Archaeology South-East



ARCHAEOLOGICAL EVALUATION

LAND NORTH OF BOARS TYE ROAD SILVER END, ESSEX CM8 3PP

ASE Project No: 180615 Site Code: SEBT18

ASE Report No: 2018300



October 2018

Archaeological Evaluation Land North of Boars Tye Road, Silver End, Essex CM8 3PP

> NGR: TL 8084 2040 Braintree District Council

Planning Ref: 16/01653/OUT

ASE Project No: 180615 Site Code: SEBT18

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Abstract

This report presents the results of an archaeological evaluation carried out by Archaeology South-East on land north of Boars Tye Road, Silver End, Essex. The fieldwork was commissioned by CgMs Heritage in advance of residential development of the site. The fieldwork took place from 3-5 September 2018.

Ten evaluation trenches were excavated within the 2.37ha site, two of which were found to contain a low density of archaeological remains.

The archaeological evaluation uncovered one undated pit and one possible postmedieval ditch, located in the north part of the site. The natural geology is buried beneath 0.26-0.33m of ploughsoil, which contained small amounts of 19th-/20thcentury finds.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East (ASE), the contracting division of UCL's Institute of Archaeology Centre for Applied Archaeology, was commissioned by CgMs Heritage, to undertake an archaeological evaluation on land north of Boars Tye Road, Silver End, Essex. The site is centred on National Grid Reference (NGR) TL 8084 2040 and its location is shown on Figure 1.

1.2 Location, Geology and Topography

- 1.2.1 The site is located immediately northeast of Boars Tye Road, on the northern outskirts of the village of Silver End, which is located in mid-Essex between Braintree and Witham. It comprises a sub-rectangular, arable field that measures 2.37ha. It lies between roadside residential properties fronting onto Boars Tye Road, to the northwest and southeast, and is bound to the northeast by a large field.
- 1.2.2 According to the British Geological Survey (BGS) online geological mapping (1:50,000 scale), the superficial deposits across the site comprise those of the Lowestoft Formation (boulder clay) and the underlying bedrock geology is identified as London Clay Formation of clay, silt and sand (BGS 2017).
- 1.2.3 The site generally slopes gently down from northwest to the southeast; the highest point (50.17m AOD) is located at the northeast end of Trench 1 and the lowest point (47.48m AOD) at the northeast end of Trench 10.

1.3 Planning Background

1.3.1 Planning consent has been granted (Ref: 16/01653/OUT) by Braintree District Council for a residential development of up to fifty dwellings with associated public open space and supporting site infrastructure. Having considered the application, Essex County Council's Place Services (ECCPS) recommended that the following condition be attached to planning consent:

'No development or preliminary groundworks of any kind shall take place until the applicant has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted by the applicant and approved by the planning authority.

REASON: To enable full investigation and recording of this site of archaeological importance. The implementation of the agreed programmed of archaeological works is required prior to the commencement of development to ensure that any archaeology on the site is recorded before construction works start.'

1.3.2 A Heritage Statement was prepared in support of the application (Architectural Management Ltd 2016), which concluded that the development would have no detrimental effect upon heritage assets in the area.

- 1.3.3 Following agreement of a programme of archaeological work with the Planning Archaeologist advising Braintree District Council, a geophysical survey of the site was undertaken by Magnitude Surveys (2018). The survey did not identify any anomalies of probable or possible archaeological origin.
- 1.3.4 Further to the results of the geophysical survey, the Planning Archaeologist recommended a programme of trial trenching, equating to 3.5% plus a 1.5% contingency, be undertaken across the site. CgMs Heritage subsequently commissioned ASE to undertake the fieldwork and a Written Scheme of Investigation (WSI) (ASE 2018a) was submitted to and approved by ECCPS.

1.4 Scope of Report

1.4.1 This report details the results of the archaeological evaluation undertaken from 3-5 September 2018. The fieldwork was undertaken by Samara King (Senior Archaeologist) with survey undertaken by Nathalie Gonzalez (Senior Surveyor). The fieldwork was managed in the field by Andy Leonard (Project Manager) and in post-excavation by Mark Atkinson (Post-Excavation Manager).

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The following archaeological and historical background information is drawn from the Essex Historic Environment Record (EHER), the WSI (ASE 2018a), the final report for excavations located immediately to the southwest (ASE 2018b) and cartographic evidence. The locations of specific known sites and findspots in the vicinity of the site are shown on Figure 1.

2.2 Prehistoric

- 2.2.1 In 1979, excavations at Cressing Temple, 1.8m to the southwest of the development site, revealed Bronze Age structural features (EHER 6008). A similar distance from the development site to the north is a cropmark site near Perry Green that includes a ring-ditch (possibly a ploughed out Bronze Age barrow) and a number of linear features. When these features were crossed by the Cressing to Horkesley pipeline, three Middle Bronze Age urned cremation burials were found (EHER 14193).
- 2.2.2 The ongoing excavations at Bradwell Quarry, to the east of the site, continue to reveal later prehistoric features. Those from Quarry Area A2 and Site R are closest to the development site and include Middle Bronze Age pits, a Middle Iron Age roundhouse (EHER 45180) and Middle Iron Age pits (ASE 2017a) all located between 0.75km and 1km to the northeast of the development site. Further to the east, in Bradwell Quarry Area A4, remains of a Middle to Late Bronze Age roundhouse has recently been discovered (ASE 2017b).
- 2.2.3 Early, Middle and Late Iron Age enclosures and occupation features have also been excavated at Cressing Temple and, more specifically, in Dovehouse Field (EHER 6009, 19793, 47116).
- 2.2.4 The excavation conducted immediately south-southwest of the site uncovered residual earlier prehistoric worked flint and a small, post-built roundhouse and associated external pitting dating to the Late Bronze Age (EHER 49095; ASE 2018b; Ennis and Howsam in prep).
- 2.2.5 Cropmarks of rectilinear enclosures that appear convincingly prehistoric have been mapped south of Egypts Farm located *c*.475m to the southwest (EHER 14190).
- 2.2.6 Overall, the evidence suggests the local area was populated throughout much of the later prehistoric period, with evidence of occupation and burial commencing in the Middle Bronze Age and continuing into the Middle and Late Iron Age.

2.3 Roman

2.3.1 The development site lies between the Roman towns at Kelvedon and Braintree and a small Roman roadside settlement and religious site at Witham. Situated 3.2km to the southeast is a Roman villa at Rivenhall (Rodwell and Rodwell 1993).

- 2.3.2 There are a number of known and presumed villa sites along the Brain valley, that at Rivenhall being excavated in the 1970s (Rodwell and Rodwell 1986). To the west and northwest, two further sites have been tentatively identified at Black Notley and Tye Green on the basis of surface artefact scatters and a third at White Notley where remains of a circular tile-built, *columbarium* type, tomb was excavated in 1954 (J. Rom. Studies 1955). Cropmark enclosures in this vicinity of White Notley were confirmed to be of Roman date where encountered during investigations along the Cressing to Terling water pipeline, with hearths suggesting crop processing activity (Percival and Bailey 2009).
- 2.3.3 Part of an Early Roman settlement, perhaps a farmstead, has been found during evaluation and excavation in Area A2 at Bradwell Quarry, *c*.1.2km to the east-southeast (ASE 2017a).
- 2.3.4 Located 1.5km to the southwest is Cressing Temple where Late Iron Age and Roman enclosures and occupation activity have been investigated in Dovehouse Field (EHER 8095 and 19793; Atkinson and Ennis in prep).
- 2.3.5 A probable Late Iron Age and Roman occupation site was investigated in the 1970s by John Hope in Cressing Churchyard and some of its wider enclosure system identified from cropmark evidence (Hope 1984; 2004). The churchyard is located 1.2km to the west-northwest of the site.
- 2.3.6 Surface finds of Roman pottery have been recovered from the fields surrounding the old Sewage Works at Silver End (EHER 17399), located c.950m south of the site. There is no evidence for Roman activity on the site itself, however, and it appears that it was located in a peripheral area outside any settlement.

2.4 Anglo-Saxon

2.4.1 No Anglo-Saxon sites are known within the immediate vicinity of the development site, although there is some evidence that Cressing village and Cressing Temple may have both had pre-cursors in this period.

2.5 Medieval

- 2.5.1 The landscape in the medieval period was agricultural and characterised by scattered farms and small villages, such as Rivenhall and Cressing. A number of medieval enclosed settlements have become known during ASE excavations at Bradwell Quarry/Rivenhall Airfield, the closest being near Sheepcotes Farm to the east. This was excavated as part of Area A2 of Bradwell Quarry (ASE 2017a)
- 2.5.2 A number of upstanding structures and existing farmsteads have their origins in the medieval period, the closest one to the site being Boars Tye Farm, which is just to the south of Wood Grove and is now in use as a residential home. This was a manorial centre and probably associated with the families of Robert de Bouser. The name 'Boars Tye' first appears in the documentary record in the 14th century but as Bourghchiers Tye and Booers Tye (Reaney 1969, 296 and 573). The existing farm (EHER 28884-7) is of 17th-century construction

and is depicted on an estate map of 1773 that is reproduced in a desk-based assessment of land to the west of Boars Tye Road (Heritage Collective 2015, appendix 3.3). Sheepcotes Farm also dates to the late 16th/early 17th century and is a timber-framed house with an 18th-century front and a 16th-century timber-framed barn. Documents date the farmhouse back to the 12th century (EHER 28881). Bower Hall (EHER 8093), to the southeast, is a 17th-century timber-framed building that replaced a medieval moated site (EHER 8092). Egypts Farm is a 15th-century timber-framed farmhouse (EHER 28883).

2.5.3 The development site in this period was on land that belonged to the manor of Cressing, which lay within the Witham Hundred. In 1136, the manor was granted to the Knights Templar who farmed the land from their preceptory at Cressing Temple, which is situated 1.8km to the southwest (EHER 6012). In 1312, the Templars were suppressed and the manor passed to the Knights Hospitallers (Page and Round 1907, 177-8).

2.6 Post-medieval and modern

- 2.6.1 The post-medieval development of the site area can best be characterised as rural. Cartographic evidence depicts it as in agricultural usage from at least the 1870s. The field is located immediately adjacent to Rolphs Farmhouse, which is 17th-century in date and a Listed Building (EHER 28882). It is likely that the site belonged to that farm.
- 2.6.2 The current farmhouse of Boars Tye Farm (EHER 28884) and its two barns and granary (EHER 28885, 28886 and 28887) date from the 17th century and are Grade II listed buildings. One of the barns was subject to a historic buildings survey in 2006 (EHER 28886; Watkins and Watkins 2006).
- 2.6.3 According to historic mapping, the site has remained as an agricultural field throughout the 19th and 20th centuries.
- 2.6.4 Historic maps and aerial photos from the 1950s and 1960s show a building *c*.150m to the south of the development site and north of Boars Tye Farm that looks like a Nissan hut and may be an ammunition shelter (EHER 20607). Sometime in the 1970s, the building was replaced by a joinery. This was demolished after 2006 to make way for Wood Grove.
- 2.6.5 Just west of Sheepcotes Lane, *c*.160m east of the site, a high frequency direction finder radar station was built as part of Rivenhall Airfield, between 1943-6 (EHER 48195).
- 2.6.6 Undated, possibly recent, cropmarks have been mapped from aerial photographs near Rolphs Farm (EHER 16249), located immediately northwest of the development site, some of which correspond with field boundaries depicted on historic Ordnance Survey maps.

2.7 Previous Work

2.7.1 A heritage statement for the site was prepared in support of the planning application (Architectural Management Ltd. 2016), which concluded that the risk to heritage assets in the area was low.

2.7.2 Subsequently, a programme of geophysical survey was completed in July 2018 (Magnitude Surveys 2018; Figure 5). The fluxgate magnetometer survey responded well to the survey area's environment. No anomalies of probable or possible archaeological origin were identified. The geophysical data primarily recorded features associated with present and former agricultural usage of the field in the form of ploughing regimes, a drainage feature and a possible field boundary. A minimal amount of natural and modern activity was also recorded.

2.8 **Project Aims and Objectives**

- 2.8.1 The general aims of the archaeological investigation, as set out in the WSI (ASE 2018a), were as follows:
 - To determine, as far as reasonably practicable, the location, extent, date, character, condition, significance and quality of any surviving archaeological remains.
 - To establish the ecofactual and environmental potential of archaeological deposits and features encountered.
 - To enable ECC's Historic Environment Management Team to make an informed decision as to the requirement for any further work required in order to satisfy the archaeology condition.
 - To further determine if the features recorded in the evaluation and excavation to the southwest are part of a larger group of features.
 - Evaluate the likely impact of past land uses, and the possible presence of masking colluvial/alluvial deposits.
- 2.8.2 Site-specific research aims, with reference to the East Anglian research framework (Medlycott 2011):
 - Is there any evidence for Bronze Age or Iron Age activity present within the site?
 - Is there potential to study variation and changes in Bronze Age settlement types (Medlycott 2011, 20)?
 - Is there evidence of any Roman activity or farmsteads within the site (Medlycott 2011, 47)?

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork Methodology

- 3.1.1 A unique site code (SEBT18) was obtained from ECCPS and was used as the unique site identifier for the entire project archive.
- 3.1.2 The archaeological evaluation of the site comprised the machine excavation under archaeological supervision of ten trenches, all measuring 30m x 1.80m and positioned in accordance to the WSI (ASE 2018a).
- 3.1.3 The trenches and archaeological features were located, planned and levelled from the site survey using a Digital Global Positioning System (DGPS).
- 3.1.4 Trenches were mechanically excavated using a toothless ditching bucket and under constant archaeological supervision. Machine excavation continued to the top of archaeological deposits or the surface of the natural geology, whichever was uppermost. The exposed archaeological horizon was cleaned by hand immediately after machine stripping; any archaeological deposits or negative features were planned as appropriate.
- 3.1.5 Discrete features were half-sectioned and slots excavated across linear features by hand. Trenches and features were recorded on ASE *pro forma* sheets and sections were recorded at 1:10 scale on A3 drawing film sheets.
- 3.1.6 Backfilling and compaction was undertaken by the machine on completion of the work, but there was no reinstatement to existing condition.
- 3.1.7 A photographic record comprising colour digital images was made. All trenches and individual contexts were photographed (trench and context shots). In addition, a number of representative photographs of the general work on site were taken (working shots).
- 3.1.7 Spoil heaps and trench bases were scanned with a metal detector, as was the spoil derived from excavated features with negative results.
- 3.1.8 The fieldwork adhered to the preceding WSI (ASE 2018a), as well as the ClfA Standard and Guidance for Archaeological Field Evaluation and Code of Conduct (ClfA 2014a, b). The fieldwork also complied with the Standards for Field Archaeology in the East of England (Gurney 2003). ASE is a Registered Organisation with the ClfA.

3.2 Archive

- 3.2.1 Guidelines contained in the ClfA *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014c) will be followed for the preparation of the archive for deposition at Braintree Museum.
- 3.2.2 Finds from the archaeological fieldwork will be kept with the archival material at the ASE office in Witham.

3.2.3 Subject to agreement with the legal landowner, ASE will arrange with Braintree Museum for the deposition of the archive and artefact collection. Any items requiring treatment will be conserved. The landowner will be asked to donate the finds to the local museum. The contents of the archive are tabulated below (Tables 1 and 2).

Context sheets	4
Section sheets	1
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	26
Context register	0
Drawing register	1
Watching brief forms	0
Trench Record forms	10

Table 1: Quantification of site paper archive

Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box	1 bag
0.5 of a box)	
Registered finds (number of)	0
Flots and environmental remains from bulk	1
samples	
Palaeoenvironmental specialists sample	0
samples (e.g. columns, prepared slides)	
Waterlogged wood	0
Wet sieved environmental remains from bulk	0
samples	

Table 2: Quantification of artefact and environmental samples

4.0 RESULTS

4.1 Summary

- 4.1.1 The site sequence was consistent across the site with all trenches containing a mid to dark greyish brown, friable clay silt ploughsoil and turf overlying a mix of mid-orange brown compact clay and chalky yellow Boulder Clay natural deposits with varying amounts of silt, flint and gravel inclusions. This sequence was *c*.0.26-0.33m deep across the site. Archaeological remains were found directly below the topsoil and cut directly into the natural deposits.
- 4.1.2 Eight trenches were devoid of archaeological remains (see section 4.4), whilst two trenches contained archaeological features, consisting of a pit and a ditch.
- 4.1.3 Trenches were not specifically targeted on the geophysical results, as no archaeological anomalies were detected. The only visible anomaly observed during the fieldwork was a siltier patch of natural deposit at the northwest end of Trench 9, which corresponded with the geophysics results.
- 4.1.4 A moderate quantity of narrow land drains was observed across the site, associated with modern agricultural practices.

Context	Туре	Interpretation	Length m	Width m	Depth m	Height m AOD
3/001	Layer	Ploughsoil	30.00	1.80	0.30-0.33	48.77-49.09
3/002	Deposit	Natural	30.00	1.80	-	48.39-48.79
3/003	Fill	Fill, single	0.80+	0.98	0.22	48.49
3/004	Cut	Linear	0.80+	0.98	0.22	48.37

4.2 Trench 3 (Figure 3)

 Table 3: Trench 3 list of recorded contexts

- 4.2.1 The trench was orientated on a NE/SW axis. No geophysical anomalies were located within the trench. A single possible archaeological feature was recorded and a modern land drain observed in the trench.
- 4.2.2 Linear feature [3/004] was located in the northeast half of the trench, running on a NW/SE alignment. It had moderately steep, concave sides and a rounded base, measuring 0.98m wide and 0.22m deep. Single fill [3/003] consisted of firm, light yellowish brown silty clay with rare flecks of charcoal. It yielded one small piece of undated ceramic building material (CBM) and a fragment of poorly preserved animal bone. The fill was quite similar to the surrounding natural, which could indicate natural silting during use as a drainage ditch, perhaps during the post-medieval period, or the fill of a geological feature. The probable ditch could not be traced further into Trenches 1 or 5.

4.3 Trench 4 (Figure 4)

Context	Туре	Interpretation	Length m	Width m	Depth m	Height m AOD
4/001	Layer	Topsoil	30.00	1.80	0.28-0.32	48.35-48.95
4/002	Deposit	Natural	30.00	1.80	-	47.98-48.64
4/003	Fill	Fill, single	0.90	0.86	0.14	48.22
4/004	Cut	Pit	0.90	0.86	0.14	48.08

Table 4: Trench 4 list of recorded contexts

- 4.3.1 The trench was positioned on a NNW/SSE axis. An undetermined linear anomaly was recorded during the geophysical survey (Figure 5), but no corresponding feature was observed in the trench. A single archaeological feature was encountered in the trench. A single modern land drain was noted crossing the trench.
- 4.3.2 A sub-circular pit [4/004] was uncovered near the centre of the trench, measuring 0.90m by 0.86m and 0.14m deep. It had gradual, concave sides with a flat base. Its single fill [4/003] comprised firm, mid-greyish brown silty clay with a moderate amount of charcoal fragments and flecks, which was bulk sampled <1>, yielding a small quantity of fire-cracked flint and pottery/fired clay fragments, two of which are likely to be of prehistoric date and one of Roman, as well as moderate quantities of oak charcoal.

4.4 Archaeologically Negative Trenches (Figures 2 and 6)

- 4.4.1 Trenches 1, 2 and 5-10 were devoid of archaeological features and encountered a similar stratigraphic sequence of ploughsoil overlying natural, consistent with deposits observed across the site. Their results and measurements are tabulated in Appendix 1.
- 4.4.2 A siltier patch of natural deposit was observed at the northwest end of Trench 9, which corresponded to the location of an anomaly of probable natural origin identified by the geophysics survey.
- 4.4.3 Modern land drains were observed in Trenches 1, 2, 5, 6 and 9.

5.0 FINDS

5.1 Summary

5.1.1 A small assemblage of finds was recovered during the evaluation on land north of Boars Tye Road, Silver End. All finds were washed and dried, or air dried as appropriate. They were subsequently quantified by count and weight, and bagged by material and context. The hand-collected bulk finds are quantified in Table 5; material recovered from the residues of environmental samples is quantified in Table 6. All finds have been packed and stored following ClfA guidelines (2014d).

Context	CBM	Weight (g)	Bone	Weight (g)
3/003	1	4	1	2
Total	1	4	1	2

Table 5: Quantification of hand-collected bulk finds

5.2 Burnt Flint by Karine Le Hégarat

5.2.1 A very small amount (28g) of unworked burnt flint fragments was recovered from bulk soil sample <1>, extracted from pit fill context [4/003]. The fragments are small (measuring up to 15mm). They display a reddish tinge, which implies that the fragments have not been heated to a high degree.

5.3 **Pottery** by Anna Doherty

5.3.1 Eighteen very small ceramic fragments, weighing 8g in total, were recovered from the residue of sample <1>, taken from context [4/003]. By far the largest and least abraded of these is a 1g sherd in a Roman grey ware fabric. Two other smaller sherds have at least one surface intact and contain some flint-temper, likely indicating a broad prehistoric date. The remaining fragments are extremely small and abraded, and generally appear to contain some quartz sand but no obvious temper. It is difficult to determine conclusively whether these represent pottery or fired clay.

5.4 Ceramic Building Material by Isa Benedetti-Whitton

5.4.1 A single, undiagnostic fragment of ceramic building material (CBM), weighing 4g, was recovered from [3/003]. A single area of sanded surface survives, but it is not possible to date the CBM. Such a small fragment could easily have been redeposited and does not necessarily relate to human activity on site.

5.5 Magnetic Material by Elena Baldi

5.5.1 Magnetic residues were recovered from environmental sample <1> from context [4/003], from the 2-4 mm sieve. The finds were analysed under a x40 binocular microscope. The finds consist of more than fifty small magnetic fragments of magnetised lithic materials, ferruginous sandstone and flint, collected using a magnet and weighing 4g. These are undiagnostic, offering no information as to the nature of their origin.

5.6 Animal Bone by Emily Johnson

5.6.1 One fragment of animal bone, weighing approximately 2g, was hand collected during the evaluation. The specimen is a medium mammal long bone diaphysis fragment. It is poorly preserved, with erosion affecting all cortical and fracture surfaces.

6.0 ENVIRONMENTAL SAMPLES

6.1 Introduction

- 6.1.1 A single sample was taken from fill [4/003] of pit [4/004] to assist recovery of environmental remains and artefacts. This report summarises the contents of the sample, focusing on botanical remains and the evidence they provide for past vegetation and fuel use.
- 6.1.2 The sample was processed, in its entirety, in a flotation tank with a 250µm mesh for retention of the flot and a 500µm mesh for the heavy residue. Both fractions were air dried prior to sorting. The heavy residues were passed through graded sieves of 8mm, 4mm and 2mm, and each fraction sorted for environmental and artefactual remains (Table 6). Artefacts recovered from the samples are incorporated in the relevant sections of this volume where they add further information to the existing finds assemblage. In total, 100ml of the flot was scanned under a stereozoom microscope at 7-45x magnifications and the contents recorded (Table 7).
- 6.1.3 Charcoal fragments were fractured along three planes (transverse, radial and tangential) according to standardised procedures (Gale and Cutler 2000). Specimens were viewed under a stereozoom microscope for initial grouping, and an incident light microscope at magnifications up to 500x to facilitate identification of the woody taxa. Taxonomic identifications were assigned by comparing suites of anatomical characteristics visible with those documented in reference atlases (Hather 2000; Schoch *et al.* 2004; Schweingruber 1990) and recorded in Table 7. Nomenclature follows Stace (1997).

6.2 Results

6.2.1 Sample <1> [4/003] derives from the single fill of pit [4/004]. It produced a large flot of 700ml consisting almost exclusively of wood charcoal fragments. Modern, uncharred plant remains, including grass stem fragments, were present, although they contributed less than 5% of the total flot. No charred plant macrofossils, such as seeds or other fruiting structures, were recorded in the 100ml scanned flot. Wood charcoal fragments were very common, ranging in size from small flecks to larger fragments >20mm in size. Oak (*Quercus* sp.) was the only taxon recorded and all of the fragments viewed appear to derive from slow grown wood with very little evidence of ring curvature, which suggests they derive from large stem or branch wood. A quick scan of the remaining flot suggests slow grown, mature oak also dominates the remaining charcoal assemblage; although, given the volume of charcoal recovered, it is possible that further taxa are also present. The sample residue also contained a small quantity of pottery and fire-cracked flint fragments.

6.3 Discussion

6.3.1 The absence of charred plant macrofossils in this sample suggests that crop processing and food preparation was not carried out within the immediate area. The charcoal-rich pit fill does, however, provide evidence for fuel use and preliminary identification work suggests that oak was the preferred fuel, at least in this instance. It is not clear whether the feature provides evidence for *in situ*

burning or whether the fuel represents waste deposited from elsewhere. The use of oak in hearths was, and still is, common place, as it provides excellent fuel (Taylor 1981). The fragments of slow grown, mature oak wood are not considered suitable for radiocarbon dating. In the context of this evaluation, this pit is isolated and undated, with no clear evidence of settlement found on site. On the opposite side of Boars Tye Road, oak-dominated charcoal assemblages have been recorded in Bronze Age deposits associated with a roundhouse and there is also evidence for medieval activity with charred plant macrofossils preserved (ASE 2018b); however, it is unclear if the pit is associated with such activities in the immediate surrounding area.

6.3.2 The current assemblage further demonstrates the potential for good preservation of charcoal and other charred plant macrofossils in the area. Any further work at the site should target recovery of samples from similar features and from primary deposits in particular.

Sample Number	Context	Context / deposit type	Sample Volume litres	Charcoal >4mm	Weight (g)	Charcoal ⊲4mm	Weight (g)	Other (eg ind, pot, cbm)
1	4/003	Pit	40L	*	2	**	2	Pottery >8mm * 8g/ FCF >8mm ** 22g/ FCF 4 - 8m ** 6g/ Mag mat ** 4g/ Mag mat *** 4g

Table 6: Residue quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and weights in grams

Sample Number	Context	Context / deposit type	Weight g	Flot volume ml	Volume scanned	Uncharred %	Sediment %	Charcoal >4mm	Charcoal ⊲4mm	Charcoal ≺2mm	Charcoal Identifications
1	4/003	Pit	254	700	100	<5	<5	***	****	***	Quercus sp. (10) all from slow grown with very little ring curvature observed

Table 7: Flot quantification (* = 1-10, ** = 11-50, *** = 51-250, **** = >250) and preservation (+ = poor, ++ = moderate, +++ = good)

7.0 DISCUSSION AND CONCLUSIONS

7.1 Overview of Stratigraphic Sequence

- 7.1.1 Natural superficial geology, composed of mid-orange brown compact clay and chalky yellow Boulder Clay natural deposits with varying amounts of silt, flint and gravel inclusions, was encountered in all trenches between 47.26m AOD (Trench 10) and 49.89m AOD (Trench 1).
- 7.1.2 A mid to dark greyish brown, friable clay silt ploughsoil and turf were overlying these deposits, measuring *c*.0.26-0.33m in thickness across the site. Several 19th-/20th-century CBM fragments observed in the ploughsoil suggest a modern origin that has been consistently turned over. Modern land drains were observed across the site. Archaeological remains were found below the topsoil and cut directly into the natural deposits.
- 7.1.3 Two trenches in the north part of the site contained archaeological features located below the ploughsoil, comprising a possibly post-medieval linear feature, containing a fragment of undated CBM and animal bone, and an undated pit, demonstrating low-level human activity within the surrounding development area.

7.2 Deposit Survival and Existing Impacts

7.2.1 The archaeological features appeared to be reasonably well preserved; although moderate impacts, such as ploughing and drainage installation, as a result of post-medieval/modern agricultural land use, were observed across the site and have resulted in 19th-/20th-century finds being distributed through the ploughsoil.

7.3 Discussion of Archaeological Remains by Period

7.3.1 The recorded archaeological features encountered by the evaluation were not identified by the preceding geophysical survey, which identified no anomalies of probable or possible archaeological origin. Although only two features were encountered on site, where possible, they have been dated on the basis of their diagnostic artefact content and are discussed below.

Post-medieval

7.3.2 The linear feature uncovered in Trench 3 likely represents a post-medieval drainage ditch, although it could not be traced further in the field or verified on historical maps. However, its orientation corresponds to the extant field boundary located along the northern edge of the site.

Undated

7.3.3 One undated pit was found in Trench 4, from which moderate quantities of oak charcoal were recovered, though it is not clear if this material is indicative of *in situ* burning or the deposition of waste material.

7.4 Consideration of Research Aims

- 7.4.1 The archaeological evaluation succeeded in its general aims of determining the character of archaeological remains within the site. One possibly postmedieval ditch and one undated pit demonstrate low-level human activity within the area.
- 7.4.2 There was no evidence for the continuation of the Late Bronze Age occupation located to the south of the development area or of any later prehistoric remains, thus none of the research aims pertaining to these topics can be addressed.
- 7.4.3 No evidence of Roman activity was uncovered at the site, perhaps further reiterating that the site is located in a peripheral area outside any settlement.
- 7.4.4 Given the site's probable past and certainly modern use as an agricultural field, it is likely that the possible ditch identified in Trench 3 is indicative of agricultural land use, perhaps during the post-medieval period. No further information regarding site usage can be obtained from this evidence.

7.5 Conclusions

7.5.1 The evaluation has successfully demonstrated the presence of a very low density of archaeological remains, comprising one possibly post-medieval ditch and one undated pit.

BIBLIOGRAPHY

Architectural Management Ltd. 2016, *Heritage Statement for a New Housing Scheme, Boars Tye Road, Silver End*, unpublished document.

ASE. 2017a, Archaeological Excavation. Area A2, Bradwell Quarry, Bradwell-Juxta-Coggeshall, Essex. Post-Excavation Assessment and Updated Project Design, unpublished ASE report no. 2016210

ASE. 2017b, Archaeological Excavations at Area A4, Phase 1, Bradwell Quarry, Essex: Summary Post-Excavation Assessment and Updated Project Design Report. ASE report no. 2016003

ASE. 2018a. Land north of Boars Tye Road, Silver End, Essex CM8 3PP: Written Scheme of Investigation for an Archaeological Evaluation, ASE unpublished document.

ASE. 2018b. Archaeological Excavation: Land to the west of Boars Tye Road, Silver End, Essex, Final Report, unpublished ASE report no. 2017452.

Atkinson, M. and Ennis, T. in prep, A Late Iron Age and Roman Landscape at Cressing Temple: The Essex County Council Field Archaeology School Excavations in Dovehouse Field 1998-2005

BGS. 2017, *Geology of Britain Viewer,* Available: http://mapapps.bgs.ac.uk/geologyof britain/home.html [accessed 07/09/2018]

ClfA. 2014a, *Standards and Guidance for Archaeological Evaluation*, Chartered Institute of Field Archaeologists.

ClfA. 2014b, Code of Conduct, Chartered Institute of Field Archaeologists.

ClfA. 2014c, Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives, Chartered Institute of Field Archaeologists.

ClfA. 2014d, Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials, Chartered Institute of Field Archaeologists.

Ennis, T. Forthcoming, 'Further Investigation of the Prehistoric Settlement and Early Saxon Cemetery at Springfield Lyons, Chelmsford', *Essex Archaeol. Hist.*, 4th ser.

Ennis, T. and Howsam, C.L. in prep, 'Late Bronze Age and Medieval Remains at Boars Tye Road, Silver End', *Essex Archaeol. Hist*

Gale, R. and Cutler, D. 2000, *Plants in Archaeology*, Otley/London.

Gurney, D. 2003, *Standards for Field Archaeology in the East of England*, E. Anglian Archaeol. Occasional Paper 14.

Hather, J.G. 2000, *The Identification of the Northern European Woods: A Guide for archaeologists and conservators,* London.

Heritage Collective. 2015, Archaeological desk-based assessment: land to the west of Boars Tye Road, Silver End, Essex, Heritage Collective unpublished report 15/1873.

Hope, J.H. 1984, 'Excavations at All Saints Church, Cressing, Essex, 1979', in Turner, R. and Priddy, D. (eds), *Four Church Excavations in Essex*, Essex County Council Occ. Pap. 4.

Hope, J.H. 2004, 'A Late Iron Age and early Roman settlement at Cressing: excavations at Cressing Churchyard 1975–77', *Essex Archaeol. Hist.*, 3rd ser., 34, 36–62.

Journal of Roman Studies. 1955, 'Roman Britain in 1954: I. Sites Explored', *J. Roman Studies*, 45, 121-49.

Magnitude Surveys. 2018, *Geophysical Survey Report of Land off Boars Tye Road, Silver End,* unpublished document.

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

Page, W. and Round, J.H. (eds). 1907, A History of the County of Essex: Volume 2, London.

Percival S. and Bailey, G. 2009, *Archaeological Excavation and Monitoring of the Anglian Water Pipeline from Cressing to Terling, Essex*, NAU Archaeology Rep. 1648.

Reaney, P.H. 1969, *The Origin of English Place-Names*, Abingdon.

Rodwell, W.J. and Rodwell, K.A. 1986, *Rivenhall: Investigations of a Villa, Vhurch and Village, 1950-1977, Vol. 1*, Chelmsford Archaeol. Trust Rep. 4, Counc Brit. Archaeol. Rep. 55.

Rodwell, W.J. and Rodwell, K.A. 1993, *Rivenhall: Investigations of a Villa, Church and Village, 1950-1977, Vol. 2*, Chelmsford Archaeol. Trust Rep. 4.2, Counc Brit. Archaeol. Rep. 80.

Schoch, W., Heller, I., Schweingruber, F.H. and Kienast, F. 2004, *Wood Anatomy of Central European Species*, Available: <<</td>

Schweingruber, F.H. 1990, Microscopic Wood Anatomy, 3rd edn, Birmensdorf.

Stace, C. 1997, New Flora of the British Isles, Cambridge.

Taylor, M. 1981. Wood in Archaeology, Shire Archaeology.

Watkins, E. and Watkins, B. 2006, *Historical Survey and Report on Boars Tye Barn, Boars Tye Road, Silver End, Rivenhall, Essex*, Chelmsford

ACKNOWLEDGEMENTS

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Trench	Context	Туре	Interpretation	Depth m	Height m AOD
1	1/001	Layer	Ploughsoil	0.26-0.36	49.71-50.17
1	1/002	Deposit	Natural	-	49.39-49.89
2	2/001	Layer	Ploughsoil	0.28-0.30	49.45-49.58
2	2/002	Deposit	Natural	-	49.13-49.29
5	5/001	Layer	Ploughsoil	0.31-0.32	48.20-48.74
5	5/002	Deposit	Natural	-	47.86-48.42
6	6/001	Layer	Ploughsoil	0.32-0.35	49.36-49.74
6	6/002	Deposit	Natural	-	49.02-49.47
7	7/001	Layer	Ploughsoil	0.29-0.32	49.64-49.76
7	7/002	Deposit	Natural	-	49.34-49.52
8	8/001	Layer	Ploughsoil	0.28-0.32	49.12-49.54
8	8/002	Deposit	Natural	-	48.75-49.22
9	9/001	Layer	Ploughsoil	0.31-0.35	48.72-48.74
9	9/002	Deposit	Natural	-	48.36-48.38
10	10/001	Layer	Ploughsoil	0.28-0.31	47.48-48.23
10	10/002	Deposit	Natural	-	47.26-47.86

Appendix 1: Archaeologically negative trenches: list of recorded contexts

Appendix 2: HER Summary

Parish: Silver End	District: Braintree
NGR: TL 8084 2040	Site Code: SEBT18
Type of Work: Trial-trench evaluation	Site Director/Group: S. King / Archaeology South-East
Date of Work: 3-5 September 2018	Size of Area Investigated: 2.37ha
Location of Finds/Curating Museum: Braintree Museum	Funding source: Client
Further Seasons Anticipated?: No	Related HER No's: 16249
Final Report: ADS Grey lit	OASIS No: 327617

SUMMARY OF FIELDWORK RESULTS:

Archaeological trial-trench evaluation was carried out in advance of residential development of the site. Ten evaluation trenches were excavated within the 2.37ha site.

The archaeological evaluation uncovered one undated pit and one possible post-medieval ditch, located in the north part of the site. The natural geology is buried beneath 0.26-0.33m of ploughsoil, which contained small amounts of 19th-/20th-century finds.

Previous Summaries/Reports:

Architectural Management Ltd. 2016, Heritage Statement for a New Housing Scheme, Boars Tye Road, Silver End, *unpublished document*.

Magnitude Surveys. 2018, Geophysical Survey Report of Land off Boars Tye Road, Silver End, *unpublished document.*

Author of Summary: S. King	Date of Summary: 07/09/2018	
Aution of Summary. S. King	Date of Summary. 01/09/2010	

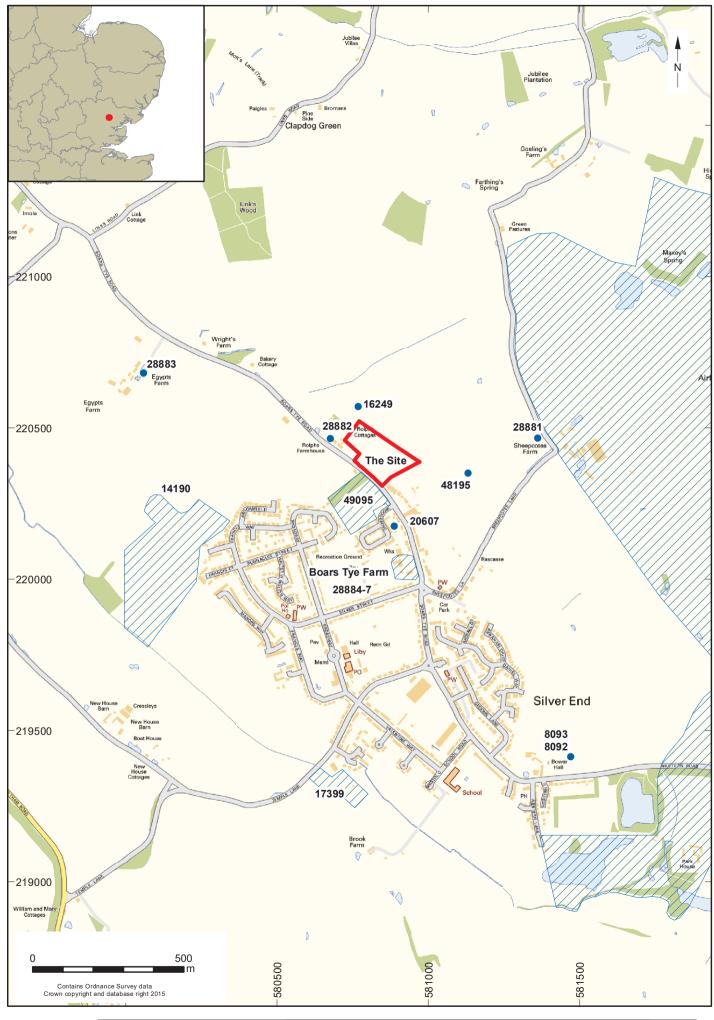
Appendix 3: OASIS Form

OASIS ID: 327617

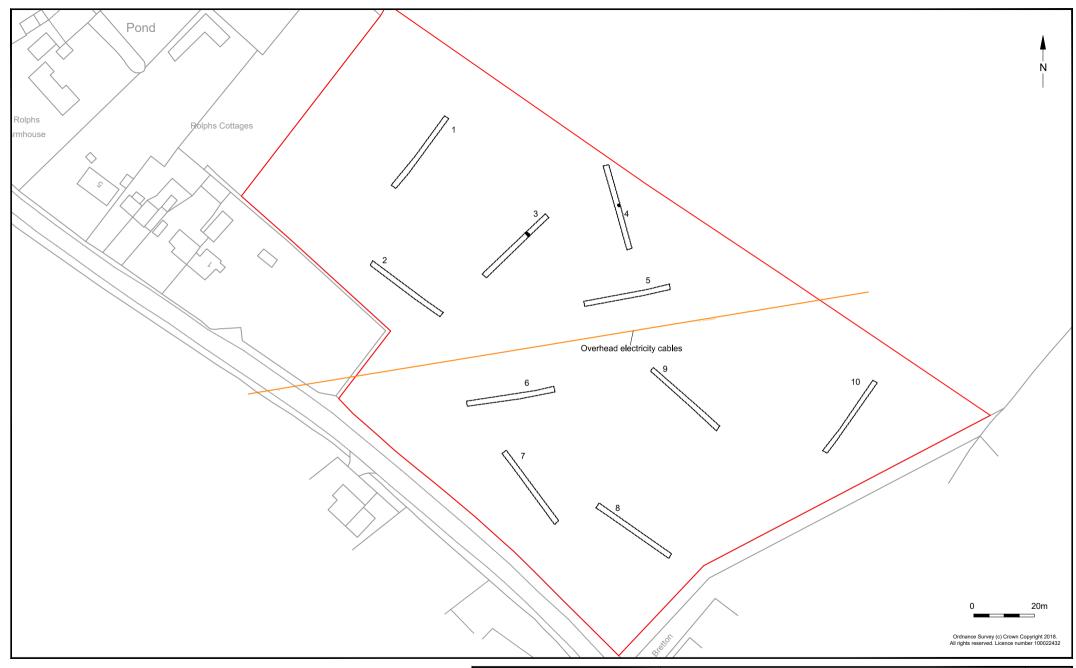
Project details

Project name	Archaeological Evaluation: Land North of Boars Tye Road, Silver End, Essex
Short description of the project	Excavation of ten trial trenches across the 2.37ha site was conducted in advance of a housing development. Two trenches yielded archaeological remains, which consisted of one undated pit and one possible post-medieval ditch in the north of the site, demonstrating low-level human activity within the area.
Project dates	Start: 03-09-2018 End: 05-09-2018
Previous/future work	Yes / No
Any associated project reference codes	SEBT18 - Sitecode
Any associated project reference codes	180615 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 1 - Minimal cultivation
Monument type	PIT Uncertain
Monument type	DITCH Post Medieval
Significant Finds	CBM Uncertain
Significant Finds	ANIMAL BONE Uncertain
Methods & techniques	""Sample Trenches""
Development type	Rural residential
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	After full determination (eg. As a condition)
Project location	
Country	England
Site location	ESSEX BRAINTREE SILVER END Land north of Boars Tye Road
Postcode	CM8 3PP
Study area	2.37 Hectares
Site coordinates	TL 8084 2040 51.852351729173 0.626055771716 51 51 08 N 000 37 33 E Point
Height OD / Depth	Min: 47.26m Max: 49.89m
Project creators	
Name of Organisation	Archaeology South-East
Project brief originator	Essex County Council Place Services

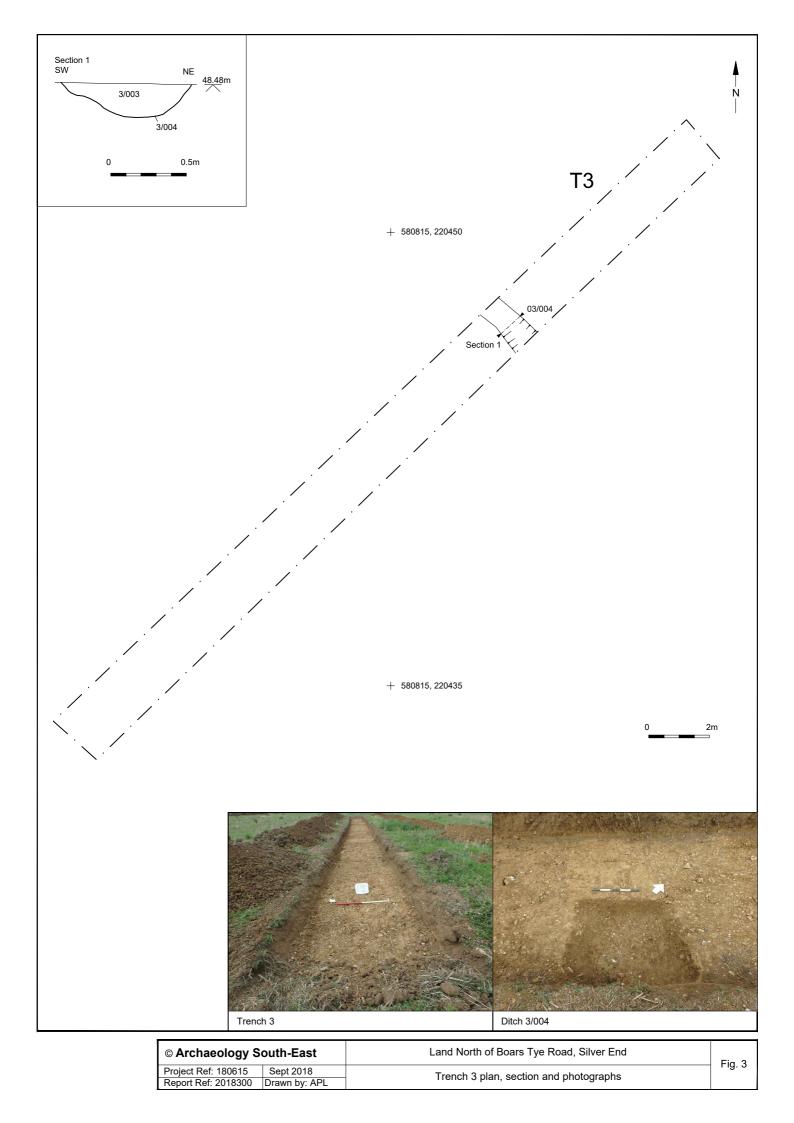
Archaeology South-East
Andy Leonard
Samara King
Developer
Braintree Museum
"Animal Bones", "Ceramics", "Environmental"
Braintree Museum
"Animal Bones", "Ceramics", "Environmental", "Stratigraphic","Survey"
"Database","GIS","Images raster / digital photography", "Spreadsheets","Text"
Braintree Museum
"Animal Bones", "Ceramics", "Environmental", "Stratigraphic","Survey"
"Context sheet","Map","Miscellaneous Material", "Photograph","Plan","Report","Section","Survey "
Grey literature (unpublished document/manuscript)
Archaeological Evaluation: Land North of Boars Tye Road, Silver End, Essex
King, S.
ASE Report No. 2018300
2018
Archaeology South-East
Witham, Essex
A4 report of approximately 35 pages including figures and appendices
archaeologydataservice.ac.uk

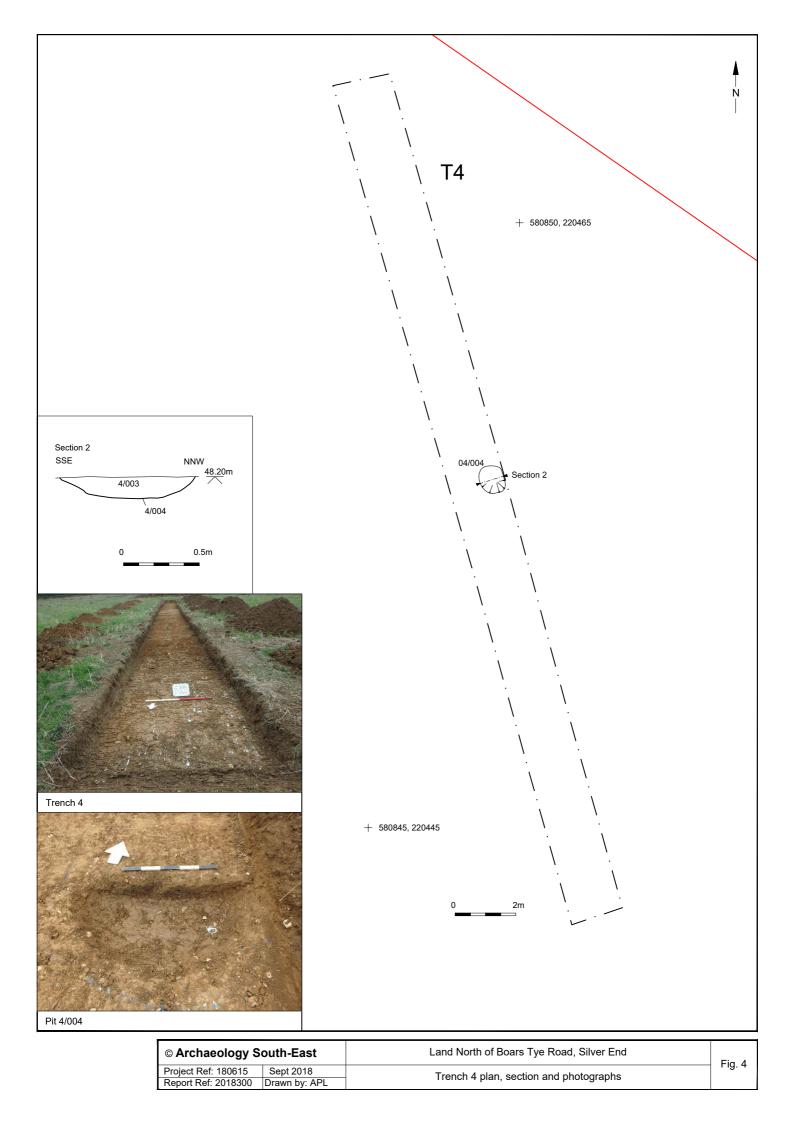


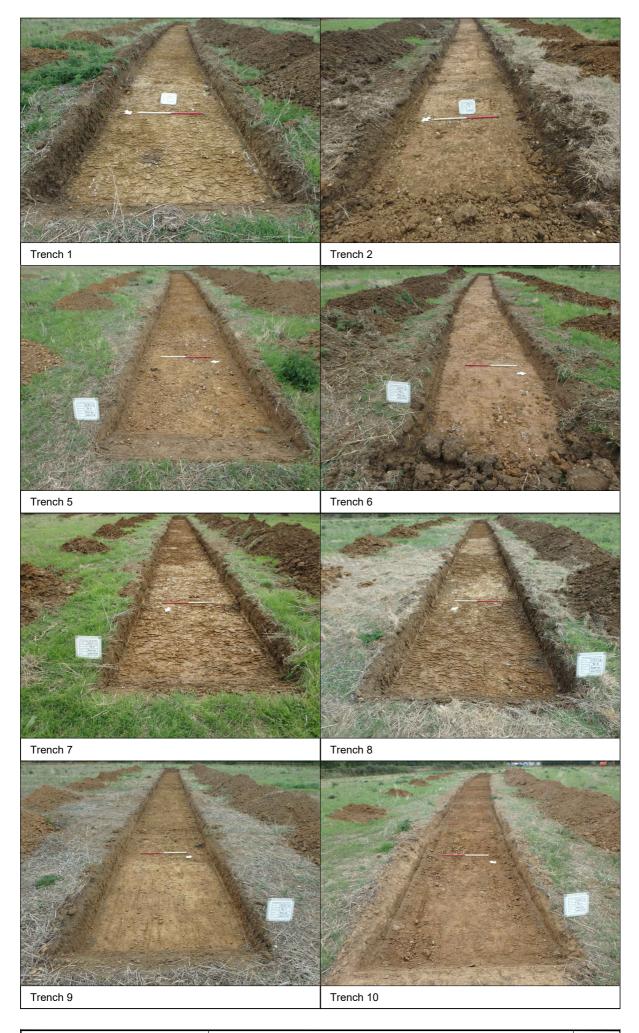
© Archaeology South-East		Land north of Boars Tye Road, Silver End, Essex	Fig. 1
Project Ref: 180615	Sept 2018	Site location with EHER information	i ig. i
Report No: 2018300	Drawn by: APL		



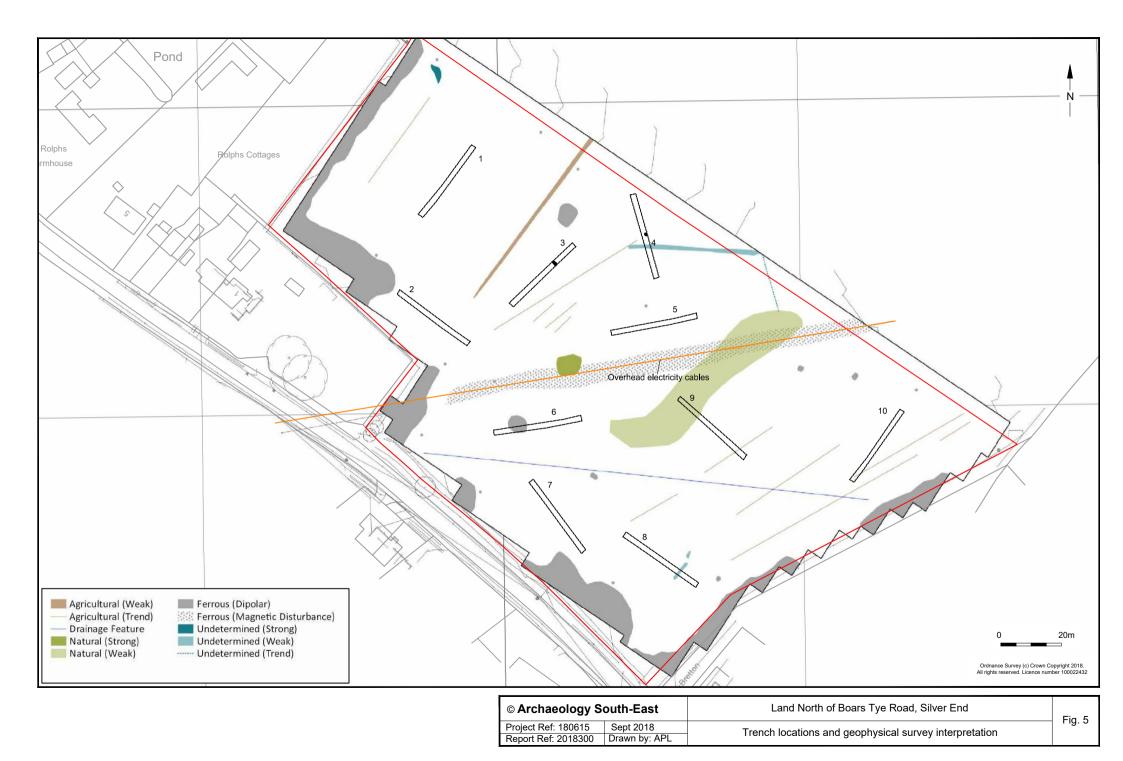
© Archaeology South-East		Land North of Boars Tye Road, Silver End	Fig. 2
Project Ref: 180615	15 Sept 2018	Transh locations	1 ig. 2
Report Ref: 2018300	Drawn by: APL	Trench locations	







© Archaeology South-East		Fig. 6
Project Ref: 180615 Sept 201	Trench photographs	i ig. u
Report Ref: 2018300 Drawn by:	Trench photographs	



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