Rankine Avenue, Scottish Enterprise Technology Park, East Kilbride, Glasgow G75 0QF, Scotland, UK
Director: Professor F M Stuart Tel: +44 (0)1355 223332 Fax: +44 (0)1355 229898 www.glasgow.ac.uk/suerc

RADIOCARBON DATING CERTIFICATE

12 December 2019

Laboratory Code	SUERC-90685 (GU54037)
Submitter	Emma Aitken Cotswold Archaeology Unit 8 The IO Centre Fingle Drive Stonebridge Milton Keynes MK13 0AT
Site Reference	Land East of Halstead Road, Kirby Cross
Context Reference	5003
Sample Reference	FWHR18-5003
Material	Human bone : Cremated human bone; long bone frag
$\delta^{13}C$ relative to VPDB	-19.9 ‰
Radiocarbon Age BP	3039 ± 25

N.B. The above ^{14}C age is quoted in conventional years BP (before 1950 AD) and requires calibration to the calendar timescale. The error, expressed at the one sigma level of confidence, includes components from the counting statistics on the sample, modern reference standard and blank and the random machine error.

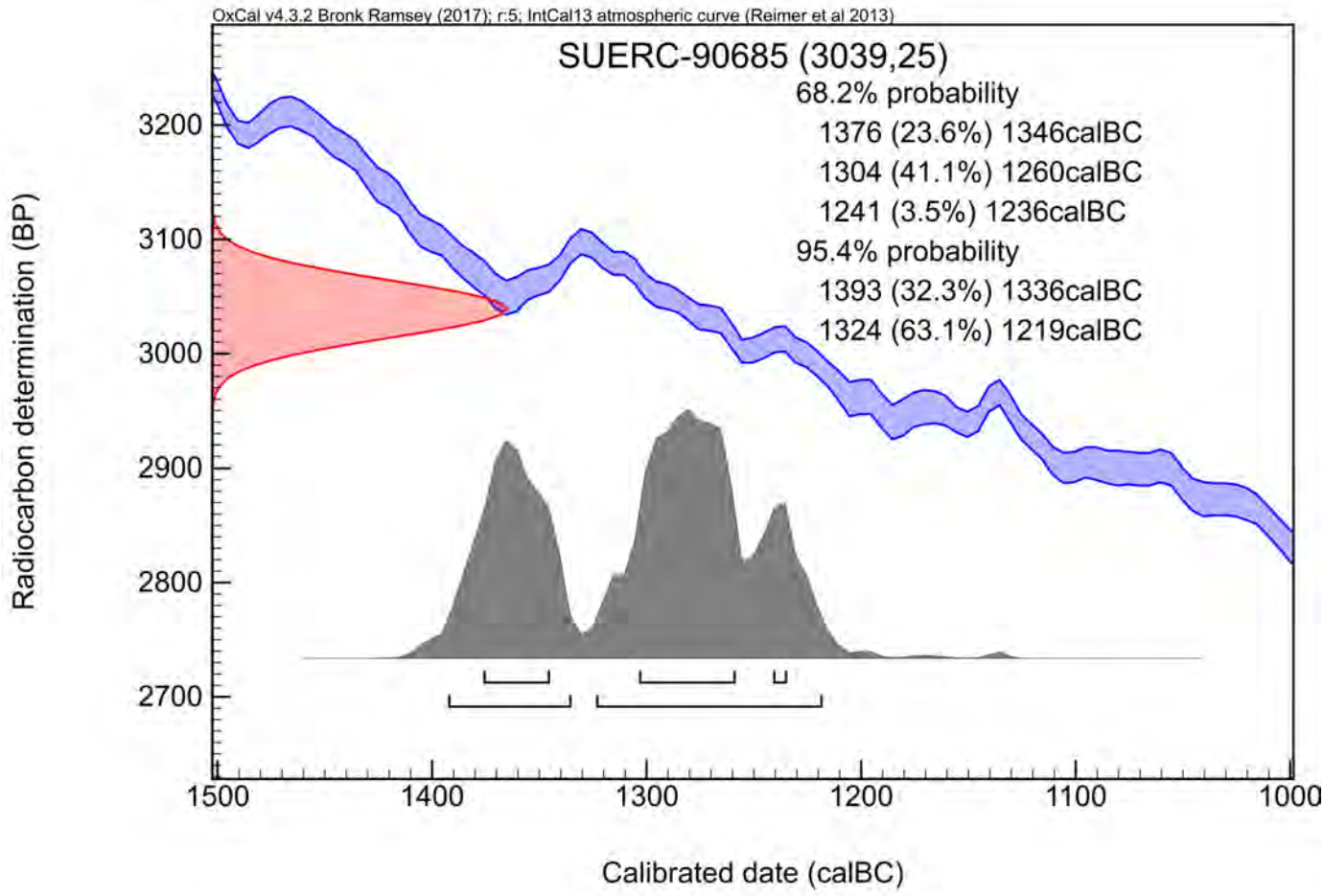
Samples with a SUERC coding are measured at the Scottish Universities Environmental Research Centre AMS Laboratory and should be quoted as such in any reports within the scientific literature. The laboratory GU coding should also be given in parentheses after the SUERC code.

Detailed descriptions of the methods employed by the SUERC Radiocarbon Laboratory can be found in Dunbar et al. (2016) *Radiocarbon 58(1) pp.9-23.*

For any queries relating to this certificate, the laboratory can be contacted at suerc-c14lab@glasgow.ac.uk.

Conventional age and calibration age ranges calculated by :

Checked and signed off by :



The radiocarbon age given overleaf is calibrated to the calendar timescale using the Oxford Radiocarbon Accelerator Unit calibration program OxCal 4.*

The above date ranges have been calibrated using the IntCal13 atmospheric calibration curve†

Please contact the laboratory if you wish to discuss this further.

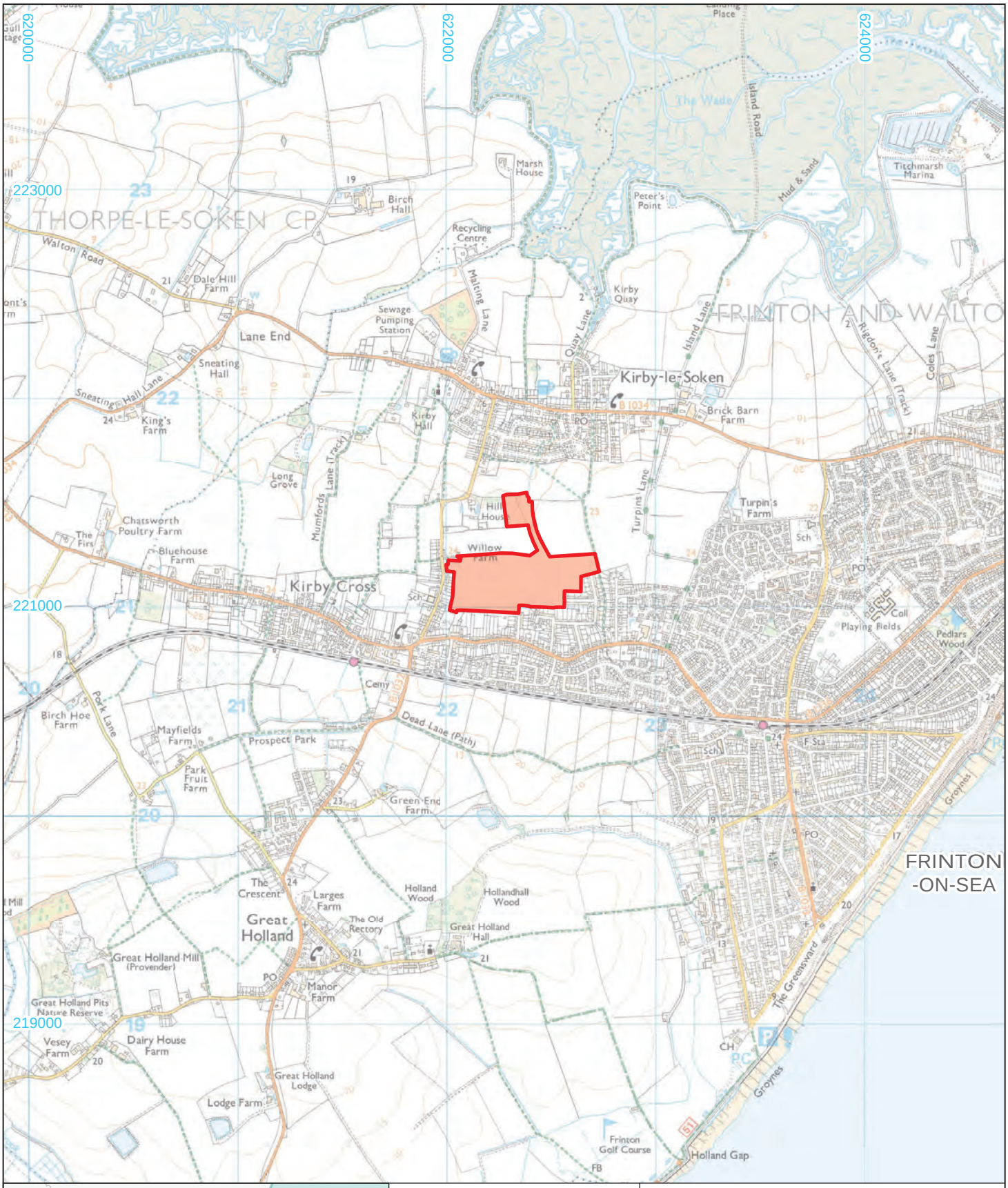
* Bronk Ramsey (2009) *Radiocarbon 51(1) pp.337-60*

† Reimer et al. (2013) *Radiocarbon 55(4) pp.1869-87*

APPENDIX H: OASIS REPORT FORM

PROJECT DETAILS		
Project Name	Land East of Halstead Road, Kirby Cross, Essex	
Short description	An archaeological excavation was undertaken by Cotswold Archaeology in February and March 2018 on land east of Halstead Road, Kirby Cross, Essex. The work was carried out at the request of Linden Limited, Wellbeck Strategic Land II LLP and Elizabeth Honor Clarke, and comprised the excavation of six areas, totalling 1035m2, within the overall 18.86ha development site. Remains of prehistoric, possible late prehistoric – Roman or Roman - Early Saxon, medieval and post-medieval date were identified. A single unurned cremation of Middle Bronze Age date represents the earliest activity encountered on the site. Possible late prehistoric to Roman or Roman to Early Saxon activity comprised two intercutting ditches that produced a single sherd of possible Late Iron Age or Early Saxon pottery from each ditch, and a small pit containing two sherds of worn and abraded Romano-British grey ware. However, the small quantity of artefactual material recovered coupled with its undiagnostic/ abraded nature raises the potential for these remains to be later, possibly medieval, in date. Medieval activity, focused in the eastern part of the site, appears to have begun around the beginning of the 12th century, with a lack of later pottery forms indicating that had ceased by the end of the 13th century or very early 14th. Ditches, possibly forming part of a trackway or enclosure system, and a cluster of small pits and postholes were encountered. Waste from a variety of crops indicates that processing was taking place nearby while the pottery assemblage, including cooking pots, jugs and jars in both local and finewares, is suggestive of settlement in the immediate vicinity. Post-medieval ditches encountered within the Site correspond with now-removed field boundaries depicted on historic maps.	
Project dates		
Project type	Excavation	
Previous work	Desk-based Assessment Air photo mapping and interpretation Evaluation	
Future work	Unknown	
PROJECT LOCATION		
Site Location	Halstead Road, Kirby Cross, Essex	
Study area (M^2/ha)	0.32ha	
Site co-ordinates	TM 22314 21126	
PROJECT CREATORS		
Name of organisation	Cotswold Archaeology	
Project Brief originator	Essex County Council	
Project Design (WSI) originator	Cotswold Archaeology	
Project Manager	Adrian Scruby	
Project Supervisor	Emily Stynes	
MONUMENT TYPE	Boundary ditches (IA, Med), pits (IA, Med)	
SIGNIFICANT FINDS	Ceramics (IA/RB/Med), cremated human remains, CBM/fired clay	
PROJECT ARCHIVES	Intended final location of archive (museum/Accession no.)	Content (e.g. pottery, animal bone etc)
Physical	Colchester & Ipswich Museum Service Accession Number: COLEM: 2017.97	Ceramics, CBM/fired clay, cremated remains, palaeoenvironmental remains
Paper	Colchester & Ipswich Museum Service Accession Number: COLEM: 2017.97	Context sheets,
Digital	Colchester & Ipswich Museum Service Accession Number: COLEM: 2017.97	Digital photographs, finds databases

BIBLIOGRAPHY	
CA (Cotswold Archaeology) 2019 *Land East of Halstead Road, Kirby Cross, Essex: Archaeological Excavation.* CA typescript report **661074_1**	



N

0 1km

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

Land east of Halstead Road, Kirby Cross, Essex

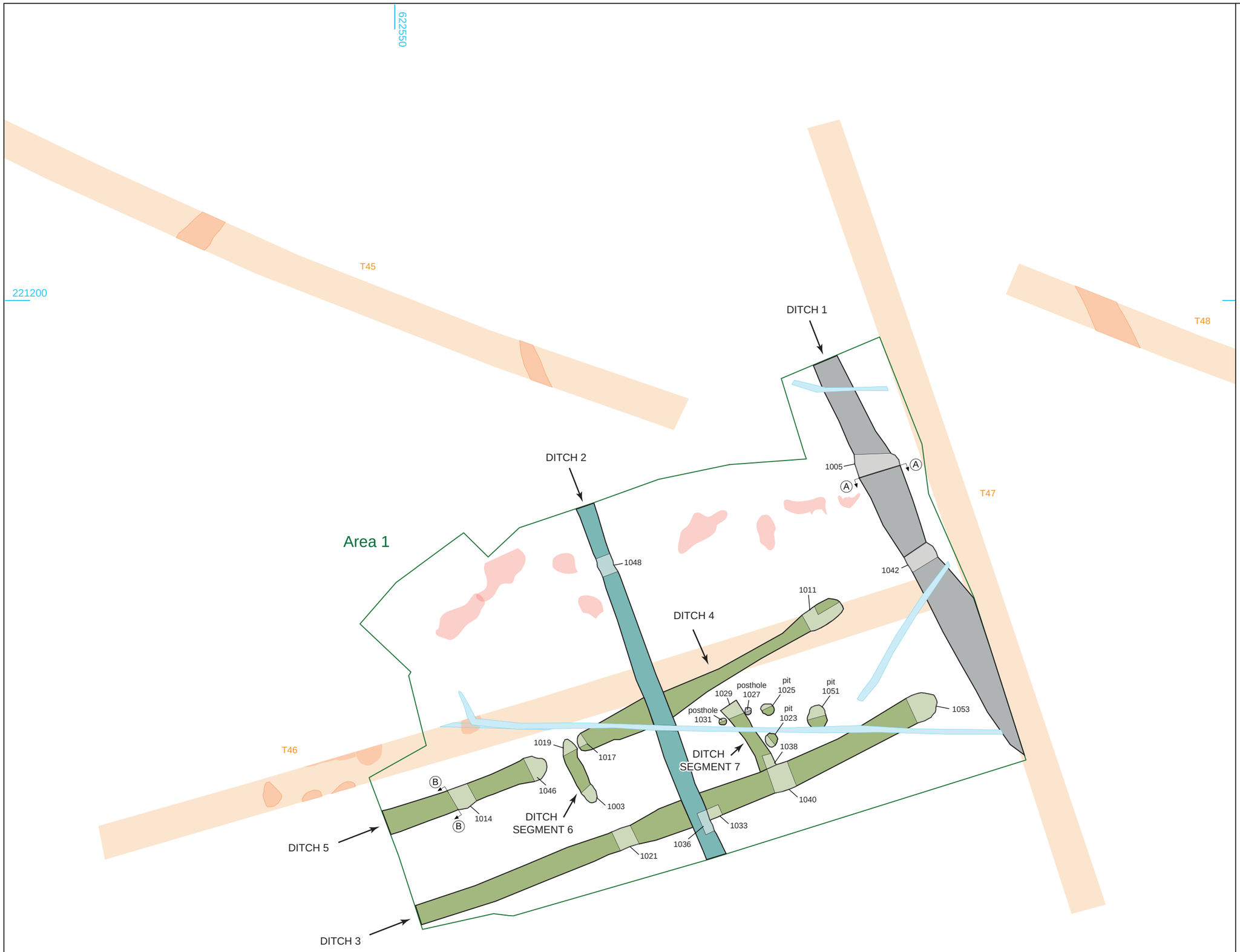
FIGURE TITLE

Site location plan

DRAWN BY	**EE**	*PROJECT NO.*	**661074**	*FIGURE NO.*
CHECKED BY	**DJB**	*DATE*	**14/01/2020**	**1**
APPROVED BY	**AS**	*SCALE@A4*	**1:25,000**	

622000
622200
622400
622600
221600
221400
221200
221000
Hill House Farm
Halstead Road
Woburn Avenue
see Fig.5
Area 5
Area 6
Area 4
see Fig.3
Area 1
Area 2
Area 3
see Fig.4
N
Site boundary
Excavation area
Archaeological feature
Previous evaluation trench (CA 2018)
Feature associated with previous evaluation trench
Area of uncultivated land
Modern
Field drain
Air photo Interpretation (Deegan 2017)
Archaeological feature
Diffuse Archaeological feature
Geological feature
Recent ditch
Recent bank
0
1:2,500
100m

Cotswold Archaeology
Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk
PROJECT TITLE
Land east of Halstead Road, Kirby Cross, Essex
FIGURE TITLE
Area locations with air photograph interpretation
DRAWN BY EE
CHECKED BY DJB
APPROVED BY AS
PROJECT NO. 661074
DATE 14/01/2020
SCALE@A3 1:2500
FIGURE NO. 2



N

Excavation area

Previous evaluation trench (CA 2018)

Feature associated with previous evaluation trench

Treethrow

Field drain

Section location

(excavated/unexcavated)

Medieval

Post-medieval

Undated

0 1:200 10m

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

Land east of Halstead Road, Kirby Cross, Essex

FIGURE TITLE

Area 1, showing archaeological features

DRAWN BY	EE	PROJECT NO.	661074	FIGURE NO.
CHECKED BY	DJB	DATE	14/01/2020	3
APPROVED BY	AS	SCALE@A3	1:200	

622500

Area 2

T53

ditch
5305

ditch
5303

Area 3

ditch
3003

C

C

221100

T59

N

Excavation area

Previous evaluation trench (CA 2018)

Feature associated with previous evaluation trench

Field drain

A A Section location

(excavated/unexcavated)

Medieval

0 1:200 10m

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

Land east of Halstead Road, Kirby Cross, Essex

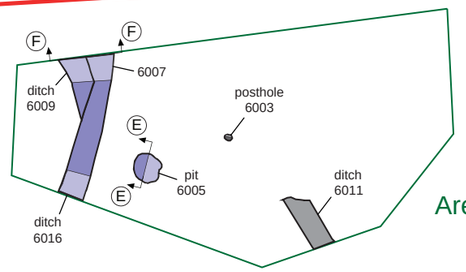
FIGURE TITLE

Areas 2 and 3, showing archaeological features

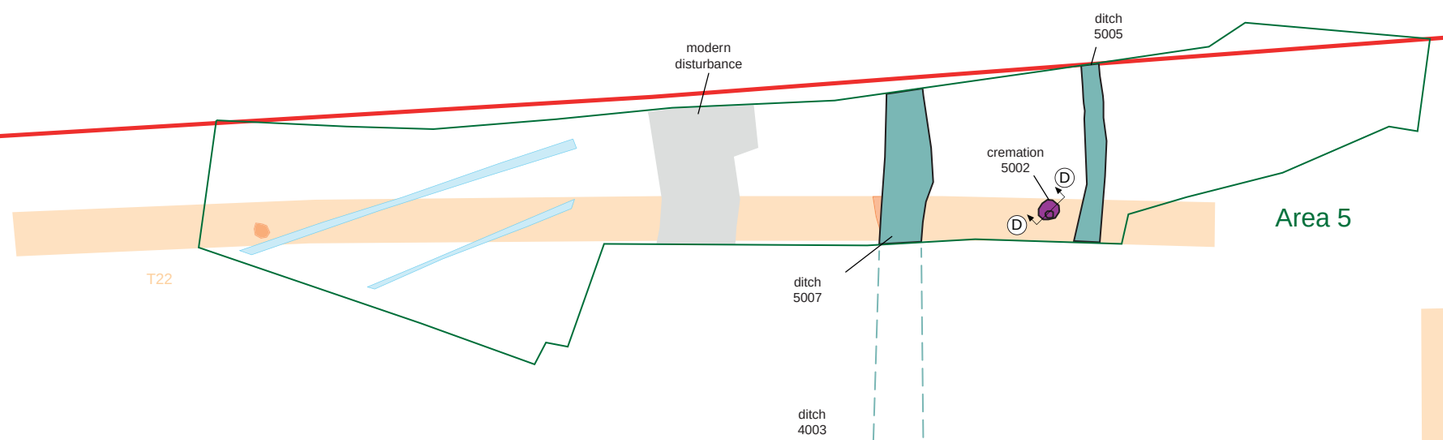
DRAWN BY	**EE**	*PROJECT NO.*	**661074**	*FIGURE NO.*
CHECKED BY	**DJB**	*DATE*	**14/01/2020**	**4**
APPROVED BY	**AS**	*SCALE@A3*	**1:150**	

622100

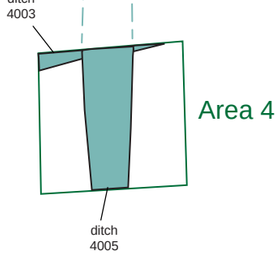
N



Area 6



Area 5



Area 4

T21

T23

221200

Site boundary
Excavation area
Previous evaluation trench (CA 2018)
Feature associated with previous evaluation trench
Treethrow
Modern
Field drain
A A Section location

(excavated/unexcavated)

Early Prehistoric
Late Prehistoric-Roman / Roman-Early Saxon
Post-medieval
Undated

0 1:200 10m

Cotswold Archaeology
Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

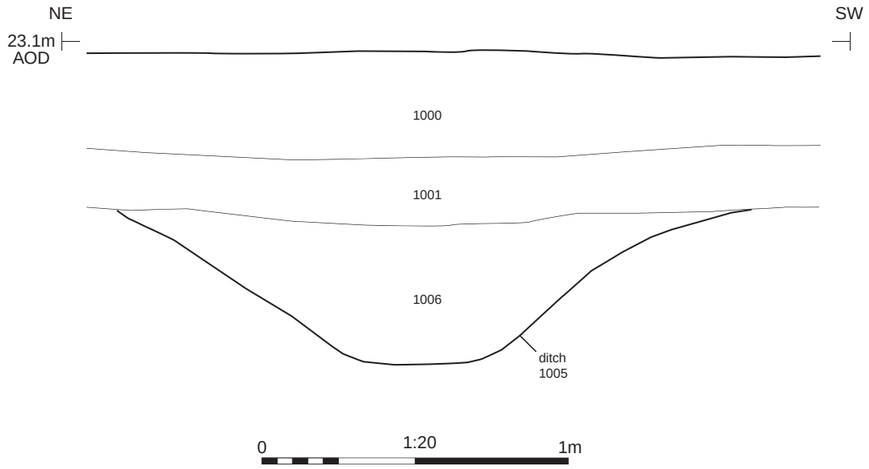
Land east of Halstead Road, Kirby Cross, Essex

FIGURE TITLE

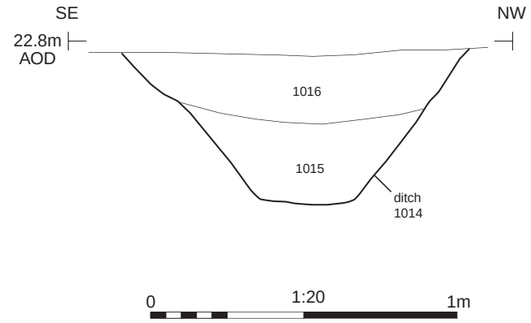
Areas 4, 5 and 6, showing archaeological features

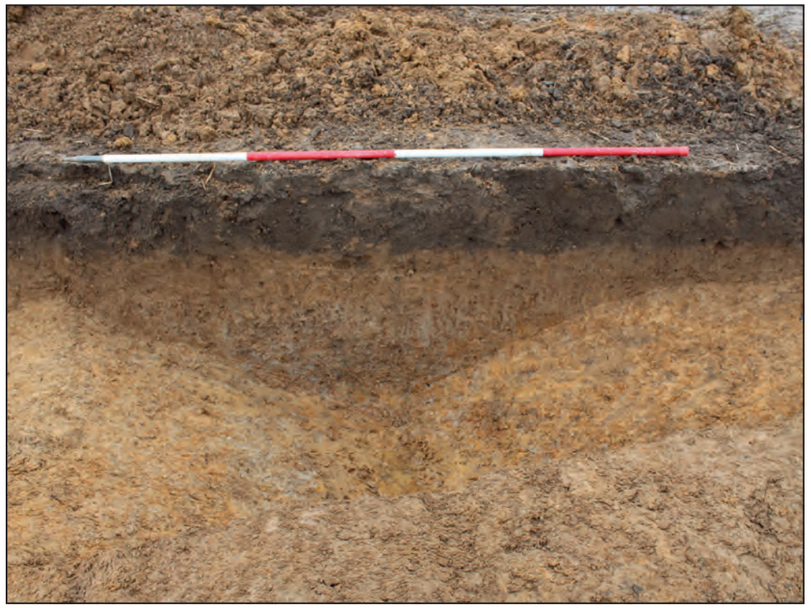
DRAWN BY	**EE**	*PROJECT NO.*	**661074**	*FIGURE NO.*
CHECKED BY	**DJB**	*DATE*	**14/01/2020**	**5**
APPROVED BY	**AS**	*SCALE@A3*	**1:200**	

Section AA

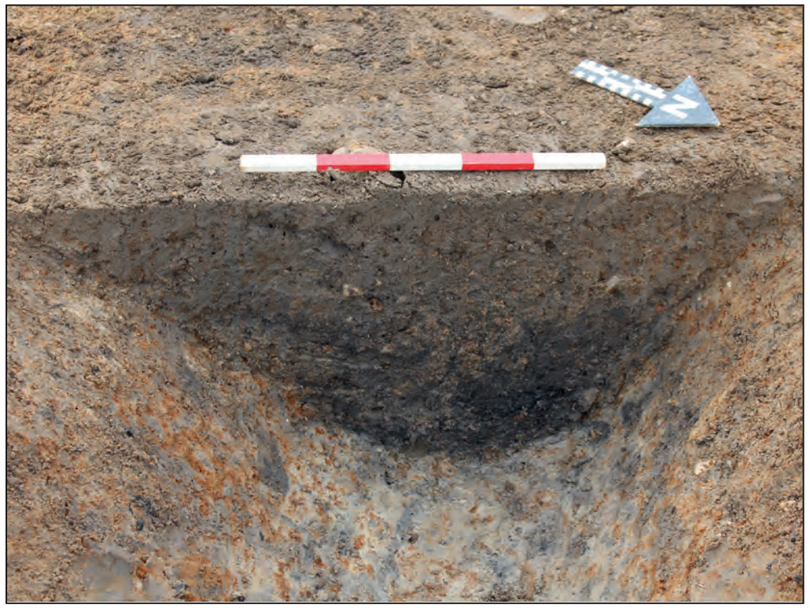


Section BB





Ditch 1005, looking south-east (2m scale)



Ditch 1014, looking south-west (0.5m scale)

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

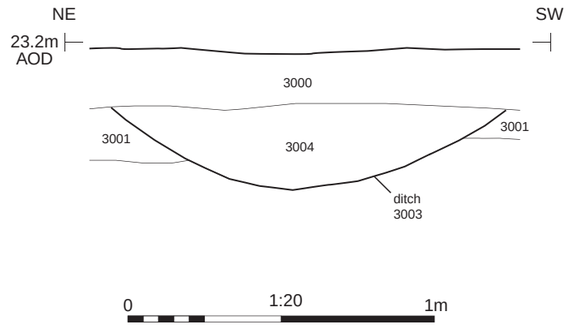
Land east of Halstead Road, Kirby Cross, Essex

FIGURE TITLE

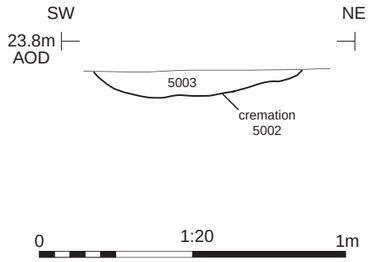
Area 1, sections and photographs

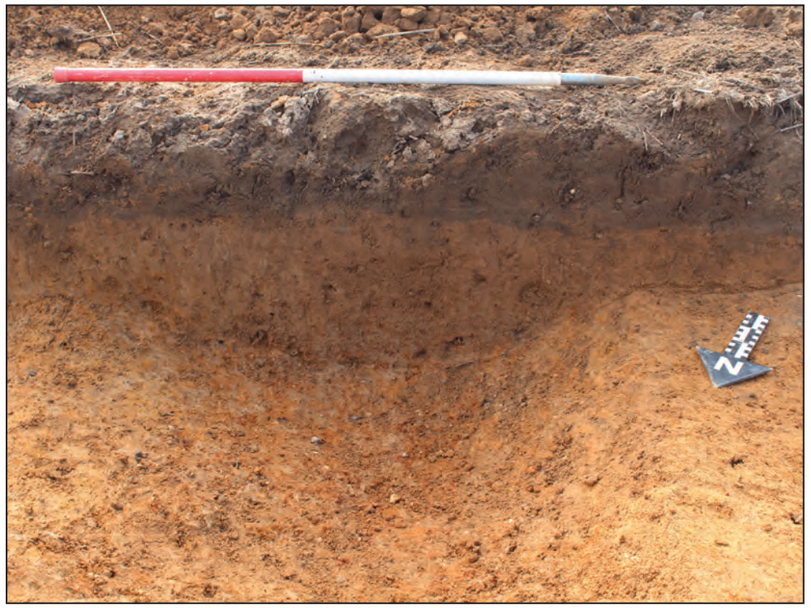
DRAWN BY	**EE**	*PROJECT NO.*	**661074**	*FIGURE NO.*
CHECKED BY	**DJB**	*DATE*	**14/01/2020**	**6**
APPROVED BY	**AS**	*SCALE@A3*	**1:20**	

Section CC



Section DD





Ditch 3003, looking south-east (1m scale)

Cremation 5002, looking north-west (0.2m scale)

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

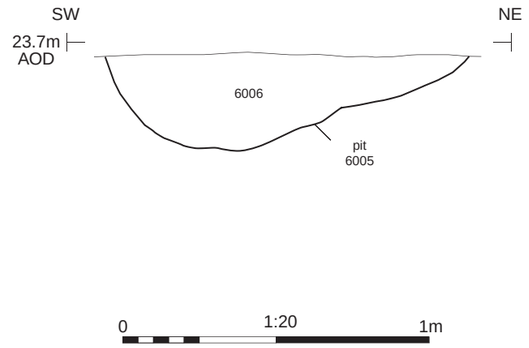
Land east of Halstead Road, Kirby Cross, Essex

FIGURE TITLE

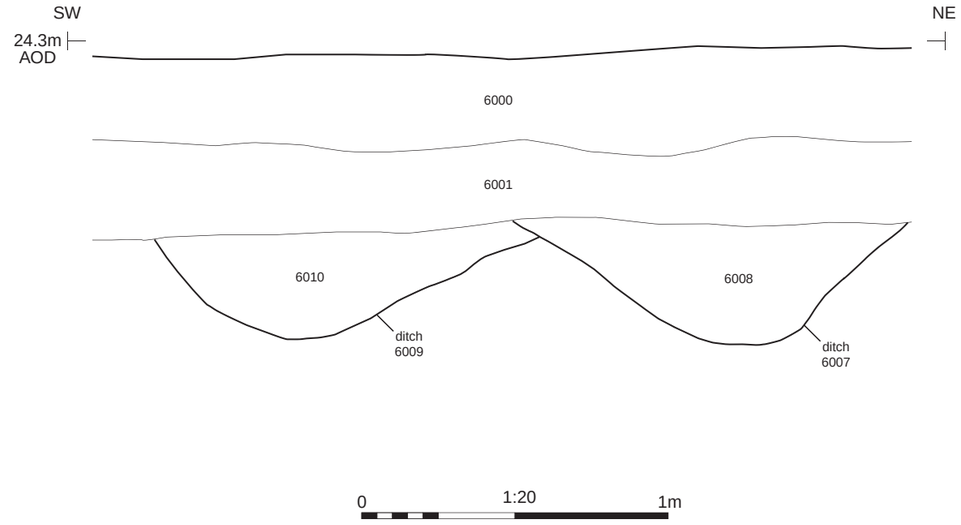
Areas 3 and 5, sections and photographs

DRAWN BY	**EE**	*PROJECT NO.*	**661074**	*FIGURE NO.*
CHECKED BY	**DJB**	*DATE*	**14/01/2020**	**7**
APPROVED BY	**AS**	*SCALE@A3*	**1:20**	

Section EE



Section FF



Pit 6005, looking north-west (1m scale)

Ditches 6009 and 6007, looking north-west (2m scale)

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

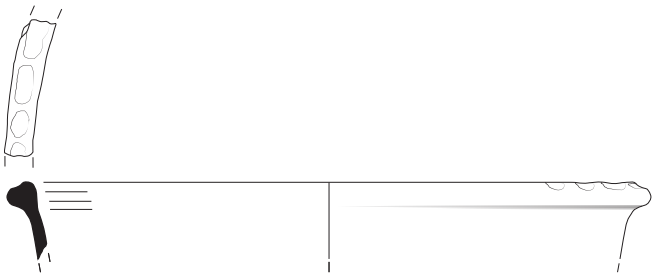
Land east of Halstead Road, Kirby Cross, Essex

FIGURE TITLE

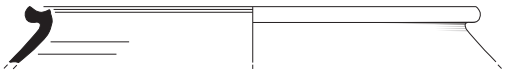
Area 6, sections and photographs

DRAWN BY	**EE**	*PROJECT NO.*	**661074**	*FIGURE NO.*
CHECKED BY	**DJB**	*DATE*	**14/01/2020**	**8**
APPROVED BY	**AS**	*SCALE@A3*	**1:20**	

1



2



0 1:4 150mm

Cotswold Archaeology

Andover 01264 347630
Cirencester 01285 771022
Exeter 01392 826185
Milton Keynes 01908 564660
w www.cotswoldarchaeology.co.uk
e enquiries@cotswoldarchaeology.co.uk

PROJECT TITLE

Land east of Halstead Road, Kirby Cross, Essex

FIGURE TITLE

Medieval pottery

DRAWN BY	EE	PROJECT NO.	661074	FIGURE NO.
CHECKED BY	DJB	DATE	14/01/2020	9
APPROVED BY	AS	SCALE@A4	1:4	

Andover Office

Stanley House
Walworth Road
Andover
Hampshire
SP10 5LH

t: 01264 347630

Cirencester Office

Building 11
Kemble Enterprise Park
Cirencester
Gloucestershire
GL7 6BQ

t: 01285 771022

Exeter Office

Unit 1, Clyst Units
Cofton Road
Marsh Barton
Exeter
EX2 8QW

t: 01392 573970

Milton Keynes Office

Unit 8 - The IO Centre
Fingle Drive, Stonebridge
Milton Keynes
Buckinghamshire
MK13 0AT

t: 01908 564660

Suffolk Office

Unit 5, Plot 11, Maitland Road
Lion Barn Industrial Estate
Needham Market
Suffolk
IP6 8NZ

t: 01449 900120

e: enquiries@cotswoldarchaeology.co.uk