

Archaeological Mitigation Report

NEEDHAMS FARM WITCHFORD

For Needham's Foundation

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L-P:ARCHÆOLOGY

Archaeological Mitigation Report

NEEDHAMS FARM WITCHFORD

Client: Needham's Foundation

Local Authority: East Cambridgeshire District Council

NGR: 549402, 278839

Planning App: 17/00534/OUT

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Abstract

An archaeological excavation was carried out at land east of Needham's Farm, Main Street, Witchford as an archaeological evaluation had identified archaeological remains. The work was carried out by L - P : Archaeology and the report prepared by Helen Holderness of L - P : Archaeology for Needham's Foundation.

The site lies approximately 1km to the west of the centre of the settlement of Witchford within an area of Iron Age to Medieval activity. The main objectives of the excavation were to record the archaeological remains on the site and to understand the establishment of the village from the post-Norman period along with examining the evidence of domestic and occupational activity, placing it within a local and regional context.

The excavation identified the remains of Medieval extraction pits spread across the site with later Post Medieval land boundaries and landscaping. The setting for these features indicate a more industrial and agricultural focus to the site rather than domestic occupation. A World War II air raid shelter was also identified.

1. Introduction

- 1.1. This report details the results of an archaeological excavation carried out at land east of Needhams Farm, Main Street, Witchford for Needham's Foundation. The local authority is East Cambridgeshire District Council.
- 1.2. The fieldwork was carried out by H. Holderness, D. Martinez-Pascual, D. Strubergs, Z. Richardson, E. Dall'olio and C. Markus, with surveying carried out by C. Pearce, all of L – P : Archaeology, between 2nd September to the 3rd of October 2019. Finds and animal bone reports by Lorraine Mepham and Lorraine Higbee, registered finds by Aileen Tierney and environmental sampling by Dr Matt Law.
- 1.3. The site is located in at land east of Needhams Farm, Main Street, Witchford (FIGURE 1). The centre of the site is at National Grid Reference 549402, 278839.
- 1.4. The event number allocated by the Cambridgeshire Historic Environment Record for the excavation is ECB5956. The event number was used as the site code.
- 1.5. The work was carried out in accordance with the requirements of the Cambridgeshire Historic Environment Team (CHET) who provided a brief for the works (APPENDIX 6), and with the approved Written Scheme of Investigation (WSI) prepared by Helen Holderness of L – P : Archaeology (HOLDERNESS 2019).

2. Site Background

2.1.PLANNING

- 2.1.1. Planning consent has been granted for construction of 3 new homes and associated works. The planning reference is 17/00534/OUT.
- 2.1.2. The site does not contain any Scheduled Monuments or Listed Building.
- 2.1.3. In 2019 the Ministry of Housing, Communities and Local Government revised the National Planning Policy Framework (NPPF). Section 16 of this document sets out planning policies on the conservation of the historic environment (HCLG 2019).
- 2.1.4. When considering an application for development the local planning authority, East Cambridgeshire District Council must consider the policy ENV14: Sites of Archaeological Interest, within the Local Plan (adopted April 2015) regarding archaeology and planning (ECLP 2015). On matters concerning archaeology and the historic environment East Cambridgeshire District Council take impartial advice from the Historic Environment Team, Cambridgeshire County Council (CHET).
- 2.1.5. Needham's Foundation and CHET have agreed the methodology for these works in the WSI (HOLDERNESS 2019). The WSI was based on a Brief provided by CHET.
- 2.1.6. This document assesses the results of the excavation.

2.2.LOCATION

- 2.2.1. The site is located to the north of Main Street in the western part of the village of Witchford. The village sits on the western spur of the Isle of Ely c. 5km to the west of the River Great Ouse at an elevation of c. 14m OD with the local landscape dropping to c. 2m in the west, north and south.
- 2.2.2. Residential properties are located along Main Street to the east and west with agricultural land, both pasture and arable, to the north and south.

2.3.GEOLOGY AND TOPOLOGY

- 2.3.1. The British Geological Survey GoeIndex shows the site to be located on Kimmeridge Clay Formation overlain by Oadby member which is characterised by lenses of sand, gravels and clays (BRITISH GEOLOGICAL SURVEY 2020).
- 2.3.2. The results of the excavation confirmed the geology of the site.
- 2.3.3. The village of Witchford sits to the west of a palaeochannel, now a drain into Grunty Fen, which would have separated Witchford from Ely until the draining of the Fens in the mid 17th century.

2.4.ARCHAEOLOGY AND HISTORY

- 2.4.1. The Isle of Ely is an elevated land located in the Fen, a former flooded coastal plain in Eastern England which covers parts of southern Lincolnshire, northern Cambridgeshire and western Norfolk.
- 2.4.2. The fenland basin was a relatively dry, grassland plain until the end of the Neolithic when the area was flooded by rising sea levels. The higher land became islands with peat based marshland surround them, which led to communities moving from the plain to occupy the higher ground whilst utilising the fen edges. Cultivation was limited to the higher ground while animal husbandry focused on sheep, which were better adapted to wetter environments (EVANS & SERJEANTSON 1988).
- 2.4.3. There is little archaeological evidence of pre-Iron Age activity in the Witchford area although a late Mesolithic/Early Neolithic blade core was found during trenching to the northeast of the site (MBC20482) and an Early Neolithic to Late Bronze Age lithic implement was recovered from archaeological trial trenching carried out 50m to the south of the site (MCB25669).
- 2.4.4. Three Bronze Age palstaves and a gold torc were recovered from Grunty Fen, 1.5km to the south of the site in the mid 19th century. Neolithic and Bronze Age artefacts have also been found at Witcham and Coveney which lie to the west and northwest of Witchford (HALL 1996).
- 2.4.5. Archaeological trenching carried out approximately 250m northeast of the site

revealed a small cemetery of 10 un-urned cremations and 1 inhumation. No direct dating was available but they are assumed to be broadly contemporary with the finds found during the same evaluation and assigned to the Middle Bronze Age (MCB20482).

2.4.6. 50m to the south of the site, an archaeological evaluation exposed the remains of a number of Iron Age or Roman ditches and gullies which were broadly orientated north to south and east to west and likely to represent field boundaries which were interpreted as field boundaries attached to a settlement. One of the ditches also contained an assemblage of 51 sherds of Roman pottery (MCB25669).

2.4.7. Approximately 150m to the southwest of the site a set of parallel ditches were uncovered during an archaeological evaluation. These contained a small assemblage of 2nd to 4th century pottery and were interpreted as possible roadside ditches (MCB24996). Further afield Roman artefacts were found at a site near Lancaster Way, 2.5km to the east in the 1920s and 5 sherds of Roman pottery was recovered the site. Later excavations has revealed a landscape containing Iron Age and Roman settlements, suggesting that these sherds came from a similar site.

2.4.8. Early Medieval remains in the present village are sparse. A mid 5th to mid 7th century inhumation cemetery was exposed during levelling at the Witchford aerodrome in 1947, 2.5km to the east of the site and may be the remains of the pre-Ely site of Cratendune (NMR REF 375089 and 375088).

2.4.9. An archaeological evaluation carried out at the current site in June 2018 revealed features with 10th to 12th century pottery in the fills but most of the pottery came from the 13th to 15th century extraction pits and field boundaries (MCB25672).

2.4.10. Saint Andrew's Church has a 13th century tower surviving from an earlier church. In the last quarter of the 14th century the nave and chancel were rebuilt and enlarge and the church was consecrated in 1376 (CB14830).

2.4.11. Medieval ridge and furrow has been examined from the north, south and west of the village (MCB20482, MCB20498, MCB24249, MCB24996, MCB25669) close to

locations of the known open fields of Belham's End, Marrow Way Fields, Hale Field and Briery Field (PUGH 2002).

2.4.12. Archaeological evaluations close to the church revealed Post Medieval ditches which correlates to a boundary marked on the first edition Ordnance Survey map of 1885 (MCB19676). A Primitive Methodist Chapel is known to have stood just outside the southeast boundary of the current site as it was recorded on the first edition Ordnance Survey map of 1885 but has since been demolished (MCB21687).

2.4.13. The current site had a significant assemblage of Post Medieval animal bone which suggested that animal husbandry, including butchery, was being practiced in an adjoining toft (MCB25672).

2.4.14. To the northwest of the village is an undated cropmark of a curvilinear feature which is likely to be a ditch (MCB23243).

3. Aims and Objectives

3.1. The general aims of the archaeological excavation were to record the character, date, location and preservation of any archaeological remains on site.

3.2. The specific aims of the archaeological excavation as defined by WSI (HOLDERNESS 2019) were:

- ◆ To contribute to an understanding of the establishment of the village of Witchford including the post-Norman conquest period and the inception of the more formal Medieval village including research into the possibly poly-focal nature of the village.
- ◆ To consider the site with reference to the wider post-Norman and Medieval landscapes within the region.
- ◆ To examine the evidence of and division in relation to settlement and occupation activity, including the character, extent, morphology, diet, economy and environment and place it within their local and broader landscape context.
- ◆ To examine and evidence for trade, both regionally and further afield.
- ◆ To examine the faunal remains and the contributions the assemblage can make to our understanding of animal husbandry practices for this area; with particular reference to the presence of juvenile faunal remains and animal burials.

4. Methodology

- 4.1. The archaeological site was excavated following the specifications listed in the WSI in order to expose the remains of the archaeological site (HOLDERNESS 2019).
- 4.2. The overburden on site was removed with an 8t 360 mechanical excavator fitted with a toothless ditching bucket and a 9t dumper used to move the spoil away from the excavation area. A spoil area was located along the north and east boundary of the site. The client did not require the top- and the subsoil to be split into separate heaps.
- 4.3. During preparations for the excavation, and in consultation with CHET, it was agreed that the site would be stripped in two phases to assist with spoil management.
- 4.4. The site was then hand cleaned and hand-planned at a scale of 1:100.
- 4.5. A site visits were carried out by K. Hopper on behalf of Cambridgeshire Historic Environment Team (CHET). During this meeting it was agreed to reduce the amount of machining along the east of the site as much of it had already been explored during the evaluation. The well uncovered in the northwest of the site was considered too dangerous to excavate as no information was available on how it had been capped, if at all.
- 4.6. Following consultation with CHET, a variation to the stripping of the area along the southern boundary was agreed. Although two extraction pits were within this area, further work was not required on them if the nature of the other extraction pits was shown to be consistent. The hedge line has created a significant degree of disturbance so it was decided to concentrate the investigation on the southwest corner with the proviso if archaeological features there continued to the east, the area would be stripped.
- 4.7. Finds recovered from the topsoil were discarded on site. Finds were collected from the top of archaeological horizons and recorded when disturbed by machine. A metal detector was used during all stages of work.
- 4.8. A site visit by CHET was carried out in the second week of the excavation timetable and it was agreed that the extraction pits would be sample excavated to understand

their nature, extent and to collect dating evidence and that once this was established no further work on them was needed.

4.9. Once the archaeological features were cleaned and exposed, an intervention plan was drawn up to target archaeological deposits and features and were investigated according to the WSI specifications (HOLDERNESS 2019).

4.10. Although no official outreach was planned during the excavation, many local people came by regularly to see the progress made and to enquire on the features and finds uncovered. The site team took time to answer the queries to promote a better understanding of the role of commercial archaeology and the development of Witchford.

5. Results

5.1. INTRODUCTION

5.1.1. The site is characterised by a series of extraction pits dating from the 13th to mid 14th centuries, linear land divisions or boundaries with mixed dating, and a Second World War air raid shelter. These appear to represent distinct phases during the life of the site and do not appear to be contemporary.

5.1.2. Most features have been dated from the material found within them but the bioturbation caused by the trees planted in the past 50 years has blurred the boundaries of some contexts and may have caused more recent material to migrate into earlier features.

5.2. EXTRACTION PITS

5.2.1. Several extraction pits were investigated during the excavation. There is a variation in size but most have a similar depth which could suggest that the same material was being extracted. The fills tended to be a mixture of deliberately dumped soils in the upper fills and slumped natural towards the base. This suggests that the pits, and area, stood vacant for a period of time before being backfilled.

5.2.2. The deliberate backfill was a mixture of topsoil and redeposited natural with a few scatters of pottery and occasional animal bone. A working hypothesis during the excavation was that one pit was backfilled with the upper material of another and extra material brought in from off site. The pottery indicated a 13th to mid 14th century date for all of the extraction pits.

5.2.3. Pits [008] and [033] were similar in size (approximately 3.75m by 2.5m) and depth: [033] was fully excavated to a depth of 1.14m, excavation in [008] ceased at a depth of 1.25m when ground conditions made it unworkable. The upper fill in each was similar and contained a range of pottery from the mid 9th to the mid 14th centuries. It was mostly fragments with few large pieces although (038) in pit [033] contained 14 shreds belonging to one vessel. The animal bone assemblage was limited in quantity but showed a good range of

domesticated animals with sheep or goat being prominent.

- 5.2.4. In the centre of the site two large pits were uncovered [170] and [171]. These were shallow, no more than 0.35m deep, and contained a deliberate backfill which included pottery ranging in date from the Early Medieval to the Medieval period.
- 5.2.5. The western pits [070] and [080] were of a similar depth and again contained deliberate backfills with a pottery assemblage suggesting a 13th to mid 14th century date.
- 5.2.6. The eastern part of the site was covered by a layer of Post Medieval material. This was removed by machine and a large (4.5m by 4m) extraction pit was exposed [165] and contained a single deliberate backfill (164). A slot was hand dug to a depth of 0.80m but rising ground water made further excavation impossible. A small assemblage of 13th to mid 14th century pottery was recovered.
- 5.2.7. The extraction pits do not appear to have a clear chronology on site as they tend to respect the boundaries of earlier extraction pits. This would indicate that those working the quarries knew where others had been dug or that they were still being backfilled as new ones were being dug. Within the pits themselves, the finds recovered show a time depth that may not reflect their actual dates, with earlier material residual in many of the fills.
- 5.2.8. Two of the extraction pits, [080] and [165], had shallow downward sloping gullies running into them [041] and [158] respectively. Initially these were interpreted as earlier field or drainage gullies but it is possible that there were 'barrow runs' for removing the material from the deeper parts of the extraction pit.

5.3.LINEAR FEATURES

- 5.3.1. The linear features across the site run generally on either a north to south alignment, or east to west. Those running north to south appear to represent land boundaries and may date from the early 19th century when inclosure occurred in Witchford and the tithe map of 1841 supports this. It is possible

that these features have their origins in earlier land divisions which persisted through time. Although there is significant Medieval occupation debris, there is little to suggest that any buildings stood on or near to the site. It is possible that an earlier farmstead was in the vicinity but this was long gone before Needham's Farm was erected.

5.3.2. Linear [061] is consistent in width and depth, 1.14m and 0.55m respectively and has a single deliberate fill that contained a large quantity of pottery which dated from the mid 9th through to the 14th century, with intrusive pottery dating to the 19th century. It runs parallel to ditches [091], [096], [098], [102], [104] and [023].

5.3.3. In the central part of the site, a series of north to south linear features were uncovered [091], [096], [098], [102] and [104]. They were generally shallow in depth, between 0.25 and 0.45m with a single fill in each. The pottery recovered mainly dates between the 13th to mid 19th centuries, with a few sherds from the mid 9th to 11th centuries.

5.3.4. Although 9th to mid 11th century pottery was recovered and identified as residual in many of the linear features, the finds report considered several sherds seemingly from secure contexts (6.2.6). Those fills with 9th to mid 11th century pottery all come from features where other slots excavated have returned with 13th to mid 14th century date [024] and [062] or truncated by 13th to mid 14th century features [044], or are part of a later Post Medieval feature [110].

5.4. OTHER FEATURES

5.4.1. Several small pits were cut by the extraction pits. [021] and [048] were both truncated by [008] and were interpreted as postholes but there is no evidence to suggest that they formed part of a structure as their profile and fills were distinctly different.

5.4.2. Some of the pits were truncated by later features and have no dating evidence from them [009]. They may be small prospecting pits but the stratigraphic chronology of the site is unclear as many of the features contain material culture that spans several centuries. The lack of material does not necessarily

bestow an early date.

- 5.4.3. In the centre of the site was a Second World War air raid shelter, [015]. The corrugated iron roof survived as did some of the internal timbers. The overburden covering the shelter was a mix of redeposited natural and the fills of the extraction pits that it cut into. As expected, the fill (014) contained a mixed pottery assemblage that covered all periods from the mid 9th century to the modern period.
- 5.4.4. After the shelter went out of use, it appears that the roof was simply pushed into the void and that the surrounding land levelled. A small plantation of quick growing trees was then planted over the area which led to significant disturbance of the lower deposits.

6. Finds

6.1. INTRODUCTION

6.1.1. The finds assemblage recovered were all washed by hand and appropriately bagged. The assemblage is of moderate size; pottery and animal bone are well represented, with other finds categories represented in smaller quantities. The assemblage ranges in date from Medieval to Post Medieval/Modern, with a few Romano-British items.

6.1.2. All finds have been quantified (count and weight) by material type within each context. Full lists of finds by context are given in APPENDICES 2–4.

6.2. POTTERY

6.2.1. The pottery assemblage amounts to 864 sherds (weighing 10,294 g), of which five sherds are Romano-British, and the remainder are Medieval to Post Medieval/Modern. Condition ranges from good to fair; the majority of sherds show little or no surface and/or edge abrasion, and there are groups of conjoining sherds within some contexts. Mean sherd weight overall is 11.9 g.

6.2.2. The assemblage has been quantified (sherd count and weight) by ware type within each context, following the regional type series for Cambridgeshire as far as possible (SPOERRY 2016), although it should be noted that this has been done only partially from hand specimens, and the identifications should therefore be regarded as provisional. The presence of identifiable vessel forms, and other diagnostic features such as surface treatments and decoration, have also been noted. Estimated Vessel Equivalents (EVEs) have not been calculated due to the low number of measurable rims, but instead the Estimated Number of Vessels (ENV) has been used, counting conjoining sherds (or non-joining sherds almost certainly from the same vessel) as 1. The total ENV is 798. The level of recording accords with the ‘basic record’, aimed at producing a rapid characterisation of the assemblage and a comparative dataset (PREHISTORIC CERAMICS RESEARCH GROUP 2016, SECTION 2.4.5). Table 1 gives the breakdown of the assemblage by ware type, and the full list by context is in APPENDIX 2.

6.2.3. In general, the pottery formed a low-level distribution across the site, with few contexts producing more than 25 sherds (nine contexts out of 55 producing

pottery). Although the condition is good, and thus not obviously redeposited, this does limit the degree of confidence that can be placed on the pottery for firm dating evidence. Contexts producing pottery are largely feature fills (ditches, pits, postholes). A few cross-feature joining sherds were noted, suggesting linked episodes of refuse disposal.

PERIOD	WARE TYPE	WARE CODE	NO. SHERDS	WEIGHT	ENV
ROMAN	Greyware		3	36	3
	Oxidised ware		2	10	2
LATE SAXON/MEDIEVAL					
Late Saxon	Stamford ware	STAM	19	186	19
	St Neots-type ware	NEOT	21	153	21
	Thetford-type ware	THET	118	2106	110
Early Medieval	Developed St Neots ware	DNEOT	55	482	55
	Early Medieval Essex Micaceous Sandy ware	EMEMS	23	412	19
	SW Cambridgeshire Sandy ware	SCAMSW	1	23	1
High Medieval	Bourne-type wares	BOUA; BOUB	5	57	5
	Developed Stamford ware	DEST			
	Grimston Glazed ware	GRIM	9	78	6
	Hedingham fineware	HEDI	1	15	1
	Lyveden A type Shelly ware	LYVA	9	93	8
	Medieval Ely ware	MEL	336	3091	310
	Medieval Essex-type micaceous grey sandy wares	MEMS	6	48	6
	Medieval Sandy Greyware	MSGW	10	72	9
	Medieval Sandy Coarseware	MSW	31	158	31
	SE Fenland Medieval Calcareous Buff ware	SEFEN	24	301	22
	Unglazed Reduced Sandy wares (Blackborough End type)	UGBB	53	301	52
	Sandy ware with iron-stained quartz		27	554	20
Late Medieval	East Anglian Redwares	EAR	9	82	9
	Late Medieval Reduced ware	LMR	2	32	2
	<i>Sub-total Medieval</i>		<i>517</i>	<i>4825</i>	<i>476</i>
Post Medieval /Modern	Bone china		5	15	5
	Creamware		3	18	3
	English stoneware		3	9	3
	Glazed red earthenware		71	1785	60
	Unglazed red earthenware		1	21	1
	Pearlware		5	38	3
	Refined whiteware		10	24	10
	Yellow ware		2	94	2
	<i>Sub-total Post Medieval/Modern</i>		<i>100</i>	<i>2004</i>	<i>87</i>
	Total		864	10294	798

Table 1- Pottery totals by ware type

ROMANO-BRITISH

6.2.1. Five sherds were identified as Romano-British; these include sandy greywares and oxidised wares. The only diagnostic piece is the rim from a flagon handle in a fine oxidised fabric (fill (005), ditch [023]). All sherds were residual in later contexts, and generally display a high level of abrasion than the later sherds.

MEDIEVAL

6.2.2. A total of 517 sherds has been dated as Medieval (4825 g; ENV 476). A number of separate ware types were identified, ranging in date from Late Saxon to late Medieval, although the chronological focus is on the high Medieval period (AD 1200–1350).

LATE SAXON (AD 850/875–1050)

6.2.3. Late Saxon wares are represented by Stamford ware (STAM), St Neots-type ware and Thetford-type wares (THET). The latter comprise a group of wheelthrown greywares, but with some variation in firing conditions and coarseness of the sandy fabric. Thetford-type wares from Cambridgeshire include those deriving from Thetford itself, as well as from Ipswich and Grimston, and wasters have also now been found in Huntingdon. Their production started c AD 850, but continues into the 11th and 12th centuries; in Ely it appears to have been used in the Middle Saxon period but earlier than St Neots-type ware (SPOERRY 2016). No attempt has been made here to differentiate between the possible different types; Huntingdon Thetford-type wares, for example, are not always sufficiently distinct to be easily recognisable (ibid., 106). The sherds here include six jar rims (at least one of which conforms to the Norfolk Thetford ware typology: (ANDERSON 2004, FIG. 43, TYPE 4) and several body sherds with applied thumbled strips.

6.2.4. The Stamford ware sherds include a jar rim, a tubular spout from a spouted pitcher and a strap handle from a similar vessel. The production of Stamford ware started at the beginning of the 10th century.

- 6.2.5. St Neots-type ware is characterised by the presence of frequent fossil shell, finely crushed and well sorted; sherds often have a ‘soapy’ texture. It is found across wide areas of the east Midlands and East Anglia. Given that the ‘developed’ variant of this ware (DNEOT: see below) is very similar in terms of fabric and even in vessel form, further sherds could be included amongst the latter. Diagnostic sherds of NEOT here include two jar rims with expanded profile which is well paralleled within the typical range for the ware. NEOT has a date range of AD 875–1100, and its occurrence elsewhere in Cambridgeshire alongside Middle Saxon pottery suggests that it was present in the county from the earliest period of its manufacture (SPOERRY 2016).
- 6.2.6. Most of these Late Saxon sherds appear to be residual in later contexts, but a small group (15 sherds) of St Neots-type, Stamford and Thetford-type wares provide reasonably secure dating evidence for ditch [110], fill (109), although occurring with two sherds of EMEMS; the date range may thus fall in the later 11th century. Two sherds of St Neots-type ware from ditch [024], fill (004), two sherds of Thetford-type ware from ditch [062], fill (064) and one of St Neots-type from ditch [044], fill (041) provide the only dating evidence for these features but should be treated with more caution.
- 6.2.7. All three of the Late Saxon wares represented here have a relatively wide date range from 9th to 12th century, and there is nothing to tie them to a tighter date range. However, as for ditch [110], their occurrence very largely with later wares could suggest that the whole group could fall relatively late in the sequence.

EARLY MEDIEVAL (AD 1050–1200)

- 6.2.8. Two ware types are represented here: Developed St Neots-type ware (DNEOT) and Early Medieval Essex-type Micaceous Sandy ware (EMEMS), which is something of a ‘catch-all’ ware type.
- 6.2.9. The shell-tempered Developed St Neots-type ware shares a fabric with the earlier variant (NEOT, see below), but is found in different vessel forms (although still wheelthrown). As the majority of the sherds here are undiagnostic body sherds, the possibility that they could belong to the earlier

variant cannot be ruled out. Diagnostic sherds include examples of shallow dishes with inturned rims and jars with expanded rims, both of which are paralleled in DNEOT and, as is noted for Cambridgeshire generally, in fabrics B1 to B7 at Bedford (SPOERRY 2016, FIG. 9.26, EM100 AND EM94 RESPECTIVELY; BAKER & HASSALL 1979, FIGS 104–113). The dish rim provides the only dating evidence for ditch fill (092).

6.2.10. A jar rim in EMEMS is also paralleled (*ibid.*, fig. 9.22, EM74); this was the only find from ditch fill (111) (ditch [112]), and joining sherds were also found in ditch [110], fill (109) and spread (073) in ditch [074]. Other jars rims with similar profiles came from ditches [061], fill (060) and [072], fill (071).

6.2.11. There is also one sherd tentatively identified as South-West Cambridgeshire Sandy ware (SCAMSW), on the basis of frequent iron-stained quartz inclusions, although this would be unexpected given the site's location. The presence of other sandy wares containing iron-stained quartz, although in fabrics not matching the description of SCAMSW in other ways, should be noted (see below in the High Medieval group).

HIGH MEDIEVAL (AD 1200–1350)

6.2.12. As might be expected, given the proximity of the site to Ely, local Medieval Ely ware (MEL) is predominant in this chronological group (66% by sherd count). Ely ware consists of sandy fabrics generally also containing flint and/or calcareous (shell, chalk, limestone) inclusions. Colouring is variable but sherds generally have an unoxidised black core. The date range is usually given as AD 1150–1350 (SPOERRY 2008; SPOERRY 2016). This is one of several High Medieval sandy/calcareous wares found across the Fenland and Fen Edge, of which Bourne wares have also been provisionally identified here (see below). Vessel forms seen here are mostly jars (at least 13 examples, two with finger-impressed rims), with four dish/bowl rims, one jug rim and one jug strap handle. Several sherds are glazed, and three carry combed decoration. Twenty-four other sherds have been tentatively identified as South-east Fenland Medieval Calcareous Buff ware (SEFEN), a new type recently defined as a

subdivision of a wider range of Ely type wares (IBID., 194–203).

- 6.2.13. Other wares include both local and regional wares. Unglazed Reduced Sandy wares of Blackborough End type (UGBB) have a source near King's Lynn and a date range of AD 1150–1450 from consumer sites. All sherds here are from the characteristic thin-walled, handmade jars (IBID., FIG. 9.77), one with a finger-impressed rim (joining sherds from fill (060) in ditch [061] and fill (164) in posthole [165]). Outside the core area of north-west Norfolk, these wares appear to have been transported to various parts of Cambridgeshire (via fenland waterways) some time after the industry began, in the later 13th and 14th centuries (IBID., 241). Grimston ware (GRIM) also has a Norfolk source; only a few sherds were identified here, all glazed and including one jar rim.
- 6.2.14. Regional wares include Lyveden A Shelly ware (LYVA) from Northamptonshire, including one jar rim (IBID., 9.55, HM138) and Developed Stamford ware (DEST) from Lincolnshire (one body sherd). There is one sherd of Medieval Essex-type Micaceous Grey Sandy ware (MEMS), another generic type.
- 6.2.15. Bourne wares are sandy/calcareous, as many of the other coarsewares seen here, and it is possible that some sherds have gone unrecognised. Bourne wares originate in Lincolnshire; 'A' type and 'B' type wares being distinguished merely on the frequency of the calcareous (oolitic) inclusions. Bourne wares are more commonly found in the north of the county but form a small presence in other Ely assemblages (SPOERRY 2016 TABLE 6.9). There is one jug rim here.
- 6.2.16. One sherd from a Hedingham fineware (HEDI) slip-decorated jug (applied red pellets) indicates at least some contact with Essex, and there are other Essex-type products in the form of a few sherds Micaceous Grey Sandy ware (MEMS), including one jar rim. Hedingham finewares are dated c 1150–1350, although various decorative styles do have chronological limits. The jug rim here does not allow reconstruction of the full decorative style, but the use of red pellets is characteristic of Scarborough-style jugs, dated c 1175/1200–1250 (WALKER 2012 38–9; FIG 14).

6.2.17. Twenty-seven sherds are in a sandy fabric containing sparse to moderate, iron-coated quartz grains and red-brown iron oxides. Similar inclusions characterise South-West Cambridgeshire Sandy ware (SCAMSW, see above), but are described as ‘abundant’, in a mid-dark brown fabric; the sherds seen here are a lighter orange-brown in colour with a pale grey core. SCAMSW has a putative source(s) outside the county in Bedfordshire (utilising Oxford Clay) and/or Northamptonshire (Jurassic clays). Either option would seem unlikely for the sherds here, given the site’s location.

6.2.18. Other sherds have been classified under the ‘catch-all’ categories of Medieval Sandy Coarseware (MSW) and Medieval Sandy Greyware (MSGW), neither of which are particularly distinctive; the greywares are not micaceous. The greywares include one small jar rim and a body sherd with a pre-firing perforation.

6.2.19. High Medieval sherds serve to date the majority of contexts producing pottery (including ditches, pits and postholes). Sherds were distributed in small quantities across the site; only six contexts produced more than 25 sherds: pit fills (038) (pit [033], 30 sherds, although 14 belong to one vessel) and (049) (pit [033], 71 sherds), ditch fill (071) (ditch [072], 102 sherds, but includes Late Saxon and Early Medieval sherds) and ditch fills (097) (26 sherds) and (119) (ditch [120], 48 sherds).

LATE MEDIEVAL (AD 1350–1500)

6.2.20. Late Medieval wares include sherds of East Anglian redwares (EAR); this is a generic type of fine red oxidised wares. The distinction between these and the later Glazed Red earthenwares (see below) is not always clear-cut. The sherds include one jug rim. There is also one sherd of Late Medieval reduced ware (LMR).

POST MEDIEVAL/MODERN

6.2.21. This chronological group comprises 100 sherds, and the majority (70 sherds) consists of Glazed Red Earthenwares (GRE), a generic category for Post

Medieval red earthenwares and almost certainly including the products of more than one (unspecified) source. Their date range spans the Post Medieval period and extends into the modern period. Vessel forms seen here include a lid-seated jar/pipkin (and another pipkin handle), a flanged bowl and a large convex jar or bowl. There is also a sherd from an unglazed flowerpot of 19th/20th century date.

6.2.22. Other wares are more closely datable. These include English stoneware (18th century or later), creamware (c 1750–1880), pearlware (19th century), refined whiteware (19th/20th century) and yellow ware (19th/20th century). These sherds were found in ditch fills (005) (ditch [023]), (090) and (103), and posthole fill (114), while GRE sherds also occurred in ditch fill (060) (ditch [061]), spread (083), ditch terminal (135), and pit fills (143) (pit [144]) and (145) (pit [146]).

6.3. CERAMIC BUILDING MATERIAL AND FIRED CLAY

6.3.1. This category includes fragments of brick, roof tile and field drain; totalling 49 fragments. Roof tile accounts for 17 fragments, and this comprises flat (peg) roof tile. The close dating of roof tile is rarely possible, and these fragments have been broadly dated as Medieval/Post Medieval.

6.3.2. Brick fragments (17) are all in very coarse fabrics with irregular surfaces. Fragments lacking surfaces have been classified as fired clay (a further 23 fragments) but are in coarse fabrics comparable to brick. Bricks are generally assumed to be of Post Medieval date, although they were in use in East Anglia from the late Medieval period, and fragments were found here in several contexts which contained only Medieval pottery (fills (007) and (010), posthole [006]; fill (038), pit [033]; fill (047), air raid shelter [015], ditch fills (092) and (097)).

6.3.3. Post Medieval field drain (13 fragments) was recovered from two contexts in the same feature (fills (014) and (047), air raid shelter [015]).

6.4. CLAY TOBACCO PIPE

6.4.1. The four fragments of clay pipe recovered include two plain stems and one

bowl fragment, none of which is closely datable but all are likely to be of 18th century date or later. There is one more complete bowl, of later 17th century date, from ditch fill (071) (ditch [072]).

6.5. GLASS

6.5.1. Nineteen fragments of glass were recovered. Two are of free- or mould-blown green wine bottle, dating to the 18th or early 19th century (fill (014), air raid shelter [015]; ditch fill (103)). The remainder is of 19th/20th century date and includes both vessel (bottle/jar and drinking vessel) and window glass.

6.6. STONE

6.6.1. Of the ten pieces of stone recovered, only one is categorically worked; this is a fragment from an imported lava quernstone (fill (060), ditch [061]). These objects were imported from the Middle/Late Saxon until at least the 16th century, and from the Medieval period onwards are more likely to have been used for grinding malt for brewing rather than flour, given the tight municipal control over flour-milling at the time. This example could have been from a pot quern rather than a rotary quern (MARGESON 1993, 202; WATTS 2006). Pottery from ditch [061] is largely High Medieval, although the feature also produced one small sherd of Post Medieval redware, possibly intrusive.

6.6.2. One limestone slab (fill (119), ditch [120]) could have functioned as roof tile, although not obviously worked. No other stone shows any signs of working, although some fragments appear to have been burnt.

6.7. METALWORK

6.7.1. Metalwork comprises objects of copper alloy (002) and iron (025). The iron is heavily corroded and this has hampered identification. No X-radiography has been undertaken at this stage.

6.7.2. The two copper alloy objects (both from modern posthole [14]) are fittings: one small cogged wheel and part of a ring fitting. Both are of Modern date.

6.7.3. The iron objects are not on the whole closely datable. Most of the identifiable objects are nails (31 examples of varying sizes), with one knife blade (from

air raid shelter [015] and also probably Modern). Other objects are either too corroded for identification, or comprise miscellaneous rod, bar and sheet fragments.

6.8. ANIMAL BONE

6.8.1. A total of 416 fragments (or 6.906 kg) of animal came from contexts of late Saxon, Medieval and Post Medieval/Modern date. Once refits are accounted for the total falls to 269 fragments (Table 2).

SPECIES	LATE SAXON	MEDIEVAL	POST MEDIEVAL	UNDATED	TOTAL
Cattle	1	25	6	3	35
Sheep/goat	1	39	8	5	53
Pig	-	16	4	1	21
Horse	-	7	2	1	10
Cat	-	1	-	-	1
Domestic fowl	-	10	-	-	10
Goose	-	1	-	-	1
Total identified	2	99	20	10	131
Total unidentifiable	-	111	25	2	138
Overall total	2	210	45	12	269

Table 2- Animal bone: number of identified specimens present (or NISP) by period

6.8.1. The assemblage was rapidly scanned following current guidelines (BAKER & WORLEY 2019), and the following information quantified where applicable: species, skeletal element, preservation condition, fusion and tooth ageing data, butchery marks, metrical data, gnawing, burning, surface condition, pathology and non-metric traits. This information was directly recorded into a relational database (in MS Access) and cross-referenced with relevant contextual information.

6.8.2. The bones are well-preserved and show no indication of having been reworked from earlier contexts. Gnaw marks caused by scavenging carnivores, are apparent on 13% of bones. This is a relatively high occurrence but does not appear to have adversely affected the composition of the assemblage.

6.8.3. Most (78%) of the animal bones came from contexts of Medieval date with smaller amounts from earlier and later contexts. A cattle scapula and

sheep/tibia came from late Saxon ditch [110]. A total of 210 fragments came from Medieval contexts including ditches, pits, postholes and layers. The identified bones are mostly from livestock, particularly sheep/goat, with some horse and domestic fowl, and single bones from a cat and goose. Livestock are represented by a range of skeletal elements indicative of mixed waste from different stages in the carcass reduction sequence, although the preponderance of sheep/goat cranial fragments and foot bones suggests there is proportionally more butchery waste in the assemblage than domestic food refuse. Saw marks on the frontal bones of a sheep skull from ditch [072] indicate that the horns were detached in order to make use of the keratinous outer sheath for object manufacture. Most of the sheep/goat bones are from adult animals and some of the more complete mandibles are from more mature animals. The evidence suggests that the assemblage includes sheep/goat culled from a wool flock. Many of the cattle bones are complete, particularly from ditch [072], and air raid shelter [15] and post hole [165]. The range of elements is characteristic of domestic food refuse and a large humerus from posthole 15 could be from a bull. Most of the pig bones are from juvenile animals and elements from the forequarter dominate. Shoulders of pork are likely to have been eaten as cured meat.

- 6.8.4.** Seven horse bones have been identified. These came from ditches [072] and [131], pit [070] and layer (058). The bones include the radius and ulna from a foal, and several elements from an adult horse. Most of the domestic fowl bones came from air raid shelter [015], they include a range of elements from a single bird. The goose bone, a humerus, came from pit 33 and the cat bone, a radius, came from pit [070].
- 6.8.5.** A total of 45 bones came from Post Medieval contexts including ditches, a pit, posthole and spread. The identified bones are mostly from livestock with addition of two horse bones. Of note is the humerus from a calf from posthole fill (114).
- 6.8.6.** A few bones came from undated contexts or were unstratified. The identified bones are from livestock and horse.

6.9. REGISTERED FINDS

- 6.9.1. There were six registered finds from the site; one composite object made of bone and iron, two stone objects, two iron objects and one copper object.
- 6.9.2. Registered Find 1 was recovered from context (005), the upper fill of Pit [023] and comprised a knife handle made from bone and iron (1 piece, 37g; 111.2mm long, 80.1mm long handle only).
- 6.9.3. Registered Find 2 was recovered from the upper fill of Extraction Pit [008] and comprised a stone spindle whorl (23g; 30mm wide, 20.9mm deep), likely dating to the 13th/14th century.
- 6.9.4. Registered Find 3 was recovered from context (012), one of the fills associated with Extraction Pit [008]. This find comprised a small flat stone (10g) however upon examination it is unlikely that this stone has been worked.
- 6.9.5. Registered Find 4 was recovered from context (022), one of the fills associated with field boundary [023] and comprised a large iron horseshoe (555g; 140mm long, 150mm wide and 25.2mm thick, at thickest point).
- 6.9.6. Registered Find 5 was recovered from context (071), field boundary [072], and comprised a small iron object with a loop (25g; 83.6mm long). Registered Find 6 was recovered from context (127), field boundary [128] and comprised a small copper object, potentially a clasp.

7. Environmental Sampling

7.1. INTRODUCTION

- 7.1.1. Three bulk sediment samples were presented for assessment. These were from context (027), a fill of a large irregular pit; context (042), an ashy fill of a linear feature; and context (071), the backfill of a ditch.
- 7.1.2. All samples were processed using a Siraf-style flotation tank. The washover (flot) of each sample was caught on a 250µm mesh sieve, and the heavy fraction (residue) was retained on a 1mm mesh.
- 7.1.3. The residues were weighed and air dried, then sorted into fractions using a nest of sieves (4mm, 2mm, 1mm, 500µm, 250µm) before being scanned under a low power microscope. The flots were weighed and scanned wet, before being air dried and scanned again.

7.2. RESULTS AND DISCUSSION

- 7.2.1. Estimated abundance of items present in the samples are presented in TABLE 3.
- 7.2.2. Low quantities of charcoal are present in contexts (027) and (071). No other plant macrofossils are present in the assemblage, suggesting that preservation of plant remains is only due to charring in these features.
- 7.2.3. There is a very small number of land snail shells in the samples, however numbers are too low to permit any reliable ecological interpretation.
- 7.2.4. There is a single mussel (*Mytilus edulis*) shell in context (027) and several in context (071). Mussels are found intertidally and subtidally on rocky shores or rocks and structures in estuaries. In context (071), it is joined by other marine mollusc species. The first of these is the common cockle (*Cerastoderma edule*), which is common in muddy and sandy shores. The other two, rough periwinkle (*Littorina saxatilis*) and Baltic tellin (*Limecola balthica*), are not edible species, so they are likely to represent accidental collections, the periwinkle being found in similar habitats to mussels, and Baltic tellins in similar habitats to cockles.
- 7.2.5. Context (071) also contains a small quantity of eggshell.

7.2.6. There are bones of a small vertebrate in context (042). These may be from a recent burrowing animal, however.

7.2.7. The flot from context (042) comprises only medium – fine modern roots and live Collembola.

Context Number	27		42		71	
Sample Number	3		4		5	
	Flot	Residue	Flot	Residue	Flot	Residue
Weight after processing (g)	17	419	56	1225	173	2899
Estimated % modern roots	10		100		40	
Charcoal		++				+
<i>Vallonia</i> sp.					+	
<i>Cornu aspersum</i>		+				
<i>Anisus leucostoma</i>	+					
<i>Littorina saxatilis</i> Rough periwinkle						+
<i>Cerastoderma edule</i> Common cockle						+
<i>Mytilus edulis</i> Common mussel		+			++	+++
<i>Limecola balthica</i> Baltic tellin						+
Eggshell						+
Microfauna bone		+		+		
Bone				+		
Pot				+		+
Fired clay				+		
Fe Obj.						+

Table 3- Estimated abundance of biological remains.

Scale + = 1-10 items; ++ = 11-50; +++ = 51-100; ++++ = >101

8. Discussion and Conclusions

- 8.1. The excavation confirmed and refined the results of the evaluation undertaken in 2018 (BARROW 2018). A small plantation of trees had disturbed the central part of the site and may explain the Modern residual pottery in earlier features and the general uncertainty in the relationships of some of the features in that part of the site.
- 8.2. Overall the site can be split into three broad phases with indicators of earlier use.
- 8.3. The first phase concentrates on the extraction pits that cross the site. These offer a strong 13th to mid 14th century date. During this period Witchford was developing into a mid-sized village concentrated round the church.
- 8.4. The landscape of the surrounding area was significantly different as the fens were still marshland. The village church stood overlooking the channel that effectively made Witchford a separate island from Ely. Early Medieval activity east of the church and across the channel is known from when an Anglo-Saxon cemetery was found during levelling work at the aerodrome. Witchford's westerly neighbour, Wentworth, also has a small scale Early Medieval history but at present, no identifiable Early Medieval remains have been found within Witchford's village boundary. However, the presence of 9th and 10th century pottery in many of the features on site brings into question where they came from and whether earlier material has been either masked or removed by later interventions.
- 8.5. The grant of free warren in 1252 appears to have boosted Witchford's prestige (PUGH 2002) with the development of the present church dating from this period. This possibly led to a boom of development around the church and the foci of the village, using locally sourced materials. The Oadby Member, which covers much of the Isles of Ely, contains lenses of sand and gravels and may have provided the local population with an easily exploitable resource leading to a series of extraction pits being dug for building materials. These were close enough to the village for easy transport along the ridge, although it cannot be ruled out that the material may also have been transported by boat to Ely or other Fen edge towns and villages.
- 8.6. As the pits were being dug, material was being brought in from the village to backfill the open features. If this material was being sourced from within the village, it is possible that the 9th and 10th century pottery comes from a small settlement and

the expansion of the village in the mid 20th century may have removed much of the evidence.

- 8.7.**The second phase deals with the development and formalisation of land boundaries in the Post Medieval period. Witchford developed into a tightly packed village dominated by small farms or tofts with several of the farm houses fronting onto Main Street. The Tithe map shows that field boundaries appear to respect the Medieval extraction pits, which may have still been partly visible as indented hollows. The eastern boundary of Plot 196 was re-established several times suggesting that this plot may have had a use as a quarry pit and was not later re-used for agriculture.
- 8.8.**Two of the four open fields for Witchford, Belham's End and Marrow Field, that made up the majority of arable land in the village during the Medieval period covered the immediate area around the site. The first inclosure act of 1806 (enacted in 1813) suggests that there had been an informal agreement with the seven majority landholders prior to the official act on how the open fields of the village were divided with the landowners being granted land near to their respective farms (WAUDBY 1814). In total, 460 acres were divided among 18 landowners. Most of the families were also represented in the 1840 award, although the total number of claimants had risen to 30.
- 8.9.**The four open fields were divided up and several parcels given to the Needham's Charity that had been tied to the farm at Needhams Farm as well as John Cropley who owned West Farm opposite Needhams Farm, and donated the land for the Primitive Methodist Chapel that stood on the southeast corner of the site.
- 8.10.**There appears to be two phases. The earlier concerns the linear features that run northwest to south east across the site. These appear to be contemporary with the extraction pits. The majority of the linear features run north to south away from Main Street. Smaller linears run east to west and could indicate animal pens fronting onto Main Street. During the evaluation a large quantity of animal bone was recovered suggesting that some form of animal husbandry, and possibly butchery, was being practised close by, possibly at West End Farm as the farm appears to straddle Main Street.

- 8.11. To the west of the site, the remains of a well were uncovered during machining which appears to have been part of Needham's Farm. A linear feature ran up to this well and may have been a conduit for bringing water to a pump that was identified from the 1927 Ordnance Survey map.
- 8.12. The final phase is concerned with the modern period and the Air Raid Shelter. Although similar to the Anderson Shelter, which was provided by the government during World War 2, this one was of a simpler design and lacked some of the construction elements that came with the standard government issued Anderson Shelter kit. It is possible that it was made ad hoc from material already at the farm.
- 8.13. Although few absolute earlier features can be securely identified, there is a sizeable assemblage of residual mid 9th to mid 11th century pottery across the site. Considering that it was located in the extraction pits and linear features which appear to have been backfilled with material brought to site it is unlikely to have been sourced from the site and was brought to site as backfill for the extraction pits from the developing Medieval settlement to the east.
- 8.14. An Early Medieval cemetery dating to the 5th to 7th centuries was uncovered during levelling work in 1947 at the aerodrome 2km to the east of the site. This could suggest that an earlier settlement near to the ford and the church but not identified within the present village of Witchford. It is possible that during this period a non-nucleated settlement of dispersed houses and farms was in existence which would make tracing any remains difficult.
- 8.15. The pottery and animal bone assemblages offer limited interpretational value of the immediate site as the bulk of the pottery came from the quarry pits. As a secondary deposit it is useful only as a proxy to the types of vessels used locally and the variety of kilns and locations from which the vessels came.

9. Archive

9.1. The paper archive consists of:

- ◆ 2 x Drawing Register
- ◆ 58 x Drawing Film
- ◆ 14 x Photographic Register
- ◆ 532 x Digital Photographs (jpeg and RAW)
- ◆ 5 x Context Register
- ◆ 175 x Context sheets

9.2. The finds archive consists of:

- ◆ 7 x box artefacts as described in Section 6 (all materials).

9.3. The archive is to be deposited at the Cambridgeshire County Archive in 2020.

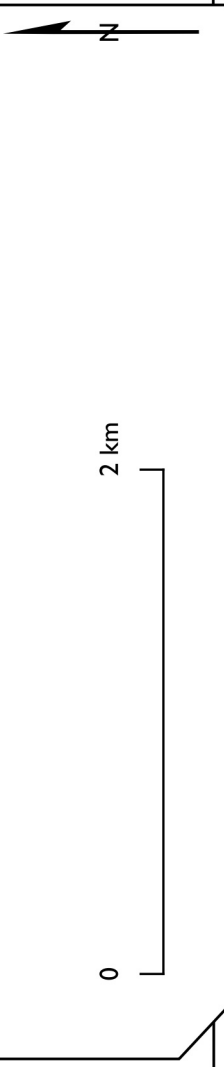
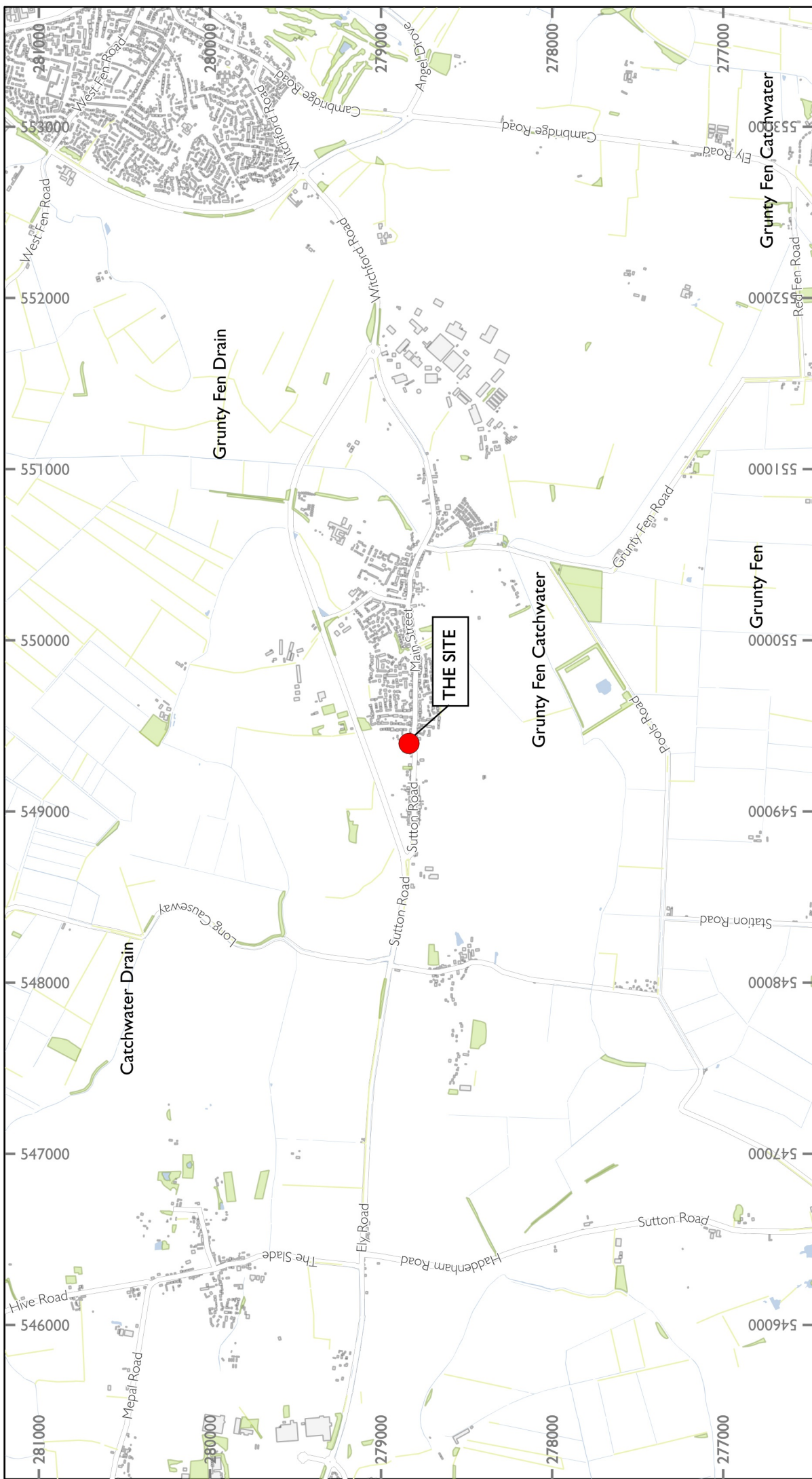
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FIGURES

FIGURE 1 // Site Location - General



PROJECT // 3247E - Needham Farm, Main Street, Witchford

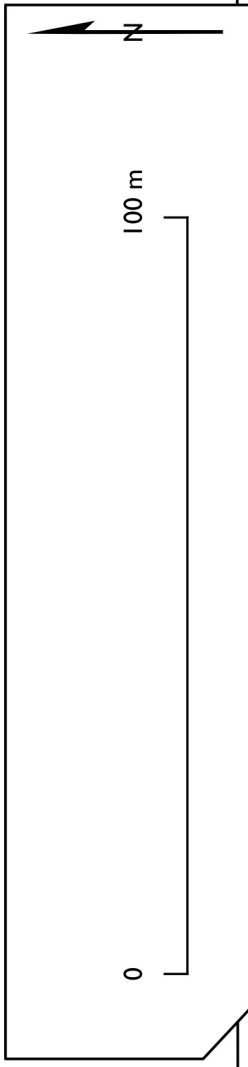
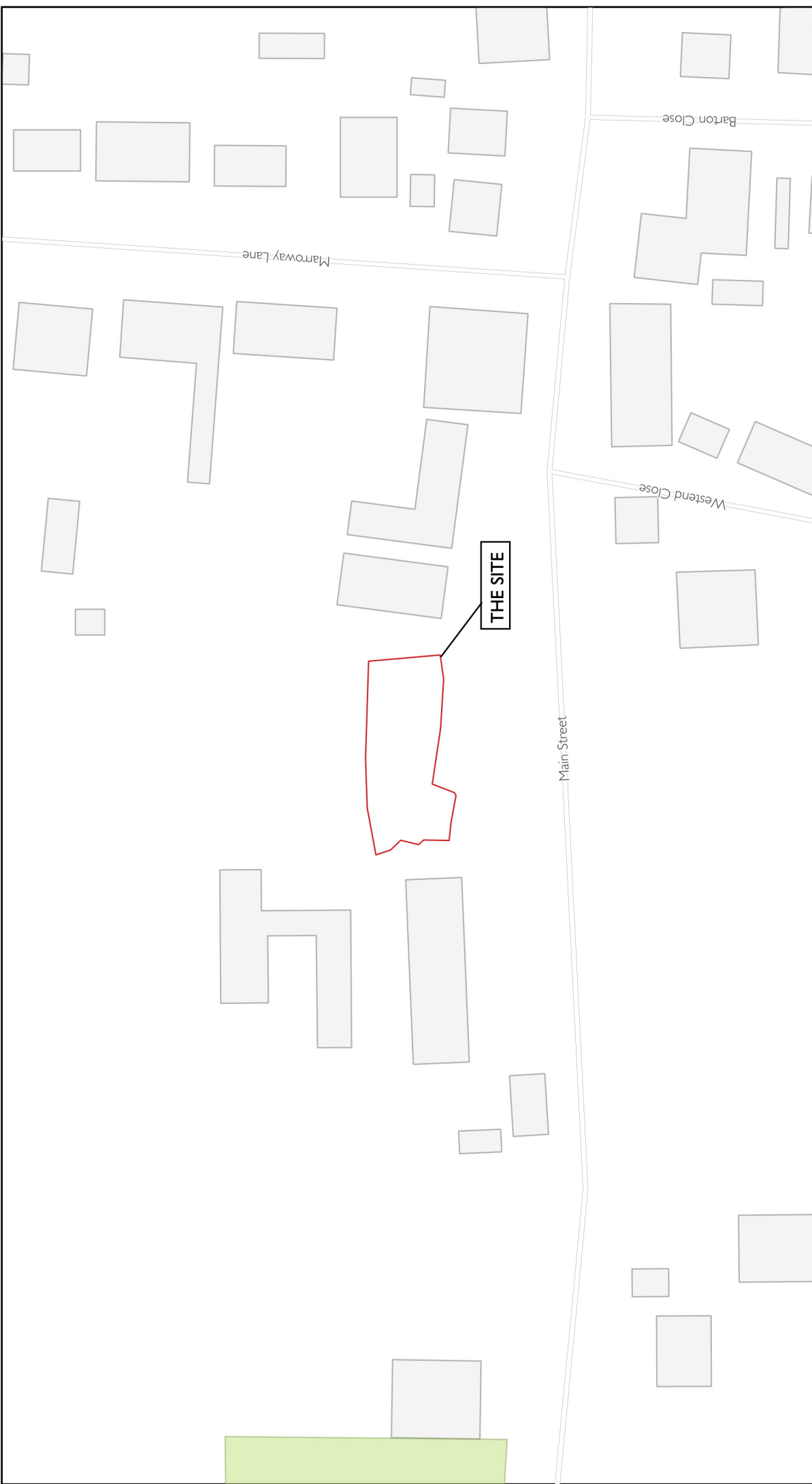
DESCRIPTION // Site Location

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DOC REF: LP3247E-AMR-v1

L-P:ARCHÆOLOGY

FIGURE 2 // Site Location - Detail



PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Site Location

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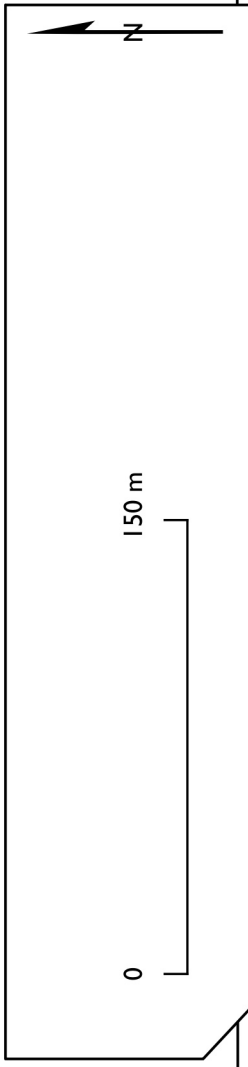
DOC REF: LP3247E-AMR-v1

L-P:ARCHÆOLOGY

FIGURE 3 // Tithe 1839



Plot	Landowner	Occupier	Landuse
191	John Cole	John Cole	Homestead and Orchard
195	FFeofes of Ely	John Cole	Garden
196	FFeofes of Ely	John Cole	Garden
198	FFeofes of Ely	John Cole	House & Homestead



PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Tithe map showing relationship between garden plots and the site.

Tithe Apportionments, 1836-1929. TheGenealogist.co.uk 2020. Held by National

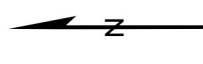
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L-P:ARCHAEOLOGY

FIGURE 4 // Phased Site Plan



- Site Redline
- Evaluation Trenches
- Excavated Slots
- Phased Features
 - HIGH MEDIEVAL
 - POST MEDIEVAL
 - UNEXCAVATED
 - UNDATED
 - MODERN



0 5 m

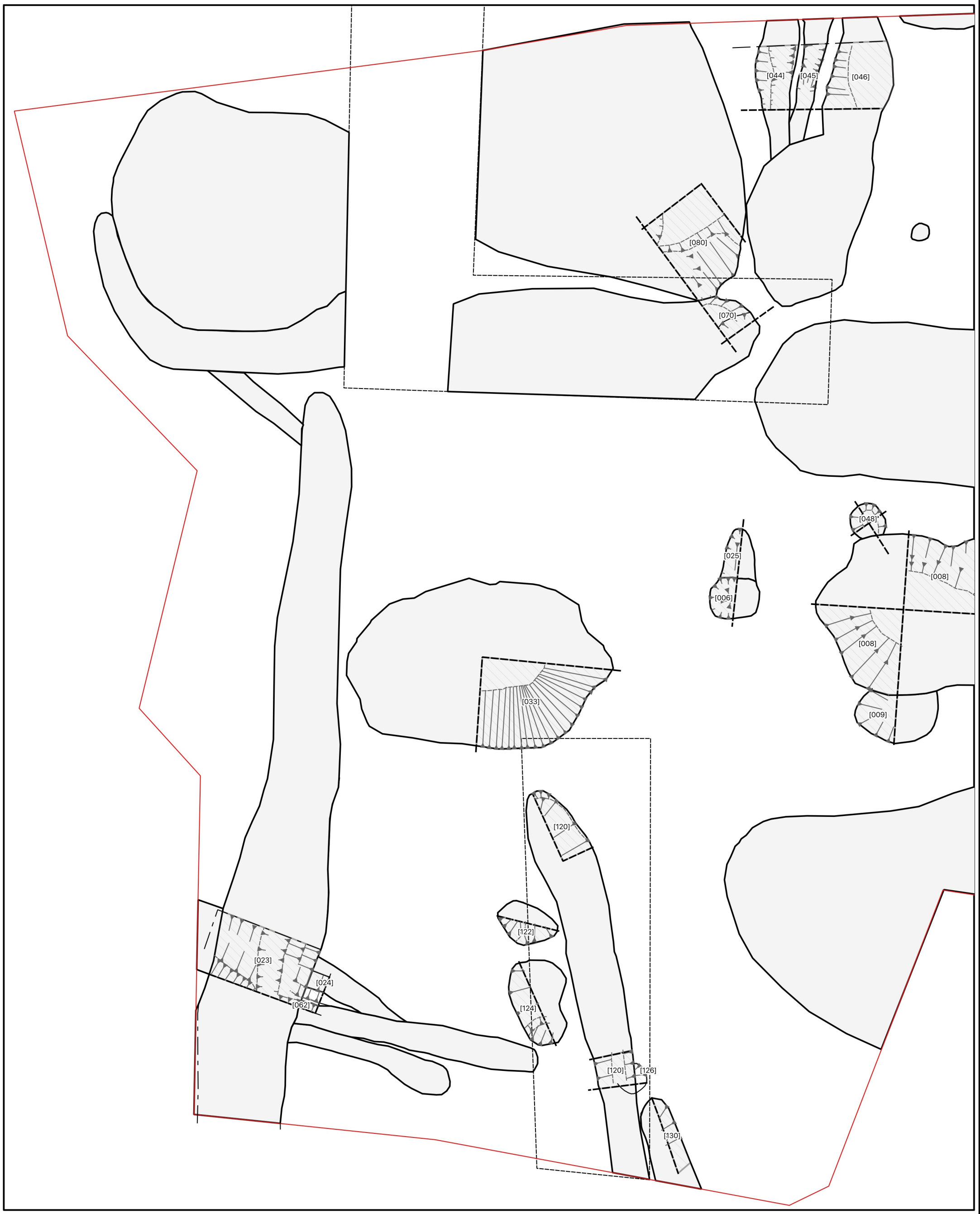
PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Phased plan displaying cut numbers of features in excavated slots.

DOC REF: LP3247E-AMR-v1.0

L-P:ARCHAEOLOGY

FIGURE 5 // Site Plan - West



0 2 m



PROJECT // 3247E - Needham Farm, Main Street, Witchford

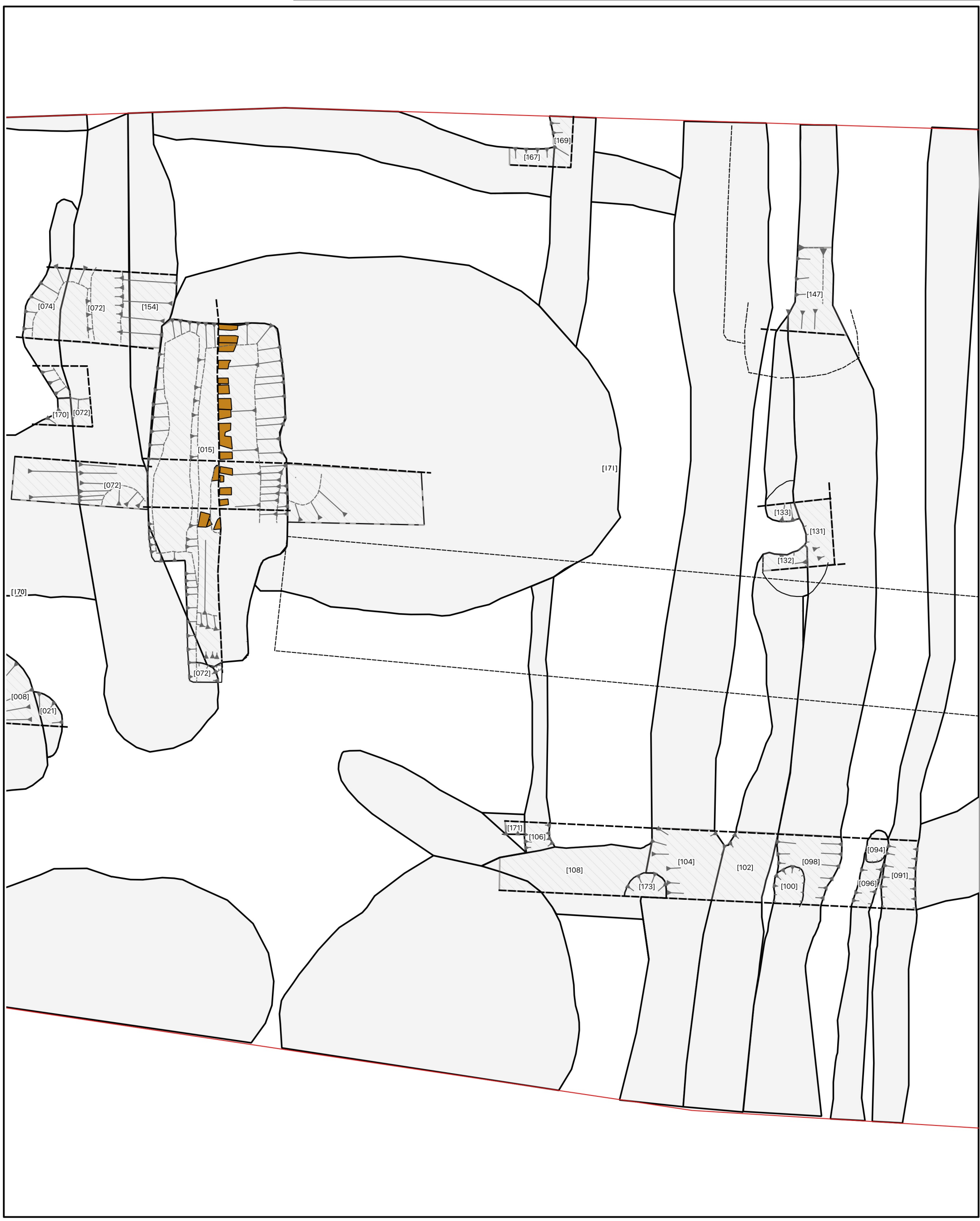
DESCRIPTION // Detailed site plan - western area.

Produced at 1:50 @A3.

DOC REF: LP3247E-AMR-v1

L-P:ARCHAEOLOGY

FIGURE 6 // Site Plan - Central



0 2 m



PROJECT // 3247E - Needham Farm, Main Street, Witchford

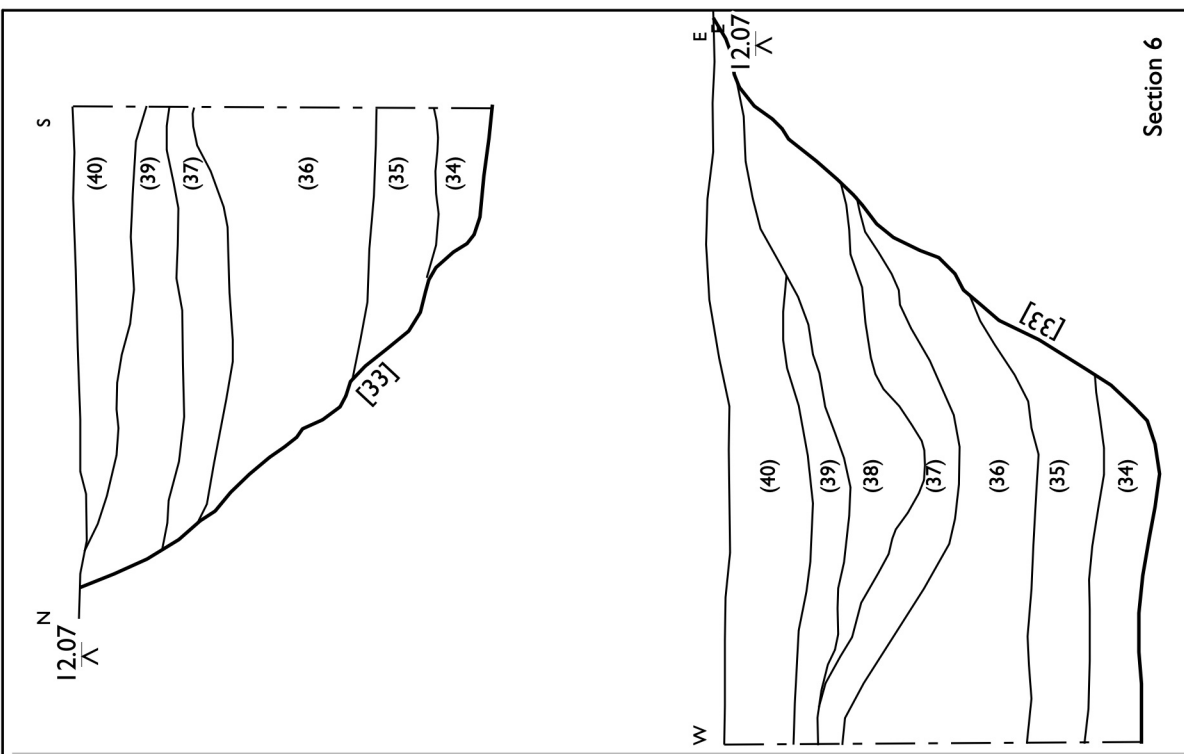
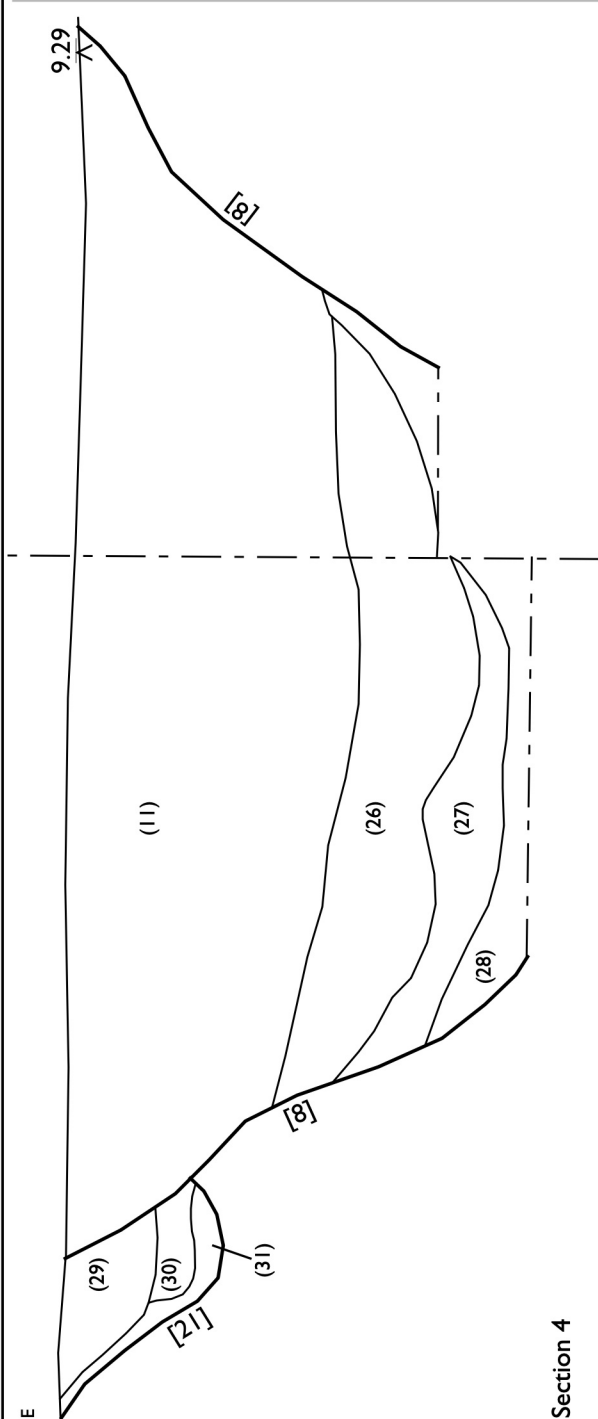
DESCRIPTION // Detailed site plan - central area.

Produced at 1:50 @A3.

DOC REF: LP3247E-AMR-v1

L-P:ARCHAEOLOGY

FIGURE 8 // Sections 4-6



0 1 m

N

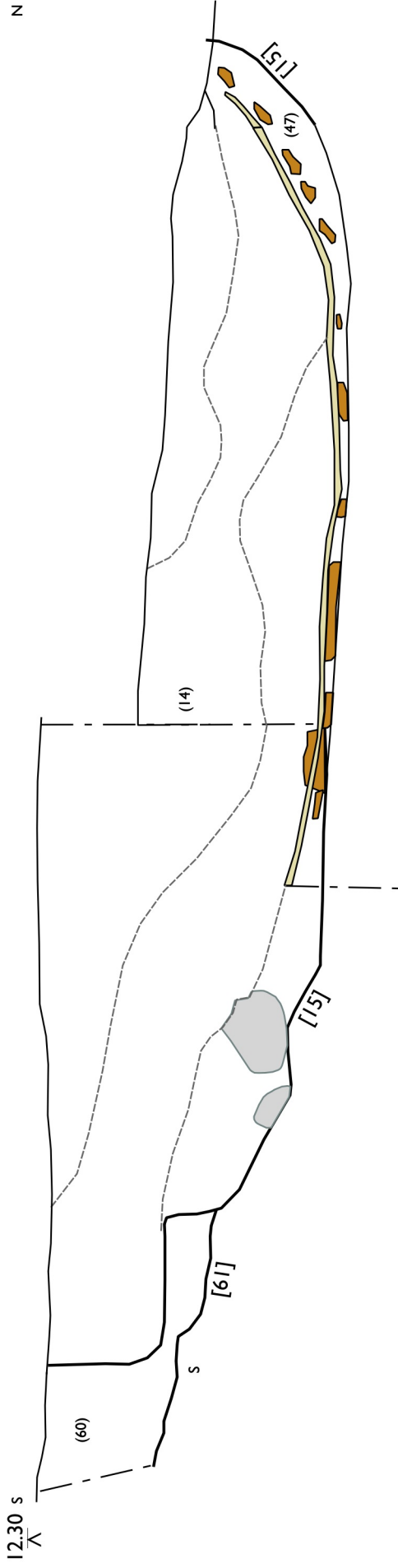
PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Sections 4, 5 & 6

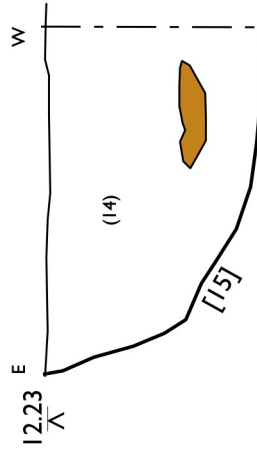
Produced at 1:20 @ A4.

DOC REF: LP3247E-AMR-v1

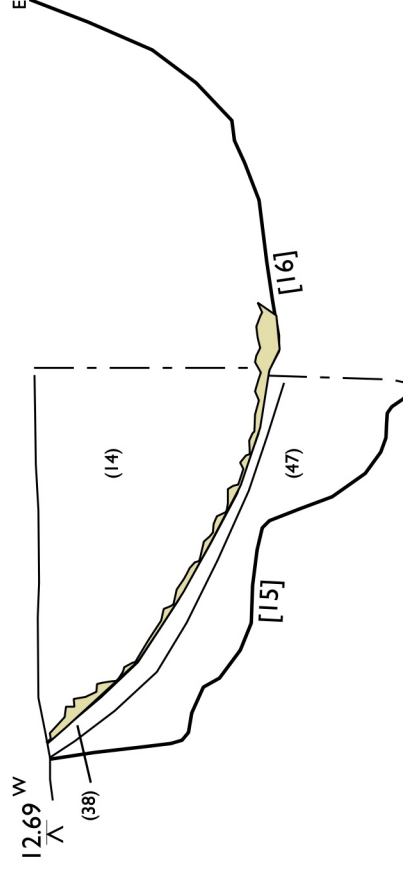
FIGURE 9 // Sections 7-9



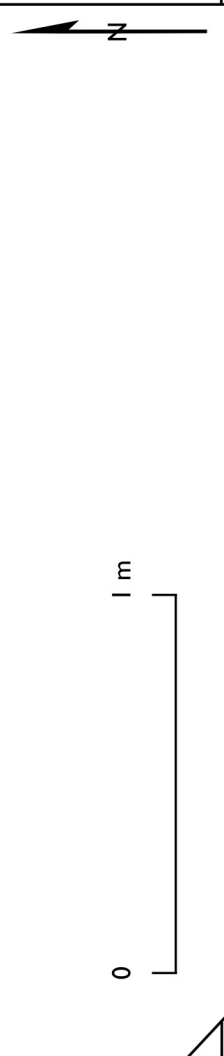
Section 7



Section 8



Section 9



PROJECT // 3247E - Needham Farm, Main Street, Witchford

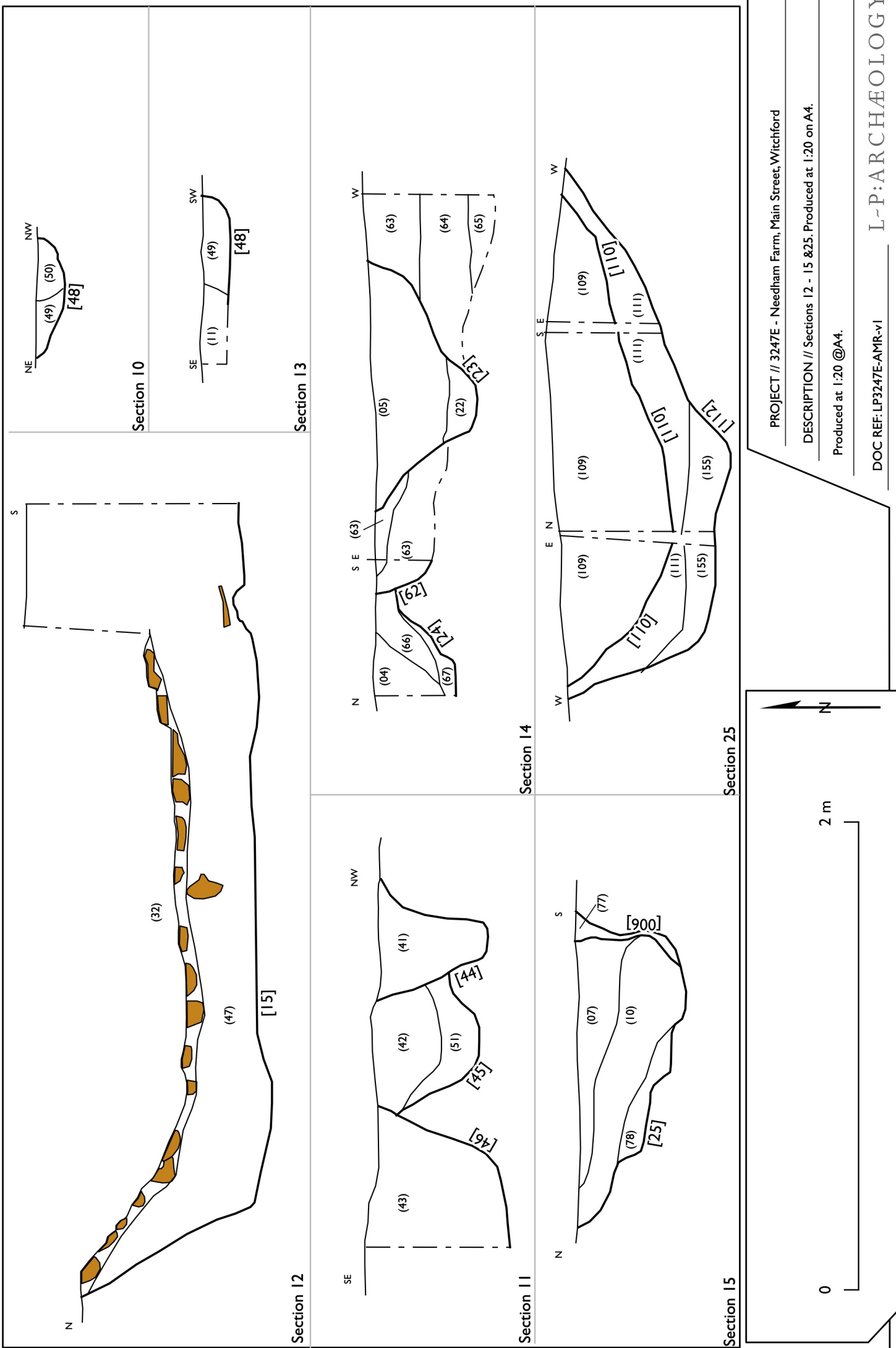
DESCRIPTION // Sections 7, 9 & 8

Produced at 1:20 @A4.

DOC REF: LP3247E-AMR-v1

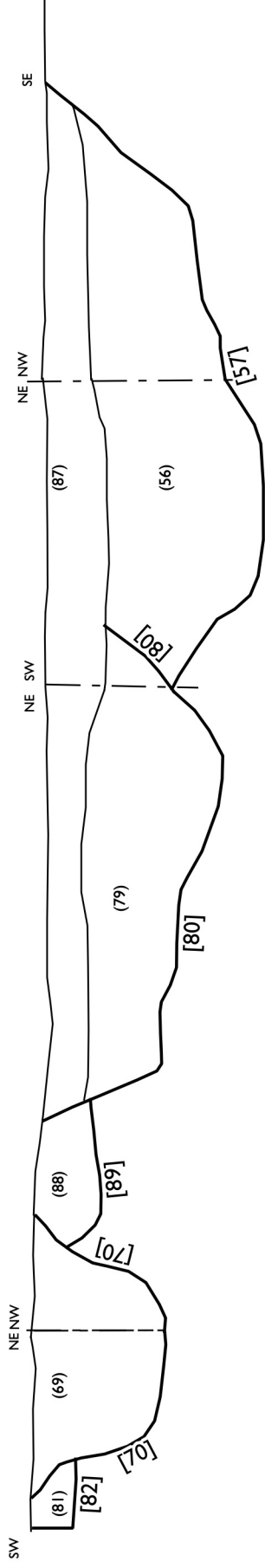
L-P:ARCHÆOLOGY

FIGURE 10 // Sections 12-15 & 25

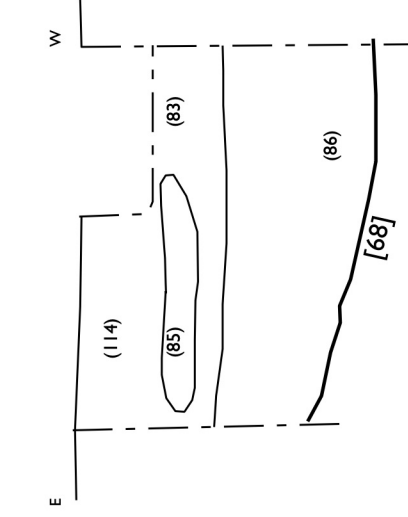


PROJECT // 3247E - Needham Farm, Main Street, Witchford
 DESCRIPTION // Sections 12 - 15 & 25. Produced at 1:20 on A4.
 Produced at 1:20 @A4.
 DOC REF: LP3247E-AMR-v1

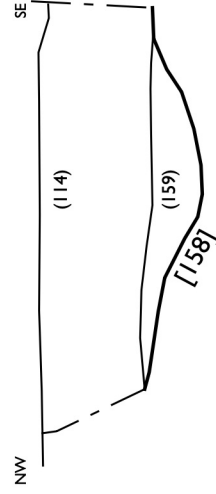
FIGURE 11 // Sections 20,24,23,29,35-38 & 40



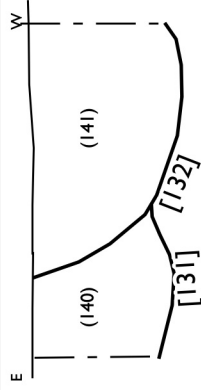
Section 20



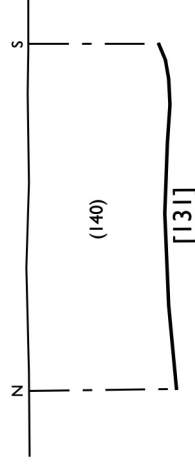
Section 29



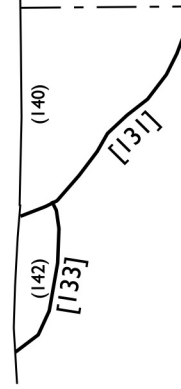
Section 40



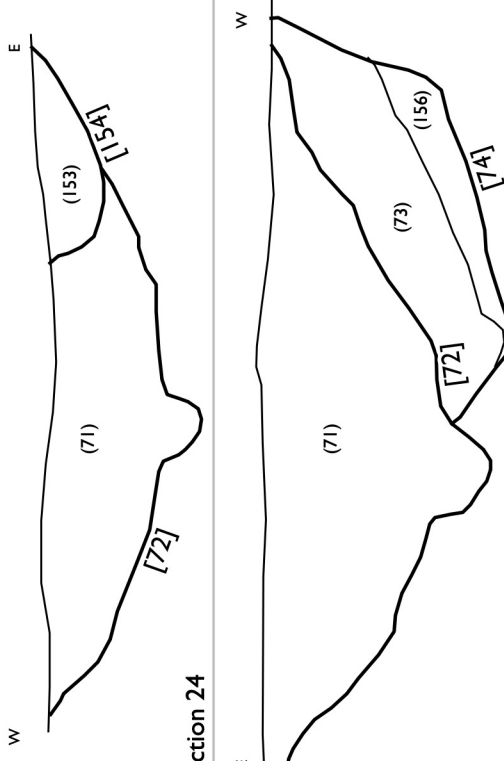
Section 35



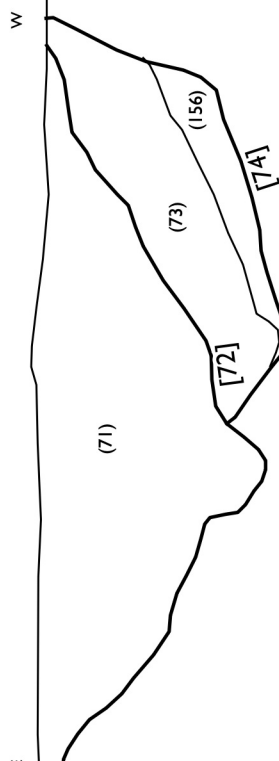
Section 36



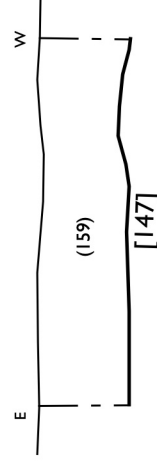
Section 37



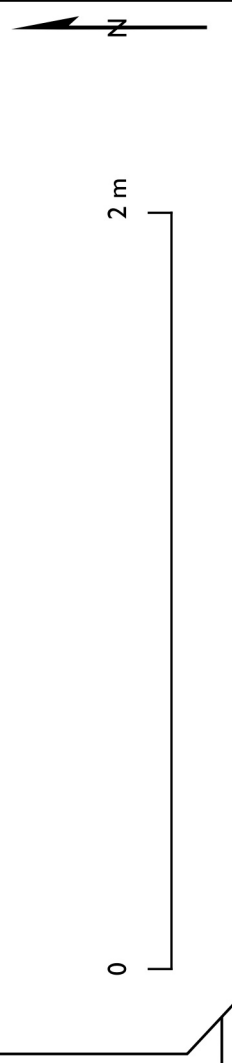
Section 24



Section 23



Section 38



PROJECT // 3247E - Needham Farm, Main Street, Witchford

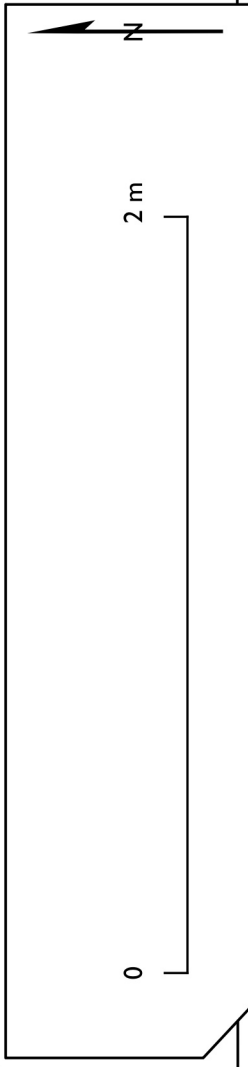
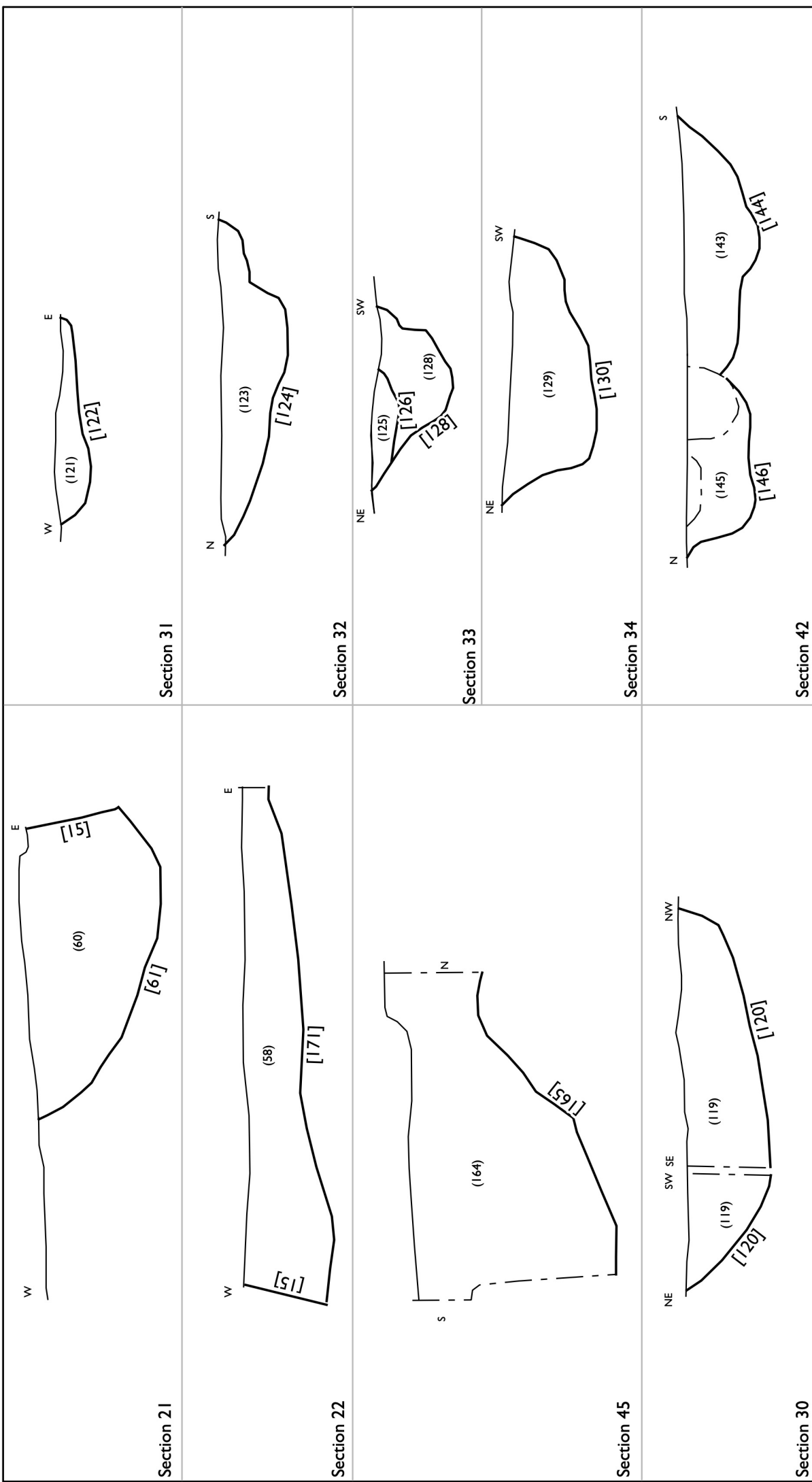
DESCRIPTION // Sections 20,24,23,29, 35-38 & 40. Produced at 1:20 on A4.

Produced at 1:20 @A4.

DOC REF: LP3247E-AMR-v1

L-P:ARCHÆOLOGY

FIGURE 12 // Sections 21, 22, 30-34, 40 & 42

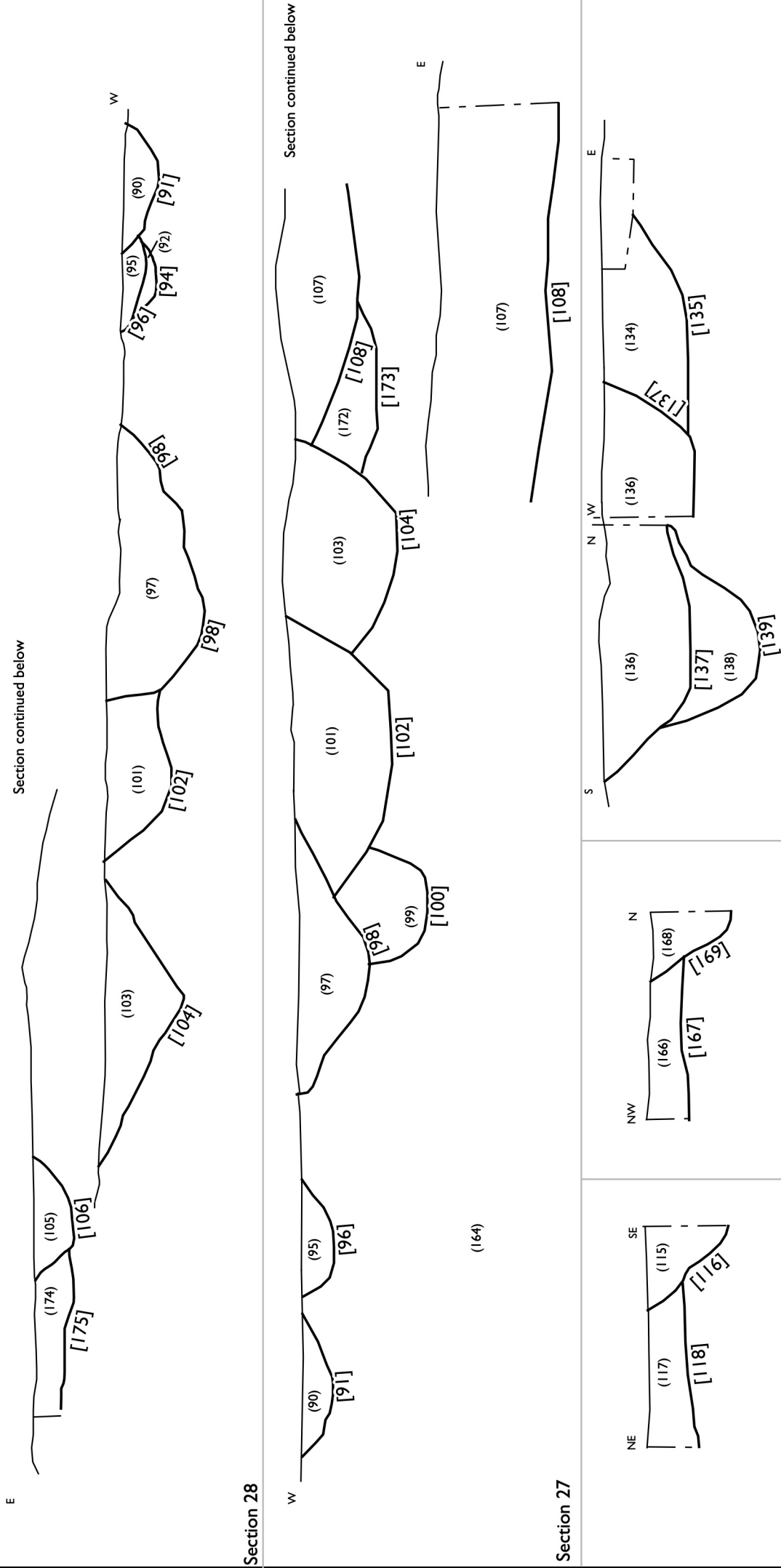


PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Sections 21, 22, 30-34, 40 & 42. Produced at 1:20 on A4.

Produced at 1:20 @ A4.

FIGURE 13 // Sections 27,28,42,43 & 55



PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Sections 27,28,42,43 & 55. Produced at 1:20 on A4.

DOC REF: LP3247E-AMR-v1

L-P:ARCHAEOLOGY

PLATES



Plate 1 - Site view looking southwest.



Plate 2 - Extraction pit [008] looking west. 1m x1m scale.



Plate 3 - Extraction pit [033] section looking west. 1m scale.



Plate 4 - Extraction pit [068] covered by Post Medieval layer (114) looking south. 1m scale.



Plate 5 - Extraction pits on east of the site after machining of layer (114). 2m x 1m scale.



Plate 6 - North to south running linears [044] and [046] with possible barrow run [045] looking north. 1m scale.



Plate 7 - Field boundary [072] and pit [074] looking south. 1m scale.



Plate 8 - North to south running linears [091], [096], [098], [102], [104] and [106] looking north. 2m scale.



Plate 9 - Field boundary [023] cutting through linears [024] and [062] looking south. 1m scale.



Plate 10 - Oblique of the Air Raid Shelter [015] showing roof timbers and corrugated iron roofing. 2m scale.

CONTEXT DESCRIPTIONS

APPENDIX I

Context No	Context Type	Description	Interpretation	Date	Same As
001	Fill	Friable dark greyish brown silt. Frequent roots and rounded stones. Modern debris and inclusions	Topsoil	Modern	
002	Fill	Firm mid brownish orange silty clay. Frequent small angular stones and occasional large smooth stones. No finds	Subsoil	Modern	
003	Fill	Compact dark yellowish orange silty clay. Occasional manganese and small rounded stones	Natural		
004	Fill	Firm mixed light orange brown and dark grey brown silty clay. Occasional angular stones. 0.34m thick. Fill of [024]	Deliberate infilling of ditch	13th century to mid 14th century	
005	Fill	Firm mixed grey brown and orange silt. Moderate small angular flint, occasionally large stones. 0.34m thick. Fill of [023]	Deliberate backfill	Post Medieval	
006	Cut	Sleep sided rounded pit with a concave base. 0.70m long, 0.52m wide, 0.49m deep. Filled by (077)	Post hole		
007	Fill	Firm mottled orange silty clay with greyish brown . Infrequent angular stones. 0.15m thick. Fill of [025] Sleep sided oval pit. 3.20m long, 2.35m wide, at least 1.25m deep (not bottomed due to ground conditions). Filled by (011), (026), (012), (027) and (028). Truncates (029) and (013)	Redeposited topsoil and natural	13th century to mid 14th century	
008	Cut		Extraction pit	Mid 14 th to 16 th century	
009	Cut	Sub circular concave sided pit with a concave base. 1.25m long, 0.90m wide, 0.20m deep. Filled by (013)	Pit	13 th century to mid 14 th century	

010	Fill	Compact greyish brown silty clay. Infrequent small angular stones. 0.30m thickness. Fill of [025]	Deliberate backfill	13th century to mid 14th century
011	Fill	Firm dark brown silty clay mortled with dark yellow brown clay. Chalk flecks and rare gravel and small sub angular stones. 0.75m thick. Fill of [008]	Deliberate backfill	Mid 14th to 16th century
012	Fill	Soft black silt with frequent charcoal. 0.06m thick. Fill of [008]	Dumped deposit	13th century to mid 14th century
013	Fill	Compact mixed dark brown and dark orangish brown silty clay. 0.20m thick. Fill of [009]. Truncated by [008]	Natural infilling	13th century to mid 14th century
014	Fill	Timbers recorded Firm greyish brown, some patches of yellow, clayey silt. Large amounts of bioturbation and natural. 0.58 thickness. Fill of [15].	Deliberate backfill	Post Medieval
015	Cut	Rectangular cut 4.92m long, 2m wide, 0.98m deep. Nearly vertical sides with gully running through concave base. Filled by (014), (032) and (047).	Cut for air raid shelter	Post Medieval
016	Timber	See (014). Taken out of belief there were structural timbers. 0.70m long, 0.10m wide, 0.08 thick.		
017	Timber	See (014). Taken out of belief there were structural timbers. 0.80m long, 0.11m wide, 0.05m thick		
018	Timber	See (014). Taken out of belief there were structural timbers. 0.48m long, 0.13m wide, 0.08/0.12m thick.		
019	Timber	See (014). Taken out of belief there were structural timbers. 0.25m long, 0.12m wide, 0.06m thick.		

020	Timber	See (014). Taken out of belief there were structural timbers. 0.40m long, 0.11m wide, 0.06m thick.		
021	Cut	Circular straight sided pit with concave base. 0.70m long, 0.60m wide, 0.40m deep. Filled by (029), (030) and (031)	Post hole	
022	Fill	Moderate mottled orange brown silty clay with occasionally angular stones of all sizes. 0.12m thick. Horse shoe found at bottom. Fill of [023]	Natural slumping	Post Medieval
023	Cut	Linear steeply sloped on the east side, gently sloped on the west side. Runs N-S. Slot 1m – linear >5m, 1.50m wide, 0.50m deep. Filled with (005) and (022). Truncates (063)	Field boundary	Post Medieval
024	Cut	Linear with steep sides running NE-SW. Slot 1.65m long, 0.58m wide, 0.53m deep. Filled with (004), (067) and (066).	Field boundary	13th century to mid 14th century
025	Cut	Oval pit with steep sides with a stepped base. 0.83m long, 0.45m wide, 0.40m deep. Filled by (010) and (078). Truncates (077)	Post extraction pit	13th century to mid 14th century
026	Fill	Compact dark brown silty clay. Occasional gravel and flecks of charcoal. 0.40m thick. Fill of [008]	Deliberate backfill	
027	Fill	Soft dark grey silty clay and dark yellow brown clayey silt. Rare gravel and charcoal flecks. 0.40m thick. Fill of [008]	Deliberate backfill	13th century to mid 14th century
028	Fill	Soft mid yellow silty clay. Occasional gravel and flecks of chalk. At least 0.55m thick. Fill of [008]	Natural slumping	
029	Fill	Compact dark brown silty clay. Occasional flecks of chalk. 0.20m thick. Fill of [021]. Truncated by [008]	Post pipe	

030	Fill	Moderate dark brown silty clay with rare charcoal flecks and gravel. 0.10m thick. Fill of [021]	Post packing	
031	Fill	Firm orangish brown silty clay. Occasional angular stones. 0.40m thick. Fill of [021]	Post packing	
032	Timber	Approximately 13 wooden planks, ceiling/roof support, lying horizontally E-W. 0.55m long, 0.10-0.15m wide. Fill of [015]	Roof supports	Post Medieval
033	Cut	Steep sided sub oval pit with a flat base. 3.84m long, 2.20m wide, 1.14m deep. Filled by (040), (039), (038), (037), (036), (035) and (034)	Extraction pit	13th century to mid 14th century
034	Fill	Soft light bluish grey clay. Occasional small rounded stones and rare charcoal flecks. 0.15m thick. Fill of [033]	Natural slumping	
035	Fill	Firm mid brownish grey silty clay with occasional orange clay patches. Rare small rounded stones and charcoal flecks. 0.21m thick. Fill of [033]	Deliberate backfill	13th century to mid 14th century
036	Fill	Compact mid greyish brown silty clay with patches of orange clay. Moderate small rounded stones, rare large sub angular stones, moderate small chalk pieces. 0.21-0.49m thick. Fill of [033]	Deliberate backfill	13th century to mid 14th century
037	Fill	Compact dark grey clay. Rare small stones, occasional charcoal flecks. 0.08-0.14m thick. Fill of [033]	Deliberate backfill	13th century to mid 14th century
038	Fill	Compact mid brownish grey clayey silt. Occasional rounded and sub angular stones, rare small chalk pieces. 0.21m thick. Fill of [033]	Deliberate backfill	13th century to mid 14th century
039	Fill	Compact light yellowish brown clayey silt. Moderate stones, frequent small chalk pieces. 0.08-0.19m thick. Fill of [033]	Deliberate backfill	

040	Fill	Compact mid greyish brown clayey silt. Moderate stones, occasional chalk pieces. 0.20m thick. Fill of [033]	Deliberate backfill	13th century to mid 14th century
041	Fill	Firm mid brownish grey sandy clay. Occasional charcoal flecks and CBM flecks. 0.46m thick. Fill of [044].	Deliberate backfill	13th century to mid 14th century
042	Fill	Soft light brown clayey sand. 0.30m thick. Fill of [045]	Deliberate backfill	13th century to mid 14th century
043	Fill	Firm dark brownish grey sandy clay. Occasional redeposited yellow clay natural. 0.60m thick. Fill of [046]	Deliberate backfill	13th century to mid 14th century
044	Cut	N-S running linear. 3m long, 0.45m wide, 0.32m deep. Filled by (041)	Linear	13th century to mid 14th century
045	Cut	N-S running linear. 2.5 long, 1.20m wide, 0.46m deep. Filled by (042) and (051)	Barrow run	13th century to mid 14th century
046	Cut	Steep sloped sided pit. Not fully excavated. 1.9m long, 1.20m wide, 0.60m deep. Filled by (043)	Extraction pit	13th century to mid 14th century
047	Fill	Firm mid to dark brown clayey silt. Frequent chalk flecks, occasional charcoal, occasional lumps of redeposited natural. 0.33m thick. Fill of [015]	Accumulated deposit	13th century to mid 14th century
048	Cut	Circular pit with concave sides and base. 0.56m diameter, 0.11m deep. Filled by (049) and (050)	Post hole	13th century to mid 14th century
049	Fill	Compact dark greyish brown clay. Occasional chalk flecks and stones. 0.11m thick. Fill of [048]	Post pipe	13th century to mid 14th century

050	Fill	Compact dark yellowish brown clay. Occasional small stones. 0.11m thick. Fill of [048].	Post packing	13th century to mid 14th century
051	Fill	Firm mid greyish brown sandy clay with occasional charcoal flecks. 0.17m thick. Fill of [045]	Deliberate backfill	
052	VOID			
053	VOID			
054	VOID			
055	VOID			
056	Fill	Firm dark greyish brown sandy clay. Occasional CBM, stones and redeposited natural. 0.48m thick. Fill of [057].	Deliberate backfill	Mid 14th to 16th century
057	Cut	Steep sided oval pit with irregular base. At least 1.34m long, 0.96m wide, 0.48 deep. Filled by (056)	Extraction pit	Mid 11th to 13th century
058	Fill	Compact mid greyish brown silty sand with occasional charcoal flecks and rounded stones. 0.33m thick. Fill of [171]	Deliberate backfill	13th century to mid 14th century
059	Fill	Compact mid greyish brown silty clay with orange brown clay. Occasional rounded stones and charcoal flecks. 0.20m thick. Fill of [170]. Truncated by [061].		

060	Fill	Soft dark greyish brown silty sand with occasional charcoal flecks and large rounded pebbles. 0.55m thick. Fill of [061]	Deliberate backfill	13th century to mid 14th century
061	Cut	N-S running linear. >4m long, 1.14m wide, 0.55m deep. Filled by (060)	Boundary ditch	13th century to mid 14th century
062	Cut	E-W running linear. Steep sides, base not reached. >1.65m long, 0.50m deep. Fill by (063), (064), and (065). Truncates (066)	Field boundary	13th century to mid 14th century
063	Fill	Firm mid grey brown silty clay. Occasional small stones. 0.25m thick. Fill of [062]. Truncated by [023].	Natural infilling	
064	Fill	Firm mid brownish grey silty clay. Occasional small stones. 0.23m thick. Fill of [062]	Natural infilling	Mid 9th century to mid 11th century
065	Fill	Moderate mid brownish orange silty clay. Rare small stones. 0.10m – not bottomed as [024] made it tricky. Fill of [062].	Natural slumping	
066	Fill	Firm dark orange brown clay. Occasional small stones. 0.20 thick. Fill of [024]. Truncated by [062]	Natural infilling	
067	Fill	Moderate light grey brown silty clay. Occasional small stones. 0.09m thick. Fill of [024]	Natural slumping	
068	Cut	Slot dug into feature. Extent not known. At least 0.50m deep. Filled by (086).	Extraction pit	13th century to mid 14th century
069	Fill	Firm mid greyish brown silty clay. 0.40m thick. Fill of [070]	Deliberate backfill	13th century to mid 14th century

070		Rounded steep sided pit with flat base. 4.5m long, 2m wide, 0.40m deep. Filled by (069). Truncates (081) and (088)	Extraction pit	13th century to mid 14th century	
071	Fill	Dark greyish brown silty clay, fill of [72]. Truncated by [154]. Finds indicate a lot of domestic waste disposal – perhaps from nearby living space. Special find no. 5.	Backfill	13th century to mid 14th century	109
072	Cut	Linear feature running N-S. L>1m, W c. 1.79m and D c. 0.55m. Boundary or water management ditch			110
073		Firm mid greyish brown clayey silt. Small rounded stones and chalk flecks. 0.28m thick.	Deliberate backfill	Mid 11 th to 13 th century	111
074	Cut	Linear feature running N-S. Sharp slope with a somewhat angled base. L>1m, W c. 0.84 and D. c. 0.42m.	Boundary or water management ditch		112
075	VOID				
076	VOID				
077	Fill	Compact mottled mid orange and dark brown sandy silty clay. Occasional medium rounded stones. 0.43m thick. Fill of [006]. Truncated by [025]	Post packing		
078	Fill	Loose dark brown black silty clay. 0.10m thick. Fill of [025]	Dumped deposit		
079	Fill	Firm dark greyish brown sandy clay. Occasional stone and natural patches. 0.45m thick. Fill of [080]	Deliberate backfill		

080	Cut	Steep sided pit with an uneven base. 4M long, 3.5m wide, at least 0.55m deep. Filled by (087) and (079). Possibly truncates (041). Truncates (088).	Extraction pit	
081	Fill	Firm mid brown grey sandy clay. 0.12m thick. Fill of [082]. Possibly same as (041)	Natural infilling	
082		Possible gully. No length recorded, 0.11m wide, 0.12m deep. Filled by (081).	Possibly gully	[044]
083	Cut	Cut for levelling ground. Covers most of the east of the site. Filled by (085). Truncates (086)	Cut for levelling ground	Post Medieval
084	VOID			
085	Layer	Spread of compact orange brown clay. Frequent stones and rooting. 0.38m thick. Fill of [083]	Deliberate dump	Post Medieval
086	Fill	Compact mid yellowish brown clay. Moderate medium and small stones. 0.50m thick. Fill of [068]	Deliberate backfill	13th century to mid 14th century
087	Layer	Firm mid greyish brown silty clay. Occasional stones. 0.23m thick. Covers (056) and (079)	Made ground	
088	Fill	Firm mid greyish brown sandy clay. Occasional small stones. 0.20m thick. Fill of [089]. Truncated by [070] and [080]	Natural infilling	
089	Cut	Possible pit or gully. No length recorded, 0.40m wide, 0.20m deep. Filled by (088).	Pit of Gully	

090	Fill	Compact mid greyish brown silty clay. Occasional small rounded stones. 0.10m thick. Fill of [091]	Natural infilling	Post Medieval
091	Cut	N-S running linear. Concave side and base. >4m long, 0.50m wide, 0.10m deep. Filled by (091)	Field boundary	Post Medieval
092	Fill	Fill of small pit	Refuse pit	
093	VOID			
094	Cut	Cut of small pit measuring 0.35m x 0.35m x 0.07m	Refuse Pit	
095	Fill	Compact dark brown silty clay. Occasional flecks of chalk. 0.10m thick. Fill of [096]	Natural infilling	
096	Cut	N-S running linear. Concave sides and a flat base. >4m long, 0.45m wide, 0.10m deep. Filled by (095)	Field boundary	
097	Fill	Firm dark brown silty clay mottled with dark yellow brown clay. Chalk flecks and rare angular stones. 0.25m thick. Fill of [098]	Deliberate backfill	13th century to mid 14th century
098	Cut	N-S running linear. Concave sides and base >4m long, 1m wide, 0.25m deep. Filled by (097)	Field boundary	13th century to mid 14th century
099	Fill	Firm dark greyish brown silty clay. Occasional charcoal flecks and lumps of redeposited natural. 0.35m thick. Truncated by [102]. Fill of [100].	Deliberate backfill	13th century to mid 14th century

100	Cut	Possible pit. Steep sides and flat base. At least 0.35 diameter, 0.35m deep. Filled by (099).	Pit	13th century to mid 14th century
101	Fill	Firm dark brown silty clay mortled with dark yellow brown clay. Chalk flecks and rare angular stones. 0.35m thick. Fill of [102]. Truncated by [097]	Deliberate backfill	Mid 14th to 16th century
102	Cut	N-S running linear. Concave sides and flat base >4m long, 1.m wide, 0.35m deep. Filled by (101). Truncates (099).	Field boundary	Mid 14th to 16th century
103	Fill	Light greyish brown silty clay. Occasional charcoal flecks and small to medium rounded stones. 0.37m thick. Fill of [104]. Truncated by [102].	Natural infilling	Post Medieval
104	Cut	N-S running linear. Concave sides base >4m long, 1.m wide, 0.38m deep. Filled by (103). Truncates (107).	Field boundary	Post Medieval
105	Fill	N-S Running shallow linear	Natural infilling	
106	Cut	N-S Running shallow linear	Field boundary	
107	Fill	Light greyish brown silty clay. Occasional charcoal flecks and small to medium rounded stones. 0.42m thick. Fill of [108]. Truncated by [104].	Natural infilling	13th century to mid 14th century
108		E-W running linear. Steep sides and flat base >3m long, 0.70.m wide, 0.42m deep. Filled by (107).	Field boundary	13th century to mid 14th century
109	Fill			Mid 11th to 13th century

110	Cut	Linear. L> 0.83m, W>0.62m and D c. 0.49m. Area very diffuse, hard to see how the ditches were laid out in the area.	Boundary or water management ditch	72
111	Fill	Mid greyish brown silty clay with medium sub-rounded flints, chalk specs. Fill of [112].	Backfill	Mid 11th to 13th century 73
112	Cut	Irregular linear. L>0.83m, W>0.50m and D c. 0.34m. Truncates [110].	Boundary or water management ditch	74
113	VOID			
114	VOID	Same as (085)		Post Medieval 85
115	Fill	Mid greyish brown silty clay. Occasional stones. 1M thick.		
116	Cut	Linear feature with a moderate slope and concave base. Running N-S. Heavily truncated by modern disturbance. Cuts (177).	Linear	
117	Fill	Mid greyish brown sandy clay with occasional stones. Medieval pottery recovered. 0.17m thick.		13th century to mid 14th century
118	Cut	Linear feature with moderate slope and flat base. Is cut by [116]. 0.8x2x0.17m.	Gully for extraction pits.	
119	Fill	Compact dark greyish brown silty sand with redeposited natural frequent small rounded stones and rare charcoal flecks. 0.32m thick. Fill of [120]. Same as (127)	Deliberate backfill	13th century to mid 14th century

120		NW to SE linear with steep sides and concave base. 5.50m long, 0.82m wide, 0.32m deep. Filled by (119). Same as [128]	Field boundary	13th century to mid 14th century
121	Fill	Loose mid greyish brown silty sand with occasional rounded some and occasional chalk flecks. 0.14m thick. Fill of [122]	Deliberate backfill	13th century to mid 14th century
122	Cut	Oval pit with gentle sides and a concave base. 0.80m long, 0.60m wide, 0.14m deep. Filled by (121).	Shallow pit	13th century to mid 14th century
123	Fill	Firm dark greyish brown silty sand with occasional natural soil inclusions, stones, flints and chalk flecks. 0.26m thick. Some signs of possible silting.	Backfill	13th century to mid 14th century
124	Cut	Irregular oval feature. C. 1.21x0.84x0.26m.	Small pit	
125	Fill	Soft mid greyish brown clayey silt with no inclusions. 0.11m thick. Fill of [126]	Natural infilling	
126	Cut	Circular pit with concave sides and a flatish base. 0.46m diameter, 0.11 deep. Filled by (125)	Pit	
127	Fill	Firm dark greyish brown silty sand with lumps of redeposited orange natural clay. 0.28 thick. Fill of [128]. Same as (119).	Deliberate backfill	13th century to mid 14th century
128	Cut	NW to SE linear with steep sides and concave base. 5.50m long, 0.82m wide, 0.32m deep. Filled by (128). Same as [120]	Field boundary	
129	Fill	Firm mid greyish brown clayey silt. Some shell flecks, natural soil, sub-rounded flints and chalk. 0.33m thick. Fill of [130].	Backfill	13th century to mid 14th century

130	Cut	Linear feature with sharp slope and flat/concave base. Filled by (129).	Boundary ditch	
131	Cut	Same as [098]	Field boundary	98
132	Cut	Same as [102]	Field boundary	13th century to mid 14th century 102
133	Cut	Linear feature with concave sides and base. >5m, 0.40m wide, 0.10m deep. Filled by (142)	Field boundary	Mid 11th to 13th century
134	Fill	Dark greyish brown clayey silt 0.3m thick. Fill of [135].	Deliberate backfill	Post Medieval
135	Cut	Terminus of linear feature. 4x0.7x0.3m. Gentle slope with a flat base. Filled by (134).	Farming related gully	Post Medieval
136	Fill	Dark brown silty clay. 0.35m thick. Fill of [137].	Deliberate backfill	Post Medieval
137	Cut	Pit feature near terminus of linear. Containing post-med finds. Filled by (136). Truncated [139].	Refuse pit	Post Medieval
138	Fill	Dark brown silty clay. Fill of [139].	Deliberate backfill	Post Medieval
139	Cut	Pit feature truncated by pit [137]	Refuse pit	Post Medieval

140	Fill	Compact dark greyish brown silty clay. Occasional stones. 0.37m thick. Fill of [131].	Deliberate backfill	Mid 14th to 16th century
141	Fill	Compact mid brownish grey silty clay. Occasional stones. 0.40m thick. Fill of [132]	Deliberate backfill	13th century to mid 14th century
142	Fill	Compact mid greyish brown silty clay. Occasional stones. 0.10m thick. Fill of [133]	Deliberate backfill	Mid 14th to 16th century
143	Fill	Dark brownish grey clayey silt with roots inclusions. 0.27m thick. Fill of [144].	Deliberate backfill	Post Medieval
144	Cut	Oval feature with a gentle slope and concave base. L. 1m and D. 0.27m.	Refuse pit	
145	VOID			
146	Cut	Circular feature with moderate slope and a irregular base. 0.7x0.7x0.26m. Filled by (145). Relation to [144] lost due to truncation in middle.	Refuse pit	
147	Cut	Sub-oval feature with a gradual slope and concave base. Filled by (150). Width 0.23m. Truncates [148].	Pit	
148	Cut	Linear feature with a gradual slope and concave base. Running N-S. 0.19m in width. Filled by (151). Truncated by [147]. Continues underneath LOE.	Gully	13th century to mid 14th century
149	Cut	Linear feature running N-S. Width c. 0.40m with steep slope and concave base. Filled by (150). Truncated by [147].	Ditch	

150	Fill	Dark blackish brown silty clay with chalk and stones. 0.23m thick. Single fill of [147].	Deliberate backfill	
151	Fill	Mid brownish grey silty clay with pebbles inclusions. Fill of [148].	Deliberate backfill	
152	Fill	Dark greyish brown silty clay with stones and root inclusions. Fill of [149]. Truncated by [149].	Deliberate backfill	
153	Fill	Light to mid greyish brown silty sand with small-med shells and sub-rounded flints. 0.17m thick. Fill of [154].	Deliberate backfill	
154	Cut	Linear feature running N-S. L> 1m, W c. 0.53m and D c. 0.17m. Moderate slope with a concave base.	Water management ditch	
155	Fill	Light greyish brown clayey silt with some small sub-rounded flints and natural soil. 0.17m thick. Fill of [112].	Deliberate backfill	
156	Fill	Light greyish brown clayey silt with some small sub-rounded flints. 0.15m thick.	Natural silting	
157	Fill	Loose mid greyish brown silty clay. Occasional medium stones, charcoal flecks and chalk flecks. 0.15m thick. Fill of [170]	Deliberate backfill	13th century to mid 14th century
158	Cut	Shallow linear with gently sloping sides. 2.5m long, 0.90 wide, 0.13m deep. Filled by (159).	Barrow run	
159	Fill	Compact dark grey brown silty clay with occasional small and medium stones. 0.13m thick. Fill of [158]. Possibly truncated by [165].	Deliberate backfill	

160	VOID		
161	VOID		
162	VOID		
163	VOID		
164	Fill	Loose mid to dark greyish brown clayey sand. Rare large rounded stones and occasional lumps of natural. 0.80m thick. Fill of [165]	Deliberate backfill 13th century to mid 14th century
165	Cut	Large sub rectangular pit at least 4.5m long, 4m wide, 0.80m deep. Upper layer removed by machine Base slopes to south. Filled by (164)	Extraction pit 13th century to mid 14th century
166	Fill	Dark brown silty clay with roots inclusions. Fill of [167].	Deliberate backfill
167	Cut	Linear running N-S across east end of site	Ditch
168	Fill	Dark brown silty clay	
169	Cut	Cut of linear	Ditch

170	Cut	Flat bottomed, sub-rectangular pit. 4.25m long, 2.17m wide, 0.20m deep. Filled by (157)	Prospecting pit	13th century to mid 14th century
171	Cut	Large sub circular pit with a west downward sloping base. 6.25m long, 5m wide, 0.33m deep. Filled by (058)	Prospecting pit	13th century to mid 14th century
172	Fill	Fill of pit		
173	Cut	Cut of pit within large ditch slot filled by (172)	Pit	
174	Fill	Fill of gully		
175	Cut	Cut of gully heavily truncated by [106]. Filled by (174)	Gully	

POTTERY BY CONTEXT

APPENDIX 2

Context	No	Wt	ENV	Ware code	Comments	Date
4	2	5	2	MEL	body sherds, 1 glazed	HM
4	1	10	1	MSW	body sherd	HM
4	2	22	2	NEOT	1 jar rim	LS
4	1	14	1	THET	body sherd	LS
5	10	41	8	MEL	body sherds, some conjoining; 1 glazed	HM
5	1	4	1	OXID	flagon handle	RB
5	1	4	1	PEAR	body sherd	PM/MOD
5	3	18	3	THET	body sherds	LS
7	1	2	1	LYVA	body sherd	HM
10	5	33	5	MEL	1 jar rim, finger impressed; 4 body sherds	HM
10	1	5	1	THET	body sherd	LS
10	1	3	1	UGBB	tiny jar rim	HM
11	3	17	3	DNEOT	body sherds	EM
11	1	11	1	DNEOT	dish rim (inturned)	EM
11	1	2	1	EAR	body sherd, small	LM
11	2	11	1	GRIM	glazed, 1 with slip dec (prob same vessel)	HM
11	38	267	38	MEL	1 jar rim; 2 other tiny rims; 1 thumbled base; 2 glazed jar rim (2 joining sherds); 4 other jar rims; 1 ?bowl rim; 1 rod handle; 2 glazed body sherds	HM
11	43	284	42	MEL		HM
11	2	14	2	MEMS	body sherds	HM
11	1	7	1	MSGW	body sherd	HM
11	2	10	2	MSW	1 rim sherd	HM
11	4	15	4	MSW	body sherds	HM
11	1	3	1	NEOT	body sherd	LS
11	5	35	5	SEFFEN	body sherds	HM
11	9	64	9	SEFFEN	body sherds	HM
11	6	81	6	THET	1 jar rim	LS
11	2	13	2	THET	body sherds	LS
11	2	13	2	UGBB	1 jar rim	HM
11	6	20	6	UGBB	body sherds	HM

Context	No	Wt	ENV	Ware code	Comments	Date
12	1	3	1	UGBB	body sherd	HM
13	2	8	2	MEL	body sherds	HM
13	1	5	1	MEMS	body sherd	HM
14	1	3	1	BONE	body sherd	PM/MOD
14	4	12	4	BONE	body sherds	PM/MOD
14	1	5	1	CREA	body sherd	PM/MOD
14	2	9	2	DNEOT	body sherds	EM
14	1	7	1	ENGS	feldspathic glazed	PM/MOD
14	1	1	1	ENGS	tiny body sherd, poss Notts-type?	PM/MOD
14	5	101	4	GRE	bowl rim (2 conjoining sherds)	PM/MOD
14	2	17	2	MEL	body sherds, 1 glazed	HM
14	10	38	10	MEL	body sherds	HM
14	1	5	1	MEMS	body sherd	HM
14	1	9	9	MSW a	body sherd; sandy ware with iron-stained quartz	HM
14	1	4	1	MSW a	body sherd; sandy ware with iron-stained quartz	HM
14	1	8	1	MSGW	body sherd	HM
14	3	23	3	MSW	body sherds	HM
14	5	26	5	MSW	body sherds	HM
14	5	42	5	NEOT	3 jar rims	LS
14	3	31	1	PEAR	non-joining but almost certainly same vessel: straight-sided mug or tankard; slip decoration (mocha)	PM/MOD
14	10	24	10	REFW	some transfer-printed; flatwares & hollow wares	PM/MOD
14	5	37	5	STAM	1 jar rim	LS
14	9	142	5	THET	body sherds, 1 with applied thumbbed strip	LS
14	9	53	9	THET	body sherds	LS
14	3	11	3	UGBB	body sherds	HM
14	1	3	1	YELL	body sherd; slip dec	PM/MOD
22	1	8	1	DNEOT	body sherd	HM
22	2	47	2	MEL	1 rim (unknown form); 1 body sherd	HM
27	13	171	5	MEL	9 sherds from 1 vessel (conjoining); jar, upper part glazed	HM
35	1	3	1	MSW	body sherd	HM

Context	No	Wt	ENV	Ware code	Comments	Date
36	1	13	1	DNEOT	body sherd with wall angle, probably dish	EM
36	3	107	3	MEL	1 bowl rim (type C); 2 body sherds	HM
36	1	2	1	MSW	body sherd	HM
36	1	23	1	SCAMSW	rim sherd	EM
36	1	7	1	UGBB	body sherd	HM
37	8	99	8	MEL	3 rims [ars [see Spoerry fig 9.47, HM102], 2 tiny rims), 5 body sherds, 1 glazed, 1 with curvilinear combing, 1 rilled	HM
37	1	1	1	UGBB	body sherd	HM
37	1	1	1	UGBB	thin-walled body sherd	HM
38	8	36	8	MEL	body sherds, 1 glazed	HM
38	1	2	1	MEL	small body sherd	HM
38	14	241	1	MSW a	prob all same vessel (some conjoining), and prob also same vessel in context 40: jug with pulled lip; degraded ext gl; sandy ware with iron-stained quartz	HM
38	1	5	1	MSGW	tiny jar rim	HM
38	5	43	5	UGBB	2 rims (thin-walled jars), firing varied	HM
38	1	3	1	UGBB	small body sherd, thin-walled	HM
40	2	16	2	BOUA	body sherds	HM
40	2	17	2	BOUA	1 rim, 1 body sherd	HM
40	1	5	1	DNEOT	body sherd	EM
40	4	41	2	GRIM	body sherds, glazed	HM
40	9	67	7	MEL	body sherds, 2 glazed, 1 combed dec	HM
40	32	198	32	MEL	body sherds, 2 glazed	HM
40	1	10	1	MSW a	body sherd; sandy ware with iron-stained quartz	HM
40	5	246	3	MSW a	large body sherds (all same vessel?) with degraded ext glaze (see also context 38); sandy ware with iron-stained quartz	HM
40	1	9	1	MSW	body sherds	HM
40	1	4	1	MSW	body sherd	HM
40	1	2	1	NEOT	body sherd	LS
40	1	15	1	SEFFEN	body sherd	HM
40	2	74	1	SEFFEN	body sherds, conjoining	HM
40	3	13	3	UGBB	body sherds	HM
40	6	25	6	UGBB	body sherds	HM

Context	No	Wt	ENV	Ware code	Comments	Date
41	1	11	1	NEOT	body sherd	LS
41	1	6	1	OXID	body sherd, abraded	RB
42	1	10	1	MEL	jar rim	HM
42	1	4	1	MSW	body sherd, thin-walled	HM
43	1	4	1	DNEOT	body sherd	EM
43	4	133	4	MEL	body sherds	HM
43	5	42	5	THET	1 small jar rim (thickened and flattened)	LS
47	1	37	1	MEL	rim (prob jar), internal gl	HM
48	1	4	1	MEL	body sherd	HM
48	1	44	1	THET	inturned and thickened jar rim	LS
56	1	2	1	EAR	body sherd	LM
56	1	9	1	LYVA	body sherd	EM
56	3	16	3	MEL	body sherds	HM
56	12	110	12	MEL	1 jar rim	HM
56	1	3	1	MEMS	body sherd	HM
56	2	4	2	MSW	body sherds	HM
56	4	81	3	SEFEN	body sherds, 2 conjoining (glazed & limescale int)	HM
56	2	18	1	THET	expanded rim, conjoining	LS
58	1	10	1	DNEOT	Rim, straight-sided jar with lid-seated rim (Spoerry fig. 9.26, EM94)	HM
58	3	26	3	MEL	body sherds	HM
58	1	11	1	MSGW	body sherd	HM
58	1	32	1	THET	body sherd; applied thumbbed strip	LS
60	2	24	2	EMEMS	1 jar rim	EM
60	1	3	1	GRE	black-glazed body sherd	PM/MOD
60	2	11	1	LYVA	conjoining body sherds	HM
60	1	11	1	MEL	body sherd	HM
60	1	12	1	MSW	body sherd	HM
60	2	11	2	NEOT	body sherds	LS
60	2	92	2	THET	body sherds, 1 with applied thumbbed strip	LS
60	3	14	2	UGBB	1 jar rim (joins 164)	HM
64	2	34	1	THET	conjoining body sherds; wide applied thumbbed strip	LS

Context	No	Wt	ENV	Ware code	Comments	Date
69	1	4	1	MEL	body sherd	HM
71	3	44	3	DNEOT	1 body sherd; 2 jar rims (1 expanded and flattened, 1 with internal hollow: Sperry fig 9.26, EM94)	EM
71	2	28	2	DNEOT	1 bowl rim (thickened)	EM
71	15	198	15	DNEOT	3 jar rims	EM
71	17	207	16	EMEMS	jar rim (2 conjoining sherds)	EM
71	7	36	7	MEL	body sherds	HM
71	1	3	1	MEL	body sherd	HM
71	7	46	7	MEL	body sherds	HM
71	1	7	1	MSW	body sherd	HM
71	5	69	5	STAM	strap handle (+ 1 other poss handle sherd); 2 glazed & 1 unglazed body	LS
71	6	150	6	THET	Body sherds; 1 neck with horizontal rilling	LS
71	7	48	5	THET	body sherds, 3 conjoining; 4 filled	LS
71	23	717	23	THET	body sherds, 5 with thumbled applied strips	LS
71	8	40	8	UGBB	body sherd	HM
73	1	69	0	EMEMS	body sherd, joins jar rim 109/111; sooted ext	EM
73	2	25	2	STAM	body sherds	LS
73	5	42	5	THET	body sherds	LS
83	1	24	1	BOUB	jug rim, glazed ext	HM
83	4	49	4	EAR	body sherds	LM
83	1	1	1	EAR	body sherd	HM
83	8	78	3	GRE	6 sherds prob same vessel, of which 3 conjoining: jug rim/strap handle, splashed glaze; plus 2 body sherds	LM
83	1	3	1	GRE	body sherd	PM/MOD
83	26	355	22	GRE	several body & base sherds internally black-glazed; plus lid-seated jar (pipkin?) rim	PM/MOD
83	1	19	1	GRIM	jar rim, internal glaze	HM
83	2	13	2	MEL	body sherds, 1 glazed	HM
83	1	16	1	MEL	body sherd	HM
83	1	10	1	MEL	body sherd	HM
83	2	12	2	UGBB	body sherds, thin-walled	HM
86	4	29	4	MEL	body sherds, 1 poss slightly overfired	HM

Context	No	Wt	ENV	Ware code	Comments	Date
90	1	5	1	MSW	body sherd, abraded	HM
90	1	3	1	PEAR	body sherd, transfer-printed (flow blue)	PM/MOD
90	1	4	1	STAM	body sherd	HM
90	1	91	1	YELL	flared bowl, slip-banded dec	PM/MOD
92	6	38	6	DNEOT	poss all same vessel, dish with inturned rim (Spoerry fig. 9.26, EM100)	HM
97	4	27	4	DNEOT	body sherds	HM
97	1	3	1	DNEOT	body sherd	HM
97	4	43	4	MEL	body sherds	HM
97	9	171	5	MEL	5 conjoining base sherds; 1 jar rim, possibly finger-impressed; 3 body sherds	HM
97	2	15	2	MSW a	body sherds; sandy, pale-firing with grey core, iron-stained quartz	HM
97	1	28	1	RB grey	body sherd, traces of white slip	RB
97	2	13	2	STAM	body sherds, glazed, 1 with applied ?pad	LS
97	2	10	2	THET	body sherds	LS
97	1	4	1	UGBB	body sherd, thin-walled	HM
99	10	47	10	DNEOT	1 thickened rim	EM
99	2	2	2	MEL	body sherds	HM
99	2	9	2	THET	body sherds	LS
101	1	18	1	LMR	jar rim	LM
101	1	1	1	MEL	body sherd	HM
101	1	21	1	MEMS	body sherd	HM
101	6	24	6	MSW	body sherds	HM
101	1	11	1	STAM	short tubular spout, glazed	LS
103	1	12	1	CREA	plate body sherd	PM/MOD
103	1	1	1	ENGS	body sherd	PM/MOD
103	2	63	2	GRE	body sherds	PM/MOD
103	1	15	1	LYVA	body sherd	HM
103	2	6	2	MEL	body sherds	HM
107	1	5	1	LYVA	body sherd	HM
107	1	9	1	MEL	body sherd	HM
109	2	46	0	EMEMS	jar rim, conjoining sherds (joins 111 and 73)	EM
109	5	26	5	NEOT	1 thickened rim	LS

Context	No	Wt	ENV	Ware code	Comments	Date
109	1	8	1	STAM	rim sherd, unglazed	LS
109	1	33	1	THET	jar rim, surface spalled	LS
109	8	190	8	THET	1 jar rim (type 4?); 1 body sherd with applied thumbed strip	LS
111	1	66	1	EMEMS	jar rim (Spoerry fig 9.22, EM74), ext sooting; joining sherds in contexts 73 & 109	EM
114	1	1	1	CREA	plate rim	PM/MOD
114	2	88	2	GRE	body sherds, 1 glazed	PM/MOD
117	1	5	1	MEL	body sherd, glazed	HM
119	1	2	1	DNEOT	body sherd	EM
119	1	15	1	HEDI	jug rim, slip dec (applied red pellets); Scarborough-style?	HM
119	5	157	4	MEL	4 body sherds, 2 conjoining; 1 strap handle, slashed down centre and on edges, glazed	HM
119	32	316	31	MEL	1 thick-walled bowl rim (type G); 2 glazed	HM
119	1	13	1	MSW a	body sherd; sandy ware with iron-stained quartz	HM
119	4	21	3	MSGW	body sherds	HM
119	3	32	3	SEFEN	body sherds	HM
119	1	22	1	THET	body sherd	LS
121	1	5	1	MSW a	body sherd; sandy ware with iron-stained quartz	HM
121	1	2	1	THET	body sherd	LS
123	2	33	2	LYVA	body sherds	HM
123	2	24	2	MEL	body sherds	HM
127	1	7	1	DNEOT	body sherd, abraded	HM
127	9	133	8	MEL	1 dish rim; 8 body sherds	HM
127	1	16	1	MSGW	body sherd, pre-firing perforation	HM
129	1	18	1	LYVA	jar rim (Spoerry fig 9.55, HM138)	HM
129	1	14	1	NEOT	jar rim (expanded profile)	LS
129	1	1	1	UGBB	body sherd, thin-walled	HM
134	6	723	5	GRE	large bowl or convex jar, internal gl	PM/MOD
135	1	6	1	GRE	body sherd	PM/MOD
140	2	7	2	GRIM	glazed body sherds	HM
140	1	14	1	LMR	body sherd	LM
140	3	22	3	NEOT	1 jar rim (SMJ4)	LS

Context	No	Wt	ENV	Ware code	Comments	Date
140	5	31	5	THET	body sherds	LS
141	1	4	1	MSGW	body sherd	HM
142	1	18	1	EAR	jug rim (dia 80mm), glazed ext	LM
143	4	152	4	GRE	1 flanged bowl rim; 3 body sherds	PM/MOD
145	1	10	1	EAR	body sherd, unglazed	LM
145	1	25	1	GRE	body sherd, internal gl	PM/MOD
148	4	53	4	MEL	body sherds, 1 glazed	HM
157	1	5	1	MEL	body sherd	HM
157	1	11	1	MSW a	body sherd; sandy ware with iron-stained quartz	HM
157	1	5	1	STAM	body sherd, unglazed	LS
157	3	50	3	THET	body sherds	LS
164	1	11	1	DNEOT	body sherd	EM
164	1	14	1	STAM	body sherd	LS
164	1	11	1	THET	jar rim	LS
164	6	85	6	UGBB	thin-walled jar, finger-impressed rim (joining sherd 60)	HM
unstrat	2	68	2	GRE	pipkin handle (U/S SE corner)	PM/MOD
unstrat	1	20	1	GRE	unglazed body sherd (U/S SE corner)	PM/MOD
unstrat	10	98	10	GRE	body sherds, glazed	PM/MOD
unstrat	20	200	18	MEL	thick-walled flared bowl rim (type G); 1 jar rim; 1 jug rim with pre-firing perforation in body wall below rim; 1 body sherd combed and glazed	HM
unstrat	5	42	1	MEL	conjoining body sherds	HM
unstrat	1	2	1	PMBL	black-glazed body sherd	PM/MOD
unstrat	1	21	1	PMR	flowerpot rim, unglazed	PM/MOD
unstrat	2	8	2	RB grey	body sherds	RB
unstrat	2	8	2	THET	body sherds	LS
unstrat	7	195	7	THET	body sherds	LS
unstrat	1	2	1	UGBB	body sherd	HM

Key to date ranges: LS = Late Saxon; EM = Early Medieval; HM = High medieval; LM = Late Medieval; PM/MOD = post-Medieval/Modern

Ware codes follow the Cambridgeshire type series, with the exception of:

BONE = bone china; CREA = creamware; ENGS = English stoneware; PEAR = pearlware; PMR = post-medieval redware (used here for unglazed redwares); PMBL = post-medieval black-glazed redware; REFW = refined whiteware; YELL = yellow ware

OTHER FINDS BY CONTEXT

APPENDIX 3

Context	Material Type	No	Wt	Comments
4	animal bone	1	21	
5	iron	2	41	nail; small bar bent at one end
7	fired clay	3	20	fragments, coarse friable fabric
10	animal bone	1	1	
10	fired clay	5	16	fragments, coarse friable fabric
11	animal bone	16	144	
11	stone	1	76	limestone, slightly burnt
12	animal bone	1	3	
12	stone	1	10	no obvious signs of working (sample 3)
14	animal bone	58	959	
14	CBM	10	357	med/post-med roof tile
14	CBM	7	119	Post-medieval field drain
14	CBM	10	299	brick fragments, coarse
14	CBM	6	75	3 field drain; 1 roof tile; 2 undiagnostic
14	copper alloy	2	10	small cogged wheel fitting; segment of ring fitting
14	CTP	3	5	2 plain stems; 1 bowl frag (C18+)
14	glass	11	23	colourless jar, min 2 vessels, 1 thin-walled (C19/C20)
14	glass	1	1	aqua vessel (C19/C20)
14	glass	1	4	post-med green wine bottle, C18+
14	iron	19	82	nails
14	iron	2	19	sheet/strip fragments
14	iron	1	32	knife blade, round-ended, with end of tang
14	iron	1	56	?large nail (very heavily corroded)
29	fired clay	1	5	coarse fabric
34	animal bone	1	51	
35	animal bone	3	24	
36	animal bone	3	310	
37	animal bone	2	37	
38	animal bone	10	77	
38	CBM	1	10	brick fragment
39	animal bone	5	19	
40	animal bone	12	44	
40	iron	1	12	nail
42	animal bone	6	125	
43	animal bone	2	19	
47	animal bone	1	4	
47	CBM	4	204	med/post-med roof tile
47	CBM	3	61	field drain
47	CBM	1	114	brick fragment, very coarse, irregular surfaces
47	glass	2	52	modern window; pale blue frosted; 1 curved edge (C19/C20)
47	glass	2	8	colourless thin-walled vessel, embossed ...EMAGNE (C19/C20)
47	iron	5	194	nails (2 large, bent at right angles)
48	animal bone	2	2	
56	animal bone	4	12	
58	animal bone	2	70	

Context	Material Type	No	Wt	Comments
58	iron	1	8	nail
60	animal bone	9	208	
60	stone	1	329	lava quern fragment (thickness 35mm)
69	animal bone	4	393	
71	animal bone	30	1064	
71	CTP	1	19	bowl, later C17
71	fired clay	2	86	coarse fabrics; 1 fragment with irregular surface
71	fired clay	4	60	coarse fabric
83	animal bone	123	1000	
86	animal bone	1	6	
90	CBM	2	9	fragments, 1 probably brick
90	CBM	3	510	brick (all conjoining); v coarse fabric, handmade, irregular surfaces
90	CBM	2	66	medieval roof tile, pale-firing
92	animal bone	5	10	
92	fired clay	3	46	fragments, coarse friable fabric
97	animal bone	13	744	
97	fired clay	2	23	fragments, coarse friable fabric
99	animal bone	2	27	
101	animal bone	6	81	
103	animal bone	5	50	
103	glass	1	14	post-med green wine bottle, C18+
107	animal bone	22	282	
109	animal bone	10	72	
109	iron	1	5	nail shank
109	stone	2	795	unworked, possibly burnt
114	animal bone	14	178	
114	iron	12	53	1 rod, 1 nail shank; sheet fragments
119	animal bone	8	38	
119	stone	1	288	limestone slab, possibly roofing
123	animal bone	2	10	
127	animal bone	1	21	
129	animal bone	5	30	
135	animal bone	1	15	
135	iron	2	6	small sheet fragments
138	iron	5	137	1 nail; 4 sheet fragments (one with straight edge, bent over)
140	animal bone	7	209	
141	animal bone	2	29	
143	animal bone	1	3	
148	animal bone	1	1	
164	animal bone	3	320	
164	stone	4	2881	unworked limestone
unstrat	animal bone	5	31	
unstrat	animal bone	1	4	
unstrat	animal bone	1	25	
unstrat	animal bone	5	161	
unstrat	fired clay	3	123	coarse fabrics; 1 with irregular surface could be brick

Context	Material Type	No	Wt	Comments
unstrat	glass	1	106	SE corner: colourless tumbler base, polygonal (C19/C20)
unstrat	iron	1	69	tapering shank with roughly triangular ?'blade' (or could just be corrosion adhering)

ANIMAL BONE BY CONTEXT

APPENDIX 4

Context	Species	Count	Element	Comments
4	unid	1		
10	unid	1		
11	unid	12		
11	cattle	1	tibia	
11	sheep/goat	1	skull	frag
11	sheep/goat	3	upper tooth	
11	sheep/goat	1	scapula	
12	sheep/goat	1	metatarsal	
14	unid	11		
14	Dfowl	1	humerus	
14	Dfowl	1	ulna	
14	Dfowl	1	sternum	
14	Dfowl	1	tibiotarsus	
14	sheep/goat	1	radius	
14	sheep/goat	1	radius	
14	sheep/goat	1	tibia	
14	pig	1	skull frag	
14	cattle	1	calcaneus	
14	cattle	1	calcaneus	
14	cattle	1	metacarpal	
14	cattle	1	tibia	
14	cattle	1	humerus	very large animal
14	unid	15		
14	sheep/goat	1	humerus	
14	rodent	3		
14	cattle	1	humerus	
14	cattle	1	navicula	
14	sheep/goat	1	tibia	
14	pig	1	incisor	
14	Dfowl	1	radius	
14	Dfowl	1	ulna	
14	Dfowl	1	scapula	
14	Dfowl	1	humerus	
14	Dfowl	1	femur	
34	cattle	1	pelvis	
35	unid	1		
35	sheep/goat	1	upper tooth	
35	sheep/goat	1	radius	
36	cattle	1	mandible	m3 in wear
37	pig	1	canine	female

Context	Species	Count	Element	Comments
37	cattle	1	calcaneus	
38	unid	1		
38	unid	7		
38	pig	1	mandible	m3 slight wear
39	pig	1	femur	
40	unid	7		
40	sheep/goat	1	humerus	
40	pig	2	vertebra	
40	pig	1	tooth	m2 heavy wear
40	goose	1	humerus	
42	unid	3		
42	sheep/goat	1	humerus	surface concretions
42	cattle	1	metatarsal	
43	sheep/goat	1	radius	
43	cattle	1	tooth	
47	sheep/goat	1	radius	
49	sheep/goat	1	mandible	
56	sheep/goat	2	tooth	
56	unid	1		
58	horse	1		
58	unid	1		
60	unid	1		
60	sheep/goat	1	upper tooth	
60	pig	1	metapodial	
60	cattle	1	lumbar vertebra	
60	cattle	1	humerus	
60	cattle	1	metacarpal	
69	unid	1		
69	cat	1	radius	
69	horse	1	metacarpal	
69	horse	1	femur	
71	unid	6		
71	pig	2	mandible	
71	sheep/goat	1	humerus	
71	cattle	1	humerus	
71	cattle	1	scapula	
71	unid	7		
71	sheep/goat	1	metatarsal	
71	sheep/goat	1	metatarsal	
71	pig	1	radius	charred

Context	Species	Count	Element	Comments
71	Dfowl	1	tarsometatarsus	juvenile
71	sheep	1	skull	Hcs removed, numerous cuts at base
71	cattle	1	axis	
71	horse	1	ulna	
71	cattle	1	metacarpal	
71	cattle	1	metatarsal	
71	horse	1	radius	foal
71	?horse	1	ulna	foal
71	cattle	1	pelvis	
83	unid	4		
83	horse	1	skull frag	
83	pig	2	femur	
83	horse	1	tibia	
83	sheep/goat	1	radius	
83	sheep/goat	1	metatarsal	
83	sheep/goat	1	mandible	p4 to m3
83	cattle	1	scapula	fragmented
83	unid	6		
83	sheep/goat	1	calcaneus	
86	sheep/goat	1	upper tooth	
92	unid	3		
92	sheep/goat	1	skull frag, upper tooth	
97	unid	1		
97	unid	4		
97	cattle	1	mandible	
97	pig	1	radius	
97	sheep/goat	1	radius	
97	cattle	1	metacarpal	
97	cattle	1	metatarsal	
99	unid	1	rib	
99	sheep/goat	1	metacarpal	
101	pig	1	tibia	
101	sheep/goat	1	metacarpal	
101	sheep/goat	1	ulna	
103	unid	2		
103	sheep/goat	1	upper tooth	

Context	Species	Count	Element	Comments
103	sheep/goat	1	tooth	
103	pig	1	ulna	
107	sheep/goat	1	tooth	
107	sheep/goat	1	metacarpal	
107	unid	11		
107	sheep/goat	1	humerus	
107	sheep/goat	1	mandible	p4 to m3 = 10H
107	sheep/goat	1	skull/hcs	
107	cattle	1	radius/ulna	
109	cattle	1	scapula	
109	sheep/goat	1	tibia	
114	unid	11		
114	cattle	1	humerus	calf
114	cattle	1	mandible	p4 to m2
119	unid	5		
119	sheep/goat	1	metatarsal	
119	bird	1	long bone	
119	pig	1	metapodial	
123	unid	1		
123	sheep/goat	1	metatarsal	
127	unid	1		
129	sheep/goat	1	tib	
129	unid	3		
129	pig	1	scapula	
134	sheep/goat	1	radius	
140	unid	1		
140	unid	3		
140	sheep/goat	1	humerus	
140	pig	1	tooth	
140	horse	1	femur	small charred patch on shaft
141	unid	2		
143	unid	1		
151	pig	1	incisor	
164	cattle	1	pelvis	
164	cattle	1	radius	
164	cattle	1	metacarpal	
unstrat	cattle	1	skull frag	
Unstrat	cattle	1	tibia	
Unstrat	horse	1	3rd phalanx	
Unstrat	sheep/goat	1	mandible	dp4, m1, m2 €
Unstrat	sheep/goat	1	humerus	

Context	Species	Count	Element	Comments
Unstrat	sheep/goat	1	pelvis	
Unstrat	unid	1		
Unstrat	sheep/goat	1	upper tooth	
Unstrat	sheep/goat	1	pelvis	

OASIS FORM

APPENDIX 5

OASIS DATA COLLECTION FORM: England

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OASIS ID: Iparchae1-387295

Project details

Project name	Needhams Farm, Witchford
Short description of the project	Excavation of a site north of Main Street, Witchford
Project dates	Start: 02-09-2019 End: 03-10-2019
Previous/future work	Yes / No
Any associated project reference codes	ECB5956 - HER event no.
Type of project	Recording project
Site status	None
Current Land use	Other 15 - Other
Monument type	DITCH Medieval
Monument type	PIT Medieval
Monument type	AIR RAID SHELTER Modern
Significant Finds	POT Early Medieval
Significant Finds	POT Medieval
Significant Finds	ANIMAL BONE Medieval
Investigation type	"Full excavation"
Prompt	National Planning Policy Framework - NPPF

Project location

Country	England
Site location	CAMBRIDGESHIRE EAST CAMBRIDGESHIRE WITCHFORD Needhams Farm
Postcode	CB6 2HT
Study area	530 Square metres
Site coordinates	TL 49400 78839 52.386759244283 0.195557509441 52 23 12 N 000 11 44 E Point

Height OD / Depth Min: 11.8m Max: 12.4m

Project creators

Name of Organisation L - P : Archaeology
 Project brief originator Cambridgeshire Historic Environment Team
 Project design originator L - P : Archaeology
 Project director/manager John Duffy
 Project supervisor Helen Holderness
 Type of sponsor/funding body Client
 Name of sponsor/funding body Needhams Foundation

Project archives

Physical Archive recipient Cambridgeshire County Council
 Physical Archive ID ECB5956
 Physical Contents "Animal Bones","Ceramics"
 Digital Archive recipient Cambridgeshire County Council
 Digital Archive ID ECB5956
 Digital Media available "GIS","Images raster / digital photography","Images vector","Survey","Text"
 Paper Archive recipient Cambridgeshire County Council
 Paper Archive ID ECB5956
 Paper Media available "Context sheet","Matrices","Photograph","Plan","Report","Section","Survey","Unpublished Text"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)
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WRITTEN SCHEME OF INVESTIGATION

APPENDIX 6

Written Scheme of Investigation for

**NEEDHAMS FARM
WITCHFORD**

For Needham's Foundation

Helen Holderness BA

L~P:ARCHÆOLOGY

Written Scheme of Investigation for

NEEDHAMS FARM WITCHFORD

Client: Needham's Foundation

Local Authority: East Cambridgeshire District Council

NGR: 549402, 278839

Planning App: 17//00534/OUT

Author: H. Holdemess

Doc Ref: LP3247E-WSI-v1.3

Site Code: ECB5956

Date: August 19

L-P: ARCHAEOLOGY

A trading name of L – P : Heritage LLP.

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www.lparchaeology.com

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1. Introduction

- 1.1. This document has been prepared by Helen Holderness of L – P : Archaeology on behalf of Needham’s Foundation.
- 1.2. The document sets out the methodology of archaeological excavation at Land East of Needhams Farm, Main Street, Witchford (FIGURE 1 AND 2). The National Grid Reference is 549402, 278839.
- 1.3. This document has been prepared in response to a planning condition attached to the consent granted for the above site by East Cambridgeshire District Council. A brief (APPENDIX I) was produced by Cambridgeshire Historic Environment Team (CHET) and this document prepared as a response to that brief.
- 1.4. The event number allocated by the Cambridgeshire Historic Environment Record for the excavation is ECB5956. The event number will be used as the site code.
- 1.5. This document sets out the research aims, detailed fieldwork methods, archiving standards and reporting strategy to be employed for the excavation.
- 1.6. This document represents a Written Scheme of Investigation (WSI) for the archaeological evaluation ONLY; this document alone will NOT result in the discharge of the archaeological condition.

2. Site Background

2.1.PLANNING

2.1.1.Planning consent has been granted for construction of 3 new homes and associated works. The planning reference is 17/01756/FUM.

2.1.2.In February 2019 the Ministry of Housing, Communities and Local Government revised the National Planning Policy Framework (NPPF) (HCLG 2019). Section 16 of this document sets out planning policies on the conservation of the historic environment.

2.1.3.In considering any planning application for development the local planning authority, East Cambridgeshire District Council, must consider the policy ENV14: Sites of Archaeological Interest, within the Local Plan (ECLP 2015). On matters concerning archaeology and the historic environment East Cambridgeshire District Council take impartial advice from the Historic Environment Team, Cambridgeshire County Council (CHET).

2.1.4.The site does not contain any Scheduled Monuments or Listed Buildings.

2.1.5.An archaeological evaluation was carried out on the site prior to determination of the planning conditions. On examination of the evaluation results the archaeological advisor to the Local Planning Authority requested further archaeological work (mitigation) on site. This document sets out the methodology for the further work.

2.2.GEOLOGY

2.2.1.The British Geological Survey GeoIndex shows the site to be located on Kimmeridge Clay Formation and Oadby Member geology (BRITISH GEOLOGICAL SURVEY 2019). This was confirmed during the evaluation works (BARROW 2018).

2.3.TOPOGRAPHY AND SITE CONDITIONS

2.3.1.The site is located to the north of Main Street in the western part of the village of Witchford (FIGURE 1). The village sits on the western spur of the Isle of Ely c..5km to the west of the River Great Ouse at an elevation of c. 14m OD with the local landscape dropping to c. 2m in the west, north and south.

2.3.2. The proposed development area is located at the western end of the village (FIGURE 2). Residential properties are located along Main Street to the east and west with agricultural land, pasture and arable to the north and south.

2.3.3. The site lies at c. 13m OD and is generally level.

2.4. ARCHAEOLOGY AND HISTORY

2.4.1. The site lies within an area of Iron Age to Medieval activity.

2.4.2. An evaluation was undertaken on the site consisting of trial trench excavation (BARROW 2018) (ECB5607). The trial trenching identified intensive Early Medieval and Medieval pitting with some late 17th to early 19th century activity. The majority of the activity was in the form of areas of pitting post holes, ditches and gullies.

2.4.3. Small quantities of 10th to 12th century pottery were dispersed across but the majority of the features were Medieval. Large quantities of domestic pottery and a moderate amount of animal bone was recovered. The pottery, Ely ware and local coarse wares, dated from the 12th to 14th century and indicated a domestic setting. Earlier activity in the local area may be evidenced by two shreds of Roman sandy grey ware pottery.

2.4.4. As well as butchered sheep and pigs there was also evidence of dogs and horses used as working animals. The majority of the animal bone was from a single feature: an 18th or 19th century pit containing the carcass of a juvenile pig but animal bones was spread throughout the assemblage. Apart from pig, sheep, goat, cow and horse were also represented from the 10th to 14th century features.

2.4.5. The charred remains of great fen sedge was observed suggesting a thatched building stood on, or near, the site while cereal remains suggest the presence of an oven or drier on or close to the site.

2.4.6. A large irregular feature, interpreted as a quarry for mineral extraction, was in the northwest of the site and contained material dating to the 12th to 14th centuries.

2.4.7. To the northeast of the site is evidence of an Early Iron Age cremation and inhumation cemetery (ECB4252 AND MCB20482). An evaluation identified postholes and provided evidence of a structure in the vicinity. The lack of finds led the excavator to

conclude that it was not a domestic structure.

2.4.8. An evaluation to the southwest located two trackways of Roman date, which are likely to intersect to the north of the site (ECB5152 AND MCB24996). To the west of the site is known further evidence of Roman, Saxon, Medieval and Post Medieval occupation.

2.4.9. St Andrews's church (CB14830), a Grade II* listed building, lies to the east of the site and contains elements of 13th century date which survive from an earlier church. The nave and chancel date to the 14th century. Medieval ridge and furrow has been recorded to the north and west of the current site (MCB20498 AND MCB24249).

2.4.10. Several Post Medieval sites have been identified listed on the Cambridgeshire HER. These include the former location of the now demolished Witchford Primitive Methodist Chapel (MCB21687) which was located at the edge of the current site.

2.5. PROPOSED DEVELOPMENT

2.5.1. The development consists of 3 new homes and associated works.

3. Aims

3.1. The aims of the excavation are:

- ◆ To record the character, date, location and preservation of any archaeological remains on the site.
- ◆ To contribute to an understanding of the establishment of the village of Witchford including the post-Norman conquest period and the inception of the more formal Medieval village including research into the possible poly-focal nature of the village.
- ◆ To consider the site with reference to the wider post-Norman and Medieval landscapes within the region.
- ◆ To examine the evidence of and division in relation to settlement and occupation activity, including the character, extent, morphology, diet, economy and environment and place the results within their local and broader landscape context.
- ◆ To examine any evidence for trade, both regionally and further afield.
- ◆ To examine the faunal remains and the contributions the assemblage can make to our understanding of animal husbandry practices for this area; with particular reference to the presence of juvenile faunal remains and animal burials. Particular care should be taken in order to remove un-fragmented specimens.

4. Methodology

4.1. OPEN AREA EXCAVATION

- 4.1.1. The Brief provided by CHET (APPENDIX 1) requires the excavation of an open area of just over 0.12ha (FIGURE 2).
- 4.1.2. The first phase of works will be to machine excavate the overburden on the site down to the top of the archaeological horizon.
- 4.1.3. A suitable machine, such as an 8t 360 mechanical excavator, will be used for the excavation. It will be fitted with a toothless ditching bucket and will be under constant supervision by a suitably qualified and experienced archaeologist.
- 4.1.4. The site is expected to be stripped all at once depending on site conditions and access to the site with spoil banded along the northern boundary.
- 4.1.5. If buried soils are encountered these will be sample excavated, for example within 1m by 1m hand excavated test pits, prior to removal by machine.
- 4.1.6. Once the overburden is removed the site will be hand cleaned and a base plan created in order to refine the excavation strategy. This will include a review and site visit with CHET. Further site visits and reviews with CHET will be taken once work is underway.
- 4.1.7. Hand excavation of all features will be undertaken as outlined in the excavation methodology below.

4.2. EXCAVATION METHODOLOGY

- 4.2.1. Examination and cleaning of all archaeological deposits will be by hand using appropriate hand tools.
- 4.2.2. A metal detector will be used during all stages of work including after the initial machine strip and during excavation. It will not be set to discriminate against iron.
- 4.2.3. An auger will be on site if required to test the depth of features.
- 4.2.4. All features are to be recorded stratigraphically.
- 4.2.5. All archaeological deposits will be examined and recorded in accordance with the

recording system set out below (SECTION 7).

4.2.6. Examination and cleaning of all archaeological deposits will be by hand using appropriate hand tools. Any archaeological deposits will be examined and recorded both in plan and section. All features will be investigated, where possible, as follows:

- ◆ A minimum of 50% of each intrusive feature (pits, postholes) although, where warranted, 100% may be necessary in some cases. This will be as half sections or quadrants if the feature is deeper. All stratigraphic relationships will be investigated to facilitate phasing.
- ◆ 10% of linear features not directly associated with settlement will be excavated with at least 1m wide slots. Distance between the slots will be determined by the extent of the feature and the character of the deposits, however, generally these would be between 5m and 10m apart. All stratigraphic relationships will be investigated to facilitate phasing.
- ◆ A minimum of 25% of any linears associated with the settlement will be excavated.
- ◆ 100% structural features (beam slots, ring ditches) will be excavated.
- ◆ 100% domestic/industrial working features (hearths, ovens) will be excavated and will be assessed by a specialist prior to excavation.

4.2.7. Allowance has been made for assistance by machine excavation of larger features if required and with agreement with CHET.

4.2.8. All works will be carried out in accordance with the *Code of Conduct* as set out by the Chartered Institute for Archaeologists: accordingly the project team will abide by the CIFA's code of approved practice, the CIFA's Standard and Guidance for Archaeological Excavation and the Standards for Field Archaeology in the East of England (GURNEY 2003).

5. Finds

5.1. GENERAL

- 5.1.1. All archaeological artefacts, including industrial and faunal remains will be collected and retained. Certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained. No finds will, however, be discarded without the prior approval of CHET.
- 5.1.2. Excavated material will be examined in order to retrieve artefacts to assist in the analysis of the spatial distribution of artefacts.
- 5.1.3. Finds will be processed at L – P : Archaeology's Bishop's Stortford facility.
- 5.1.4. The finds assemblage will be retained for deposition with the site archive in the Cambridgeshire County Archive.
- 5.1.5. Marking of finds will follow the requirements of the County archive facility. Bulk finds will be bagged in clear self-sealing plastic bags marked with the same details.
- 5.1.6. All finds which constitute Treasure under the 1996 Treasure Act for England and Wales will be immediately reported the Finds Liaison Officer and CHET and to the coroner within 14 days of discovery. Any treasure will be excavated and moved to a safe storage facility or suitable security will be arranged on site if immediate removal is not possible.
- 5.1.7. Should finds that require immediate conservation be encountered, they will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in the United Kingdom Institute for Conservation *Conservation Guideline No. 2* (UNITED KINGDOM INSTITUTE FOR CONSERVATION 1983). Appropriate guidance set out in the Museums and Galleries Commissions *Standards in the Museum Care of Archaeological Collections* (MUSEUMS AND GALLERIES COMMISSION 1992) and the current ClFA guidelines will also be followed. Packaging of all organic finds and metalwork will follow the UKIC/Rescue guidelines, *First Aid for Finds* (LEIGH 1998). Any necessary conservation and treatment of metalwork will be arranged in conjunction with specialist conservators.

5.2.HUMAN REMAINS

- 5.2.1. Human remains are not expected to be encountered however the excavation is to be undertaken within a settlement site where isolated burials may be encountered.
- 5.2.2. At all stages of archaeological work, human remains encountered will be treated with care and respect. Upon encountering human remains Ministry of Justice and environmental health regulations will be followed. The local coroner and CHET will be contacted immediately and an exhumation licence will be requested from the Ministry of Justice.
- 5.2.3. All human remains, articulated or otherwise, will be retained. Burials will be excavated and recorded according to the standards laid out in McKinley and Roberts (MCKINLEY & ROBERTS 1993) and the Museum of London Archaeological Site Manual (SPENCE 1994). No remains will be left exposed overnight.
- 5.2.4. Human remains will be transferred to the processing facilities once they have been lifted.
- 5.2.5. Digital record photographs will be taken of all inhumation and cremation burials and significant deposits of disarticulated bone as part of the recording process. Publication quality photographs will be taken of all graves containing burial artefacts, and any burials considered of particular osteological or archaeological interest. Individual orthorectified digital photos will also be taken for each burial. These will be georeferenced to the National Grid and may be used in the digitisation of skeletons or as is in the site GIS.
- 5.2.6. Infant and neonatal burials and, where appropriate hands and feet, will be block-lifted to ensure full recovery. Where foetal remains are found in situ, they will be given a unique context number but will be retained with the remains of the mother throughout the post-excavation process.
- 5.2.7. The 100% sampling of the basal fills of any and all graves which do not appear to contain human remains ('empty' graves) will be carried out to check for the presence of teeth and bone fragments. This sampling strategy will be subject to review by the project osteologist during excavation.
- 5.2.8. The skeleton will be lifted and placed in archive quality perforated plastic bags

each containing two tyvek labels with site code, context number and details. Arms, legs, hands, feet, torso and skull will be placed in separate bags with the limbs, hands and feet separated into right and left sides. These will be placed in a large clear plastic bag to ensure that the integrity of each burial is retained.

5.2.9. Cremated bone will be excavated according to Brickley and McKinley (BRICKLEY & MCKINLEY 2004): all suspected cremation deposits will be 100% sampled, cinerary vessels containing burnt bone will be lifted (after seeking advice from the project conservators where appropriate) and excavated under laboratory conditions by the an osteologist.

5.2.10. Treatment of all remains and samples will be to professional standards, those of the receiving body and in accordance with United Kingdom Institute for Conservation guidelines (UNITED KINGDOM INSTITUTE FOR CONSERVATION 1983).

5.2.11. Specialist processing staff will wash all human remains. The block lifted remains of neonates and infants will be processed using a floatation tank or bucket sieve with a 1 mm mesh to ensure complete recovery. All other inhumed remains will be washed over a 1 mm mesh. Once dry, inhumations will be bagged and boxed according to the requirements of the receiving body. The arms, legs, hands, feet, torso and skull will be placed in separate bags each containing two tyvek labels. The limbs, hands and feet will be separated into right and left sides. The remains will be placed in a clearly labelled box lined with jiffy foam. Human bone will not be marked.

5.2.12. Samples containing cremated human bone and samples from basal grave fills will be wet-sieved over a 1 mm mesh, dried and sorted. Cremated bone will be in an un-perforated bag and boxed together with the associated residue.

6. Environmental Strategy

6.1. INTRODUCTION

6.1.1. The archaeological evaluation has outlined the nature and date of the deposits likely to be encountered, and provides the basis for designing a site-specific palaeo-environmental and palaeoeconomic sampling strategy and programme. This strategy is based on the perceived nature of the site, and takes guidance from Historic England's environmental archaeology guidelines (CAMPBELL ET AL. 2011).

6.1.2. Further guidance will be used as appropriate and will include *Waterlogged Organic Artefacts* (ENGLISH HERITAGE 2012), *Investigative Conservation* (ENGLISH HERITAGE 2008), and *Waterlogged Wood* (ENGLISH HERITAGE 2010). The regional archaeological science advisor for Historic England will also be notified of any significant deposits.

6.2. PALAEO-ENVIRONMENTAL AND PALAEO-ECONOMIC SAMPLING STRATEGY

6.2.1. Aims of sampling are principally to recover palaeo-economic data relating to activity on site, to aid in characterising the area and interpreting the activities performed on, and around, the excavated location.

6.2.2. Function, Activities and Economy:

- ◆ define and characterise the function of excavated features and the activity associated with them;
- ◆ characterise the excavated evidence for diet and economic activity associated with the settlement;
- ◆ characterise the use of the land during the Roman period.

6.3. PRINCIPLES

6.3.1.L - P : Archaeology's Environmental Archaeologist will be consulted for advice throughout the course of the excavation, and will make regular site visits. The sampling strategy may be revised in light of these visits and consultation with Historic England's Regional Science Advisor and Cambridgeshire Historic Environment Team.

6.3.2. Sampling are likely be predominately of bulk samples from dated or dateable contexts/features. Sample size of 40 litres is preferred, but each sample must be context specific and as such in some cases sample size will be smaller than that nominally anticipated.

6.3.3. A series of bulk samples will be taken from a range of feature types in each phase/period, but concentrating on features outlined above.

6.3.4. If waterlogged deposits are present, a select series of bulk samples will be taken from key contexts. These will be generally 10 litres, but up to 30 litres (or greater) to recover artefacts.

6.3.5. Geoarchaeological description and sampling may be undertaken through appropriate exposures of deposits if deemed to be of value in addressing the research aims.

6.3.6. Sample types:

- ◆ Bulk sample 40 litres size for charred plant and charcoal remains, animal bones and marine shell
- ◆ Bulk sample 10 to 40 litres for waterlogged plant remains and insects
- ◆ Monolith/kubiena samples

6.4. SITE SPECIFIC SAMPLING STRATEGY

BULK SAMPLES

6.4.1. Bulk samples will be removed from a series of dated and dateable contexts, and primarily from contexts or features with good evidence of archaeological artefacts/activity. The sampling programme will ensure that a range of feature types are sampled. Sampling will concentrate in particular on pits and single-event deposits.

6.4.2. A picture of the local and natural surrounding environment may be provided by the preservation of insects and waterlogged plant remains in deeper, and waterlogged, features, if these are present. All major, and a selection of other minor, deposits will be spot sampled. Where deposit sequences are present which encompass any significant span, then a series of samples will be taken through the

deposit.

6.4.3. A range of bulk samples should be removed from a selection of:

- ◆ well-dated contexts
- ◆ clearly dumped and disposed debris (e.g. in pits)
- ◆ working areas

6.4.4. Sample size should follow recommendations by Historic England guidelines on environmental archaeology (CAMPBELL ET AL. 2011), and the standard applied by L - P : Archaeology as advised by the L - P : Environmental Archaeologist, taking into account any comments from the Historic England Regional Science Advisor and the Cambridgeshire Historic Environment Team (CHET).

6.4.5. Consideration should be given to monolith sampling of well-dated, relatively long time sequences, if they occur, to provide an environmental and economic context (pollen) for the site and also to aid in the interpretation of any feature-specific deposition or formation process (geoarchaeology).

OTHER FEATURE/CONTEXT -SPECIFIC COMMENTS

6.4.1. Any dump deposits will be subject to systematic sampling. The exact number and location of samples is to be defined during fieldwork by the L - P : Environmental Archaeologist in agreement with the Historic England Regional Science Advisor.

6.4.2. Bulk samples should be taken to evaluate and characterise the nature of these deposits.

6.4.3. A simplified feature by feature sampling guide is given below which can be displayed in the site office as a more immediate prompt and *aide memoir*.

6.5. FEATURE-TYPE SAMPLING REQUIREMENTS

6.5.1. In order to make the site specific sampling strategy easily implementable on-site, a pragmatic summary guide to sampling is set out in the table below. This is defined by feature type and/or specific feature.

6.5.2. This table should be copied and put up in a handy location on site such as the wall of the site accommodation.

Feature	Reason and Aim	Sample
Pits	especially from well-dated or artefact bearing contexts	bulk sample
Waterlogged deposits	as pits – but in deep sequences a series of samples could be advantageous	waterlogged samples (insects and plant remains)
Postholes	only if a) well-dated by artefacts or association, b) charcoal-rich for post timber	bulk sample
Hearths	charcoal to feature function and examine woodland resources and management	bulk samples

6.6.SCIENTIFIC DATING

6.6.1.Where appropriate, samples for scientific dating will be taken. Provision will be made for:

- ◆ Dendrochronological analysis from timbers.
- ◆ C14 dating from organic material, which may be taken as sub-samples from bulk or monolith samples.
- ◆ Archaeomagnetic dating from hearths or other suitable deposits.

7. Recording System

7.1. The event number ECB5956 has been allocated by the Cambridgeshire Historic Environment Record and this will be used as the site code. This code will be used to label all sheets, plans and other drawings; all context and recording sheets; all photographs (but not negatives); all other elements of the documentary archive.

7.2. The recording system used will follow the Museum of London Archaeological Site Manual (SPENCE 1994).

7.3. STRATEGY

7.3.1. Our strategy for the archive conforms with our overall philosophy for the project. The maximum amount of record checking and interpretation should take place in the field and be transferred there and then into the archive.

7.3.2. In addition to the paper archive, an ARK database will be used to help this process (ARK DEVELOPERS 2016). The use of a database for context information as well as a linked GIS for spatial information is intended to provide a powerful tool for the ongoing interpretation and publication of the site.

7.4. THE WRITTEN RECORD

7.4.1. The written archive will consist of recording pro-forma recording sheets that are based on the Museum of London system and conform to the standards for archive deposition so as to ensure maximum cross archive compatibility.

7.4.2. Register sheets will be employed to act as master indices of all types of documentary resources. In particular a context register will be maintained at all times that acts as a master list of the contexts that have been issued.

7.4.3. Sample registers, finds recording sheets, access catalogues, and photo registers will also be used.

7.4.4. Context sheets will contain individual descriptions of all archaeological strata and features excavated or exposed.

7.4.5. Context sheets will include all relevant stratigraphic relationships and a separate matrix diagram will also be employed.

7.4.6. The back of all sheets will be printed with a grid for sketches and notes. Such notes and marginalia are considered an essential part of the record.

7.4.7. Documentary material including the paper archive, photographic negatives and prints will be stored in boxes to the standard required for submission into the County archive facility.

7.4.8. If there is any doubt over recording techniques and terminology, the Museum of London Archaeological Site Manual will be used as a guide (SPENCE 1994). Copies of the manual will be available on site in the site office.

7.5. THE DRAWN RECORD

7.5.1. A site location plan will be added into the site GIS based on the OS Mastermap data. This will be made available on paper and digitally in the site office. This base data will be used to show the investigation area and development site in relation to the surrounding locality and street pattern.

7.5.2. This base data will be supplemented by GIS shapefiles, which will show the location of the areas investigated in relation to the investigation area and OS grid. The locations of the OS bench marks used and site TBM will also be indicated. Again, this data will be available in digital form and as paper copies in the site office throughout the project.

7.5.3. The extent of any visible archaeological deposits will be recorded in plan by the excavator of the context using 6H pencil on the provided permatrace drawing sheets at 1:20.

7.5.4. The drawing sheet should be completed in accordance with the Museum of London manual. Drawing conventions and line types are set out in detail in the manual. Drawings must also include: context number, grid square, matrix information and levels information.

7.5.5. Significant or complex deposits can be drawn at a higher scale such as 1:10 provided that the drawing is clearly marked as such.

7.5.6. Sections containing significant deposits, may be drawn. This should be at an appropriate scale, usually 1:10 or 1:20. All sections will be related to the Ordnance

Datum using spot heights and registers of sections and plans will be kept.

7.5.7. Sketch plans and other drawings should be made on the back of context sheets, which have a grid printed to assist drawing. Such sketches provide valuable additional information and should be annotated in as much detail as possible.

7.6. THE PHOTOGRAPHIC RECORD

PRIMARY RECORD

7.6.1. Primary archive photographs will be taken using a DSLR. Digital images will be saved as RAW data files and JPEG. When deemed appropriate, black and white photographs can be taken using 35mm negative film such as Ilford FP4+.

7.6.2. The photographic record will be sufficiently thorough and detailed to illustrate all significant phases, structures, important stratigraphic and structural relationships, and individual items of interest, including artefacts. If in doubt, most completely excavated contexts should be photographed.

7.6.3. All site photographs will include a photographic scale of appropriate size. Where appropriate a board giving context number, north arrow and date should be employed.

7.6.4. If required, all film will be processed immediately on their completion. No photographic materials will be kept in temporary storage media at any time. Photographic negatives will be stored in archival quality polypropylene sleeves with strip divisions, three ring holes, centres 107mm apart and dimensions no greater than, 255mm (from the punched side to the opposite edge) by 300mm. The sleeve should have a white writing strip.

WORKING SHOTS

7.6.5. Working shots should illustrate both the general nature of the archaeological operation and also all of the key features photographed for the primary record.

7.6.6. Working shot photographs will be taken both by the nominated photographer and all other members of the team. These shots will be made using the site camera.

7.7.SURVEY

7.7.1.A site grid will be established and linked into the GIS system. This grid will then be tied in to the Ordnance Survey national grid.

7.7.2.Grid points will be marked using appropriate markers. Grid point markers will be checked and relaid as necessary during the course of the project.

7.7.3.Basic site surveying and scale drawing will be undertaken by the excavation team using 30m tapes laid out between the grid markers.

7.7.4.A level will be present on site at all times and all members of the site team are expected to take their own levels for plans and drawn sections

7.8.GEOGRAPHICAL INFORMATION SYSTEM (GIS) AND DATABASE

7.8.1.The entire drawn archive will be scanned, georeferenced to the National Grid, digitised, and maintained within a desktop GIS. All other related non-spatial data (context, photographic, and finds archives) will be linked to it from an ARK system.

7.8.2.All plans will be scanned, georeferenced, and digitised on a daily basis to allow for easy and rapid production of printed plans for the archaeologists in the field.

8. Community Involvement and Outreach

- 8.1.1. The site is located close to the historic core of Witchford and it is envisaged that local interest in the development will be high.
- 8.1.2. Detailed inquiries from members of the public regarding the results of the works, or sensitive information, will be directed to the project manager.
- 8.1.3. If appropriate information boards can be provided for display on the site fencing.
- 8.1.4. Information for press releases will also be provided through the client allowing dissemination of the results of the archaeological work.
- 8.1.5. If requested a submission of a short illustrated statement for the parish magazine.

9. Post Excavation Assessment Report

9.1.A formal report on the results of the archaeological works will be prepared on completion of the fieldwork. The report will conform to MoRPHE (HISTORIC ENGLAND 2015), the Standards for Field Archaeology in the East of England (GURNEY 2003) and the Chartered Institute for Archaeologists Standard and Guidance for Archaeological Field Excavation (CHARTERED INSTITUTE FOR ARCHAEOLOGISTS 2014):

- ◆ A non-technical summary (abstract).
- ◆ Introductory statements and site background.
- ◆ The aims and methods adopted in the course of the evaluation.
- ◆ A description of the nature, extent, date, condition and significance of all archaeological deposits recorded during the works, with specialist opinions and parallels from other sites if required.
- ◆ Illustrative material including maps, plans, sections, drawings and photographs as necessary.
- ◆ A catalogue of finds, including any specialist reports.
- ◆ A discussion and summary of the results, including a statement of significance.
- ◆ An index of the contents and location of the archive.
- ◆ Sources consulted.
- ◆ A copy of the OASIS record sheet.

9.2.A post excavation summary will be provided within two weeks of leaving the site and a post excavation report (PXA) will be prepared within six months and will be submitted to the Client and to CHET for approval.

9.3.On completion of the PXA report, an Updated Project Design (UPD) will be produced. This will set out the revised research aims for the final analysis stage of the project. This will also included a revised publication proposal and detailed synopsis of the publication.

9.4. The results of the excavation will be published in an appropriate academic journal or in an appropriate alternative format such as a monograph series. The UPD will contain a detailed publication proposal including a publication synopsis including approximate word limits, figure counts and overall size.

9.5.L - P : Archaeology shall retain full copyright of any report under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the client in all matters directly relating to the project as described in this document. Any document produced to meet planning requirements can be copied for planning purposes by the Local Planning Authority. Any information deposited in the Sites and Monuments Record or Historic Environment Record can be freely copied without reference to the originator for research or planning purposes.

10. Archive

- 10.1. The site code ECB5956 will be used to mark all plans, drawings, context and recording sheets, photographs and other site material during excavation.
- 10.2. The site archive will be so organised as to be compatible with current requirements of the Cambridgeshire County Archive (CAMBRIDGESHIRE COUNTY COUNCIL 2017). Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto pro-forma recording sheets. Relevant context, sample and photograph registers and environmental sample sheets will also be used.
- 10.3. On completion of finds analysis, the landowner will be asked to sign a Deed of Transfer transferring title of the finds to the County archive facility.
- 10.4. The integrity of the site archive will be maintained. All finds and records will properly be curated (subject to the Deed of Transfer) by the County archive facility and be available for public consultation. Appropriate guidance set out in the MGC “Standards in the Museum Care of Archaeological Collections” (MGC 1992), and the SMA’s draft “Selection, Retention and Dispersal of Archaeological Collections” (1993) will be followed in all circumstances.
- 10.5. The minimum acceptable standard for the archival report is defined in the *Management of Research Projects in the Historic Environment* (HISTORIC ENGLAND 2015) para 5.4. It will include all materials recovered (or the comprehensive record of such materials) and all written, drawn and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and internally consistent. It will also contain a site matrix, a site summary and brief written observations on the artefactual and environmental data.
- 10.6. United Kingdom Institute for Conservation guidelines for the preparation of excavation archives for long-term storage (WALKER 1990) will be followed. With consent of the landowner, arrangements for the curation of the site archive will be agreed with the Cambridgeshire County Archive.
- 10.7. Pursuant to these agreements the archive will be presented to the Cambridgeshire County Archive within 6 months of the completion of the fieldwork (unless alternative arrangements have been agreed in writing with the Local Planning

Authority or Historic England). In addition, written confirmation from the client will be provided for the transfer of ownership.

10.8.The project will be registered and regularly updated as part of the OASIS project.

10.9.The County archive facility shall be granted licence for the use of the archive for educational purposes, including academic research, as long as such use is non-profit making and conforms to the Copyright and Related Rights regulation 2003.

11. Access and Safety

- 11.1. Access to the site will be arranged for the Local Planning Authority and CHET who will make site inspections to ensure that the archaeological investigations are progressing satisfactorily.
- 11.2. CHET should be given notice of at least one working week prior to the commencement date of site works.
- 11.3. Before any site work commences, a full Risk Assessment Document will be produced setting out the site specific health and safety policies that will be enforced in order to reduce to an absolute minimum any risks to health and safety.
L - P : Archaeology has suitable insurance for undertaking archaeological excavation work.
- 11.4. All relevant health and safety regulations will be followed. Barriers, hoardings and warning notices will be installed as appropriate. Safety helmets and visibility jackets will be used by all personnel as necessary.
- 11.5. The site will be fenced off to prevent public access.
- 11.6. No personnel will work in deep unsupported excavations.

12. Staffing and Timetable

12.1.1. The project manager is John Duffy of L – P : Archaeology.

12.1.2. John Duffy will be responsible for the overall coherency of the team and for the management of the archaeological excavation as well as supervision of the fieldwork.

12.1.3. The field team will consist of members of L – P : Archaeology with experience in rural open area excavation archaeological techniques. Helen Holderness will supervise the fieldwork team of three other archaeologists, with Cara Pearce supervising the site survey. Additional excavation staff will be on site if warranted.

12.1.4. The post excavation team will consist of members of L – P : Archaeology based in the Bishop's Stortford facility and will be responsible for undertaking the processing of artefacts and environmental samples prior to assessment and analysis.

12.1.5. Specialists will be consulted based on the results of the excavation and with the approval of CHET. Specialists are likely to include Lorraine Mephram (ceramics) and Lorrain Higbee (animal bone), both Wessex Archaeology. Environmental evidence will be assessed by Matt Law (molluscs) of L – P : Archaeology and Ellen Simmons, Sheffield University (plant macrofossils).

12.1.6. Fieldwork is expected to start August 2019. It is expected that the machine strip will take 3 days with an additional 4 weeks for the archaeological excavation, dependent on the archaeological remains.

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FIGURES

FIGURE 1 // Site Location - General



0 500 m



PROJECT // 3247E - Needham Farm, Main Street, Witchford

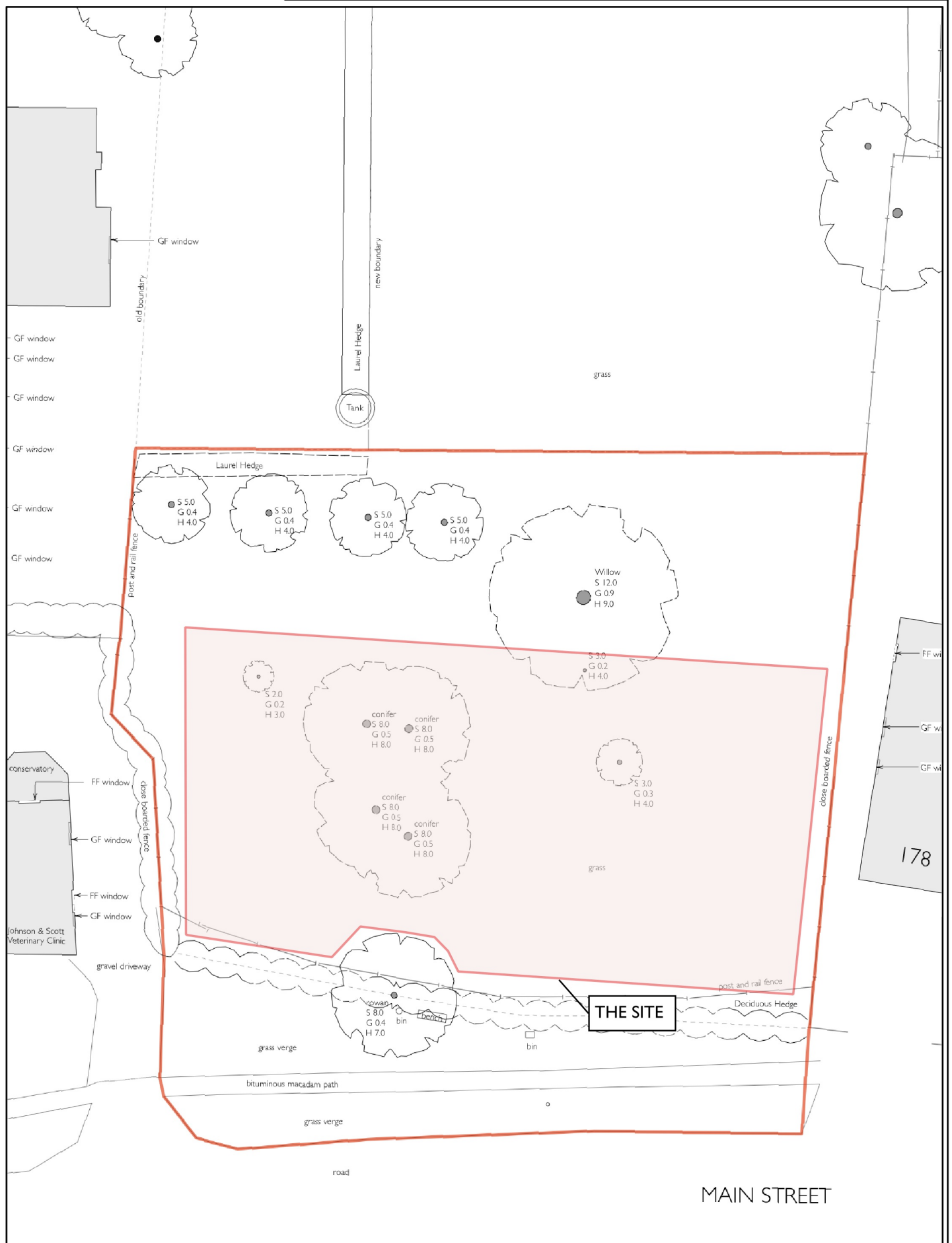
DESCRIPTION // Site Location

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DOC REF: LP3247E-WSI-v1.0

L-P:ARCHAEOLOGY

FIGURE 2 // Site Location - Detail



PROJECT // 3247E - Needham Farm, Main Street, Witchford

DESCRIPTION // Site Location Detail

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L-P:ARCHAEOLOGY

BRIEF

APPENDIX I

BRIEF FOR ARCHAEOLOGICAL INVESTIGATION
Historic Environment Team

Site: Land East of Needhams Farm, Main Street, Witchford

Planning Application: 17/00534/OUT

Company: Needham's Foundation

Location: NGR TL 4939 7883

This design brief is only valid for six months after the date of issue. After this period the Cambridgeshire Historic Environment Team (CHET) should be contacted. Any specifications resulting from this brief will only be considered for the same period. Please note that this document is written for archaeological project managers to facilitate the production of an archaeological specification of work.

Any response to this brief should follow CIfA Standard and Guidance for Archaeological Excavation (revised 2014). The Project Manager is strongly advised to visit the site before completing their specification, as there may be implications for accurately costing the project. The Project Manager must consult the Cambridgeshire Historic Environment Record (CHER) documents in order to design the Written Scheme of Investigation (WSI) and ensure their availability to the excavation team.

NO FIELDWORK MAY COMMENCE UNTIL WRITTEN APPROVAL OF A SPECIFICATION HAS BEEN ISSUED BY THE HISTORIC ENVIRONMENT TEAM

1.0 SITE DESCRIPTION

- 1.1 This development is located in the western part of Witchford on Kimmeridge Clay formation and Oadby Member geology at roughly 13m AOD.
- 1.2 The site is situated in an area of higher ground than the fen to the north which would have offered occupation opportunities. To the north east of the application area archeological investigations in 2014 revealed evidence of an Iron Age cremation and inhumation cemetery, as well as further evidence of Iron Age occupation in the vicinity (Historic Environment Record reference ECB4252). More recent investigations identified 26 cremations and 5 inhumations in the cemetery, which was set on the north side of a palaeochannel, amongst a fieldsystem (ECB4772). Archaeological investigations to the south west, to the rear of Sutton Road identified two Roman trackways, which are projected to intersect at the north of the development area (Jefferson, 2017, Report number MAS/471/17, ECB5152). To the west, Roman, Saxon, medieval and post-medieval occupation evidence is known (05610, CB15655, 05797, MCB16775).
- 1.3 An evaluation carried out within the development area in June 2018 revealed substantial evidence of Early Medieval and Medieval activity (ECB5346). The 10th-12th century Early Medieval (Saxo-Norman) activity has implications regarding the origins of the village suggesting that there was poly-focal activity in the area prior to the establishment of the more formalised Medieval boundary of the village. The majority of activity was Medieval (12th-14th Century) in the form of plot boundaries and areas of pitting. Substantial quantities of pottery were recovered from the evaluation the majority of which were domestic wares, in addition a moderate quantity of butchery was evident on the animal bone. A potential pig burial was identified and the presence of neo-natal elements of pigs and cattle suggest that animals may have been bred on or near to the site. This assemblage has a number of interesting features and a larger assemblage would likely shed light on medieval and post-medieval animal husbandry practices carried out at the site (Cussans, J.E.M., 2018). The environmental evidence is particularly of import as it infers the presence of a hearth or oven on or in the vicinity of the

site. In addition great fen sedge was identified within the charred remains which is an indication that a thatched building stood on or near to the site. The distribution and density of carbonised plant remains within the sampled medieval deposits indicates that there was consistent deposition of carbonised remains from domestic activity within features on the site (*Summers, J., 2018*). Two whetstones were recovered from a 12th-15th century ditch. The artefacts and ecofacts recovered during the evaluation of the site are suggestive of a mixed use domestic economy (*Barlow, 2018, report number 5607*).

- 1.4 The results of a CHER search are available in map and pdf report format. Due to the large amount of data included in the area, we recommend that this information is supplied to you in a GIS format (Map Info TAB. or Arc ESRI shapefile SHP.). If you would like to receive this data, at no further cost, please complete and return the attached GIS licence form (stating which GIS format you require) to the CHER either by email or post; email and address details are included on the form.

Reproduction of spatial data by any other means is not recommended.

2.0 THE NATURE OF THE DEVELOPMENT AND ARCHAEOLOGICAL REQUIREMENTS

- 2.1 The development is for the proposed development of three residential houses.
- 2.2 Due to the evidence of significant archaeological remains at the site a condition has been placed on planning consent requiring a scheme of archaeological work to be undertaken at the site. This design brief sets out the requirements for the archaeological investigation of the site.
- 2.3 The investigation should include a suitable level of documentary research to set the results in their geographical, topographical, archaeological and historical context.
- 2.4 The investigation should include open excavation of the area of archaeological significance and will include the excavation of sufficient archaeological evidence to conform to section 3.0 and 6.0 below. Any discrete archaeological features that extend beyond these areas agreed for excavation may need to be investigated beyond these areas. Decisions regarding any such features will require authorisation by CHET following consultation and a suitable contingency should be included in the specification.

3.0 MITIGATION STRATEGY COMPRISING EXCAVATION

The part of the mitigation strategy comprising open excavation of the identified area (see plan) will consist of the following programme.

1. Initial site clearance of overburden under archaeological supervision;
2. Should buried soils be present, these should be left in place for sample excavation (appropriate grid of 1m x 1m hand excavated test pits) prior to removal by machine.
3. The stripped area(s) will be subjected to a metal detection survey *prior* to excavation. The detector should not be set to discriminate against iron;
4. Manual cleaning and base planning of archaeological features will occur to refine the excavation strategy;
5. Review on site with CHET officer (followed by periodic reviews);
6. Full excavation of archaeological features;
7. Preparation of a post excavation assessment (PXA) to establish the research potential of evidence acquired from all fieldwork stages (integrating evaluation results as necessary),

and the production of an updated project design (UPD) setting out the objectives and methods for conducting the remaining analysis and reporting stages (**cost review stage**);

8. Arrangements for the transfer of title of the archive to Cambridgeshire County Council or for appropriate receiving body should be finalised at this stage. Any other arrangements must be agreed at this stage;
9. Completion of analysis and production of a full archive report;
10. Submission of short illustrated statement for parish magazine and/or client's media outlet.
11. In the event of significant archaeology being found, a note in the local journal summarising the project results;
12. Deposition of the collated archive in the Cambridgeshire Archaeological Archive facility (or equivalent).

All of the above stages should be carried out in accordance with the procedures and guidance contained within Historic England's manager's guide: *Management of Research Projects in the Historic Environment. The MoRPHE Project Managers' Guide. (HE 2015).*

4.0 MITIGATION STRATEGY DETAILS

4.1 Aims and Objectives

- 4.1.1 The primary objective is to preserve the archaeological evidence contained within the site by **record** and to attempt a reconstruction of the history and use of the site. The following research priorities are important considerations although the Project Manager is welcome to propose others. Attention is drawn to the issues raised in *Research and Archaeology Revisited: a revised framework for the East of England* (EAA Occ. Paper No 24, 2011. See EAA website for online updates: http://www.eaareports.org.uk/research_framework.htm).
- 4.1.2 All aspects of the investigation shall be conducted in accordance with the Chartered Institute for Archaeologists' *Code of Conduct*, the *Standard and Guidance for Archaeological Excavation* (CifA 2014), and *Standards for Field Archaeology in the East of England* (EAA Occasional Paper 14, 2003).

4.2 Research priorities

- 4.2.1 To contribute to an understanding of the establishment of the village of Witchford including the post-Norman conquest period and the inception of the more formal Medieval Village of Witchford.
- 4.2.2 To consider the location of the site with reference to the wider post-Norman and Medieval landscapes within the region.
- 4.2.3 To examine the evidence of land division in relation to settlement and occupation activity, including character, extent, morphology, diet, economy and environment and place the results within their local and broader landscape context.
- 4.2.4 To examine any evidence for trade, both regionally and further afield.
- 4.2.5 To examine the ceramic traditions and contribute to an understanding of local and regional ceramic developments.
- 4.2.6 To examine the faunal remains and the contributions the assemblage can make to our understanding of animal husbandry practices for this area; with particular reference to the

presence of juvenile faunal remains and animal burials. Particular care should therefore be taken in order to remove un-fragmented specimens.

4.3 Environmental reconstruction

- 4.3.1 A geoarchaeological approach to sampling and for the definition of landscape change and characterisation is recommended. The selection of relevant appropriate sampling techniques should be shown in the WSI in an attempt to gain evidence to model the landscape and its transformation brought about by the settlement's inhabitants and due to natural events. Detailed examination of midden deposits, waterlogged fills and utilised buried soils is an expectation, and particular interest will be on the presence of blocky charcoal in soil fills, which may be suggestive of the use of charcoal in craft production, while hammerscale and other metalworking by-product, indicative of on-site manufacture, should be sought and appropriately investigated and sampled. Reference should be made to the environmental report (*summers, J. in Barlow, G. 2018*) in order to devise a suitable sampling strategy.

5.0 PROGRAMME OF WORKS

5.1 Site clearance and base planning

- 5.1.1 The modern make up from the delineated area will be mechanically stripped with a toothless ditching bucket, preferably using a tracked vehicle. A metal detection survey will be conducted.
- 5.1.2 The areas will be hand-cleaned to define archaeological features sufficient to produce a base plan. The base plan, recorded digitally using a total station theodolite or equivalent GIS based survey, and/or photogrammetry for complicated evidence, of all features will be produced at an appropriate scale and provided for the Client and CHET for the first monitoring meeting.

5.2 Monitoring

- 5.2.1 The first monitoring meeting will be held after the initial site clean and presentation of the base plan but prior to major excavation work. Subsequent monitoring meetings will be held and will be arranged during the course of the project.

5.3 Excavation

- 5.3.1 A programme of full excavation within these areas will be designed to take account of the research aims and objectives detailed above, general requirements and specific methodology detailed below and be presented in accordance with paragraph 8.1.
- 5.3.3 The Project Manager will ensure that sufficient resource is available for this programme of work and that an agreed contingency is included to enable the investigation of unexpected discoveries or poor weather conditions.

5.4 Post-excavation audit and analysis programme

- 5.4.1 The Project Manager will ensure that sufficient resource is made available for a comprehensive post-excavation assessment (audit), the analytical programme, production of an archive report and appropriate publication of the results. This programme must include the following;

1. A site summary should be provided within two weeks of leaving the site.
2. Within six months of completion of all site works an assessment report must be produced together with specialist assessments of the further research potential of all artefact assemblages and environmental samples. An integrated, illustrated interim site narrative

should support this assessment. For sites of lesser complexity or significance, it may be acceptable to proceed directly to stage 4. This would represent a departure from the agreed scheme and would require the approval of CHET.

3. Following completion of a post-excavation assessment of all materials, a review of the post-excavation programming will be held in consultation with CHET and the relevant specialists. At this review stage, a timetable including a Critical Path Analysis and the aims of specialist research presented in an Updated Project Design will be identified and agreed. This timetable will also contain agreed monitoring points.
 4. After the review, all specialist reports will be commissioned and the full post-excavation programme implemented through to full archive report production, publication and archiving. The Project Manager must satisfy CHET that their organisation is capable of completing these works within two years of the completion of site works. The final monitoring meeting will take place when the archive is prepared ready for deposition (c.f. Section 8.8 below), and the archive report and draft publication report have been submitted to CHET. **There will be no discharge of the archaeological condition prior to the completion of these requirements.**
- 5.4.2 Any variation to these timetables or outputs **must be agreed in advance** with CHET. The Project Manager is advised to ensure that arrangements for securing the specialist analyses, and for obtaining absolute dates, are made at as early a stage as possible.
- 5.4.3 For advice on the production of Post-Excavation Assessment reports, please see https://www.algao.org.uk/sites/default/files/documents/ALGEO_England_PXA_Advice_Note.pdf

6.0 METHODOLOGY

- 6.1 Where safe to do so, all discrete features should, in normal circumstances, be half-sectioned or excavated in quadrants where they are large or found to be deep. The use of an auger is recommended to gain depth information for deep features and should be available in the field tool kit. Machine assistance may be required for very large/deep features and should be shown as a contingency arrangement in the Written Scheme of Investigation.
- 6.2 The excavation of linear features not directly associated with settlement must be sufficiently sampled to allow an informed interpretation of their date and function. As a guide, 10% excavation of field system ditches is acceptable. Excavation slots must be **at least 1m** in width. Indication of the interval between excavation slots must be given in the project design.
- 6.3 The excavation of linear features associated with settlement must be a minimum of 25%; this may increase depending on the nature of the physical evidence. While the professional judgement of the site director in determining a suitable sample is recognised, structural remains such as eaves drip gullies, beam slots and post-holes demonstrated to be part of a buildings construction require total excavation. The use of sampling control baulks is encouraged.
- 6.4 All industrial features including "domestic" ovens and hearths should be assessed by an archaeometallurgist for sampling and dating purposes. Thereafter they should be subject to 100% excavation and further sampled for content assessments.
- 6.5 Under no circumstances is the percentage of sampling of archaeological features to be determined solely by resource limitations. Any changes both to the above methodology and the final specification must be agreed by CHET.
- 6.6 The photographic record must consist primarily of monochrome photographs supplemented by high quality digital images. Appropriate scales should be used. Digital photographs intended for archive purposes must comply with best practice available at the current time –

e.g. as raw data files in APS-C format. The incorporation of digital images within ensuing reports, to augment the drawn record, is encouraged.

6.7 The use of metal detectors on site to aid the recovery of artefacts is required. The instruments should not discriminate against ferrous materials.

6.8 The Project Manager may wish to allow for the use of mobile "all weather" shelters to enable excavation of crucial or sensitive areas.

7.0 SPECIFIC REQUIREMENTS

7.1 Outreach & Public Engagement

7.1.1 In the event of significant archaeology being found, a note in the local journal summarising the project results would be necessary.

7.2 Archaeological Science

7.2.1 An outline strategy for sampling for scientific dating, geoarchaeology and soil science, biological analysis, artefact conservation and analysis, and analysis of technological residues, ceramics (residue and petrology studies where appropriate, and stone must be agreed with CHET, following, where necessary, consultation with Historic England's Science Advisor before the commencement of site work. This strategy should be based on the evaluation results and should be contained in the specification of works (section 8.1). The strategy will be subject to variation as appears necessary during the excavation, following consultation with CHET and the Science Advisor or the project's palaeoenvironment and science specialists.

7.2.2 The Project Manager is advised to consult their appointed environmental and science specialist(s) with the aim of providing a tailor-made sampling scheme for the extraction of plant or animal remains from the site and for costing purposes. Reference to the following publication is advised in relation to sample sizes (see page 12), type, location, and when designing the site's environmental archaeology strategy: Historic England, 2011 (reissued 2015), *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)*.

7.2.3 The Project Manager is also advised to consult the following guidance documents in order to provide an adequate strategy for the excavation, field treatment and conservation of any delicate organic materials: Historic England, 2012 (reissued 2015), *Waterlogged Organic Artefacts: Guidelines on Their Recovery, Analysis and Conservation*; Historic England, 2008 (reissued 2015), *Investigative Conservation: Guidance on How the Detailed Examination of Artefacts from Archaeological Sites Can Shed Light on Their Manufacture and Use*; Historic England, 2010 (reissued 2015), *Waterlogged Wood: Guidelines on the Recovery, Sampling, Conservation and Curation of Waterlogged Wood*.

7.2.4 **The project manager must ensure that the results of palaeoenvironmental investigation, industrial residue assessments/analyses & scientific analyses are included in a full report and sent to the Historic England Science Advisor.**

8.0 GENERAL REQUIREMENTS

8.1 The investigation must be undertaken by an archaeological team of recognised competence, fully experienced in work of this character and formally acknowledged by CHET, advisors to the Local Planning Authority (LPA). Inclusion in The Chartered Institute for Archaeologists' Register of Organisations is recommended. Details, including the name, qualifications and experience, of the Site Director and all other key project personnel will be communicated to CHET as part of a **Written Scheme of Investigation** that conforms to Historic England's MoRPHE guidelines (Management of Research Projects in the Historic Environment, Historic

England, 2006, reissued 2015). These details may need to include a statement of the current post-excavation commitments of the Project Manager and Site Director. This specification must:

1. be supported by a research design which sets out the site specific objectives of the archaeological works;
 2. detail the proposed works as precisely as is reasonably possible, indicating clearly on plan their location and extent;
 3. provide a timetable for the proposed works including the outreach work and contingency mentioned above;
 4. provide details of all specialists;
 5. indicate the methods of recording;
 6. indicate the level and grade of all key project staff;
 7. indicate that the evidence will be published as a **journal article** at most and provide an estimate in the proposed budget for the benefit of the client, indicating that this sum should be set aside for this specific purpose and that it will be revised following the completion of the PXA & UPD.
 8. A review will be made upon receipt of the PXA as to the whether a journal article is necessary.
- 8.2 Care must be taken in the siting of offices and other support structures in order to minimise impact on the environment. Extreme care must also be taken in the structure and maintenance of spoil heaps for the same reasons and to facilitate a high quality reinstatement. This is particularly important in relation to pasture land.
- 8.3 Archaeological Project Managers must satisfy themselves that all constraints to groundworks have been identified, including the siting of live services, Tree Preservation Orders and public footpaths. CHET officers bear no responsibility for the inclusion or exclusion of such information within this brief.
- 8.4 Care must be taken in dealing with human remains and the appropriate Ministry of Justice (MoJ) and environmental health regulations followed. The CHET and the local Coroner must be informed immediately upon discovery of human remains. Where human remains are encountered as part of the investigation, it is essential that an **exhumation licence** is requested from the MoJ in advance of excavating the remains. The post-excavation assessment should contain an analysis of the remains and a statement for the final deposition of the assemblage. The qualified statement must address future research potential, where applicable, and the options for reburial.
- 8.5 Before commencing work the Project Manager must carry out a **risk assessment** and liaise with the site owner, Client and CHET in ensuring that all potential risks are minimised. A copy should be sent to CHET.
- 8.6 Project Managers are reminded of the need to comply with the requirements of the **Treasure Act 1996** (with subsequent amendments). Advice and guidance on compliance with Treasure Act issues can be obtained from the Cambridgeshire Historic Environment Team (CCHET) office. Any finds that could be considered treasure under the terms of the Act made during the process of fieldwork should be **immediately** reported to the Finds Liaison Officer of the Portable Antiquities Scheme based in CCHET, so that it is reported to the appropriate Coroner within 14 days of discovery in line with the Act¹.

¹ Please see <http://finds.org.uk/treasure> for further information.

- 8.7 The site archive specification should conform to the guidelines in MoRPHE (HE 2006 reissued 2015), eg section 2.5.3 and be deposited within the county's archaeological archive facility on completion of site analysis and any ensuing publication.
- 8.8 **To assist with the creation and curation of the project's archive, the Project Manager must contact the CHER office to obtain an Event number (ECB) at the outset of the project.** CHER use this number as a unique identifier linking all physical and digital components of the archive. The unique event number **must** be clearly indicated on any specification received for this project. It should be shown on all paperwork created on site (context forms and plans etc), on relevant ensuing reports and on the OASIS data collection form.
- 8.9 Arrangements for the long term storage and deposition of all artefacts must be agreed with the landowner and CHER during the reporting stage. Transfer of title and the transfer of the ownership of the archive to the County Archive Facility or another local registered depository need to be arranged at this time, and the arrangements indicated in the report. The Project Manager should consult *Deposition of archaeological archives in Cambridgeshire* regarding the requirements for the deposition of the archive into the County Archive Facility at this web link: <https://www.cambridgeshire.gov.uk/residents/libraries-leisure-&-culture/archaeology/archaeology-archives/>
- 8.10 **The current archive deposition cost is £75 per box (or minimum £50 per archive).** This combined charge covers accessioning and uplift (£15) together with a fee to provide for the long term storage (£60). Further details of charges for the use of the County Archive Facility can be found in Section 5 of the guidelines.
- 8.11 CHET supports the national programme: Online Access to the Index of Archaeological Investigations (OASIS III) project and requires archaeological contractors working in Cambridgeshire to support this initiative. In order that a record is made of all archaeological events within the county, the archaeological contractor is required to input details of this project online at the ADS internet site². The OASIS reference ID should be clearly indicated on the relevant report and the Data Collection Form should be included within the report. **Any report that does not contain this information will not be accepted.**
- 8.12 Reports of each phase (Post Excavation Assessment, Full Archive Report, Publication Text), clearly marked **DRAFT**, should be prepared and presented to CHET. These reports must include suitable illustrations and conform to the guidance contained in Historic England's MoRPHE publication (HE 2006, reissued 2015), *Standards for Field Archaeology in the East of England* (EAA Occasional Paper 14, 2003) and with the Chartered Institute for Archaeologists' *Code of Conduct*, the *Standard and Guidance for Archaeological Excavation* (2014).
- 8.13 Following acceptance, **one copy** of the approved report of the results should be submitted to the CHER. The approved report should also be uploaded to the OASIS database within two weeks of approval.
- 8.14 All post excavation and analysis should be completed within **two years** of the completion of site works unless there are reasonable grounds for more time and this has been discussed and agreed with CHET.
- 8.15 CHET is responsible for monitoring all archaeological work within Cambridgeshire and will normally inspect site works and review the progress of excavation reports and archive preparation. The Project Manager must inform CHET in writing, **at least one week in advance**, detailing proposed start dates for the project.
- 8.16 Any changes to the specifications that the Project Manager may wish to make after approval by this office should be communicated directly to CHET for approval.

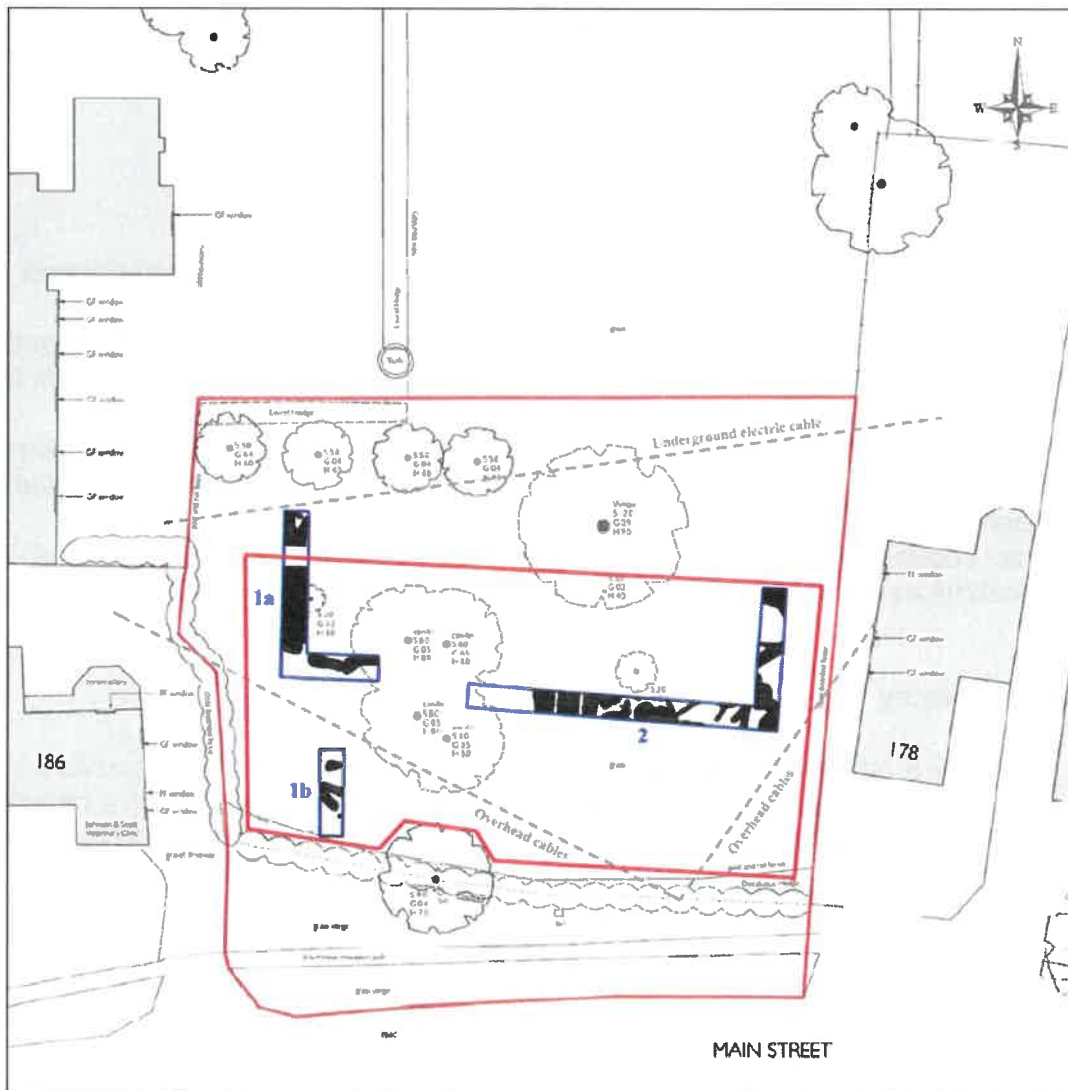
² <http://ads.ahds.ac.uk/project/oasis>

- 8.17 CHET should be kept regularly informed about developments both during the site works and subsequent post-excavation work.
- 8.18 The archaeological advisory and planning role of Cambridgeshire County Council’s Historic Environment Team should be acknowledged in any report or publication generated by this project.

As part of our desire to provide a quality service to all our clients we would welcome any comments you may have on the content or presentation of this design brief. Please address them to the author at the address below.

Kerry Hopper

Historic Environment Team
 Environment & Commercial Services
 Cambridgeshire County Council
 SH1011 Shire Hall
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After Barlow, 2018, Report Number 560, Figure 3.

SPECIALISTS

APPENDIX II

Specialism	Specialist	Organisation
Animal Bone	Dr Hannah Russ	Freelance
Environmental	Dr Matt Law	L - P : Archaeology
Human Remains	Tom Swannick	L - P : Archaeology
Post Roman Pottery	Lorraine Mepham	Wessex Archaeology
Prehistoric and Roman Pottery	Dr Francesca Mazzilli	Freelance
Ceramic Building Material	Lorraine Mepham	Wessex Archaeology
Plant Macrofossils / Charcoal	Ellen Simmons	University of Sheffield
Molluscs	Dr Matt Law	L - P : Archaeology