

**ARCHAEOLOGICAL AND GEO-ARCHAEOLOGICAL
EVALUATION**

**Land north of Marsh Road,
Burnham-on-Crouch,
Essex**

**ASE Project No: 190426
Site Code: BCMR19**

ASE Report No: 2019341



December 2019

Archaeological and Geo-archaeological Evaluation

**Land north of Marsh Road,
Burnham-on-Crouch, Essex**

NGR: TQ 95152 97053

Planning Ref: Pre-application

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Abstract

This report presents the results of an archaeological and geo-archaeological evaluation carried out by Archaeology South-East on land north of Marsh Road, Burnham on Crouch, Essex, between 07 and 16 October 2019. The fieldwork was commissioned by RPS Consulting Services Ltd, on behalf Taylor Wimpey Homes, in advance of residential development.

Thirty evaluation trenches were excavated across the c.5.5ha site, which is situated to the north of Burnham-on-Crouch. Archaeological features were recorded in five trenches in the east of the site, the remaining 25 trenches being devoid of such remains.

Two distinct clusters postholes and pits were identified in Trench 14 and across Trenches 20 and 30. These are interpreted as remains of Middle Iron Age domestic structures, potentially constituting a farmstead. However, only a small quantity of diagnostic pottery sherds, from four of the features, were recovered. An Iron Age ditch and another undated ditch to the south may define a contemporary settlement boundary or part of a wider field system. This Iron Age land use activity is likely to extend into the currently un-evaluated north-eastern part of the site.

A post-medieval agricultural furrow and a small number of unstratified finds were also recorded.

The geo-archaeological investigation recorded a sequence of silts, clays, clayey gravel and sandy gravel, but no humanly-struck flints or deposits with palaeoenvironmental potential were encountered.

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1.0 INTRODUCTION

1.1 Site Background

- 1.1.1 Archaeology South-East (ASE), the contracting division of UCL's Centre for Applied Archaeology, was commissioned by RPS Consulting Services Ltd, on behalf of Taylor Wimpey Homes, to conduct an archaeological and geo-archaeological evaluation on land north of Marsh Road, Burnham on Crouch, Essex.
- 1.1.2 The evaluation was undertaken in fulfilment of an archaeological condition attached to planning consent.

1.2 Location, Geology and Topography

- 1.2.1 The site is located on the northern outskirts of Burnham on Crouch (TQ 95152 97053; Fig. 1), in the south of Maldon District, in Essex. It comprises a c.5.5ha sub-rectangular field that is bounded to the west by St Mary's Church, which marks the historic (medieval) centre of Burnham, to the south by Marsh Road, and to the north by Pannel's Brook, beyond which lie the buildings of Roman's Farm. Agricultural fields lie further to the north and east. The modern town lies to the south.
- 1.2.2 The British Geological Survey (BGS 2019) identifies a natural strata of the site as London Clay Formation, comprising deposits of clay, silt and sand. Superficial layers of River Terrace Deposits, comprising sand and gravel, are located to the south. Superficial head deposits of clay and silt have also been identified towards the eastern limit of the site. The majority of trenches revealed a natural deposit of yellowish/orangey brown silty clay, with light-greyish orange/brown clayey sand and tan coloured clay in the southwest corner of site. Thin colluvial deposits were recorded in Trenches 6, 7, 8 and 9, alongside Pannel's Brook.
- 1.2.3 The site comprises agricultural land, gently sloping from Marsh Road (south) to Pannel's Brook (north). The site is located at approximately 10m AOD.

1.3 Planning Background

- 1.3.1 A planning application will be submitted shortly. The Senior Historic Environment Consultant for Essex County Council Place Services (M. Medlycott) has confirmed that the planning condition, in the event of positive findings from this pre-determination evaluation phase, will be the same as for a previous nearby development on land Rear of Pippins Road, Burnham-on-Crouch (Ref: MAL/14/00108):

L2 Implementation of Archaeological Fieldwork Programme

No development including any site clearance or groundworks of any kind shall take place within the site until the applicant or their agents; the owner of the site or successors in title has secured the implementation of a programme of archaeological work from an accredited archaeological contractor in accordance with a written scheme of investigation which has been submitted to and approved in writing by the local planning authority. The development

shall be carried out in a manner that accommodates the approved programme of archaeological work

- 1.3.2 Following the issue of this advice by ECC Place Services, ASE was commissioned by RPS Consulting Services Ltd, on behalf of their client, to conduct the required archaeological trial-trench evaluation, with a geo-archaeological component. A Written Scheme of Investigation (WSI) detailing the programme and methodology of the fieldwork was prepared by ASE (2019a) and approved by ECC Place Services prior to the commencement of fieldwork.
- 1.3.3 All work was undertaken in accordance with the WSI, as well as the standards and guidance of the Chartered Institute for Archaeologists (CIfA 2014a, b). The results of the archaeological evaluation will inform decisions regarding the need for, and extent of, any further archaeological works that may be required in order to mitigate the impact of the development upon the archaeological resource. That decision will be made by Essex County Council Place Services in their role as advisors to the ECC planners.

1.4 Scope of Report

- 1.4.1 This report presents the results of archaeological evaluation undertaken at Land North of Marsh Road between 07 and 16 October 2019. It describes the archaeological remains encountered, interprets and considers their significance, and assesses the potential for further remains within the wider site.
- 1.4.2 The results of the geo-archaeological assessment undertaken in concert with the archaeological trial trenching, although carried out reported upon separately by QUEST, are also included in this current report.

2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The following archaeological and historical information is drawn from the WSI (ASE 2019a) and the Heritage Assessment (CSA 2019), based on evidence held in the Essex Historic Environment Record (EHER), the historic towns assessment for Burnham-on-Crouch (ECC 1999), and other readily available sources. 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 A sparse scatter of prehistoric flint artefacts and debitage has been recorded around Burnham-on-Crouch, predominantly on the western side of the town. Finds of palaeolithic worked flint; one core, one unretouched flake and one miscellaneous worked fragment was recovered c.500m west of the site (HER 11310, 11350). Residual Mesolithic/Neolithic flint has recently been recovered from features identified at Land West of Southwater Road (ASE 2018a). A prehistoric 'semi-leaf-shaped' flint tool was recovered c.800m to the south-west (HER 11318). Worked flint, including a core fragment has been recovered from Hill Farm (HER 11342) c.1km to the south-west.

2.2.2 Cropmarks corresponding to features possibly prehistoric in date have been identified at a number of locations (HER 11242, 11338, 11341). In 2010, a Bronze Age hoard comprising 214 objects (PAS ID: ESS-8822A3) was discovered by metal detectorist in a field over 900m to the south-east of the site. The hoard contained complete and fragmented objects, and is thought to represent largely waste pieces to be recast. It included axes, spearheads and knives, along with fragments of swords and waste ingots. Some of the objects were placed within a pottery vessel. These hoards form part of a widespread phenomenon of deposits of buried Middle/Late Bronze Age metalwork across south-east Essex. A founder's hoard of six Bronze Age loopless palstave axes (HER 11211) has also been recorded to the south-west of Burnham-on-Crouch.

2.2.3 Evidence for Iron Age occupation in the vicinity includes fragments of Iron Age pottery found in 1936 on a housing estate, c.600m yards SW of the church (HER 11231), and a small bowl with an omphalos base c.650m to the south of the site (HER 11334).

2.2.4 Until recently, the earliest-known nucleated settlement at Burnham-in-Crouch appears to have been a late Iron Age to Romano-British farmstead (HER 11332) located south-west of Burnham-on-Crouch. Recent excavations, outlined below in section 2.7, have added considerably to understanding of the Late Bronze Age and Iron Age occupation of the area.

2.2.5 A trenching investigation of cropmarks plotted c.850m south-east of the site, by the Maldon Archaeology and History Group in 2006, revealed a 72m-wide rectilinear Iron Age defended enclosure (HER 16031) with entrances to the north and west. A prehistoric trackway of possible Bronze Age origin was found adjacent to the enclosure.

2.2.6 Approximately c.820m to the south-west of the site were several Late Iron Age burials with associated 'Belgic' pottery vessels (EHER 11235), found in the 1930's.

2.3 Roman

2.3.1 A 1st-century AD Romano-British farmstead succeeded a Late Iron Age farmstead, c 860m to the south-west of the site (EHER 11333, 15291). The Dengie peninsular was an ideal location for salt extraction, given its estuaries and coastal marshland. A large 'red hill' of over 221m in diameter at Stoneyhills, situated c.1km to the north-east of the site, is evidence of this exploitation (EHER 47316). The salt industry is also attested by briquetage associated with both pre-Belgic and Late Iron Age pottery (HER 11232) to the south-west of the site.

2.3.2 The exploitation of this area may have been connected with the development of a possible north/south aligned Roman Road (EHER 11285), whose route may have connected the north and south coasts of the peninsular via the Stoneyhills area. The postulated route of this road is possibly preserved in a north/south aligned pathway and hedge lines that pass along the western boundary of the current site.

2.3.3 Re-used Roman ceramic building material (CBM) forms part of the fabric of St. Mary's Church, located on Church Road (EHER 11225). Roman finds (HER 11233) and coins (HER 11233, 11302) have been recovered.

2.4 Anglo-Saxon and Medieval

2.4.1 Domesday Book records Burnham as a small manorial village in 1086 (ECC 1999, 5 and 7), suggesting that the village had developed in the Anglo-Saxon period.

2.4.2 The Saxon village was probably situated around St. Mary's Church, c.80m west of the site, on Church Road; the current building was erected in the 14th century, but may have been preceded by earlier structures (HER 11226). A moat at Burnham Hall (HER 11224), next to the church, may indicate the location of a homestead or hall central to the original medieval village core. It is postulated that the area surrounding Hall Farm, may be the location of a Deserted Medieval Village, although this would be beyond the postulated extent of the Church and Hall complex (ECC 1999, 22).

2.4.3 In 1253 a market was granted to the Fitzwalter family who owned the manor of Burnham (HER 18400), which may have coincided with the shift of the village's nucleus away from St. Mary's Church to the riverside, where the modern-day Quay and High Street are situated. The new nucleus of Burnham-on-Crouch may have been planted to take advantage of the estuary, both for trade and as a fishery. Elements of the later medieval town's layout certainly appear planned, particularly the High Street at a tangent to the Quay, which would have allowed the maximum number of plots to have access from ship to warehouse (ECC 1999, 7). Few other medieval buildings remain extant in the modern town, and none are in proximity to the site.

2.5 Post-Medieval and Modern

- 2.5.1 The post-medieval town, economy and industry were based on the fishing trade, especially oysters, and on ancillary services such as boat building and coopering (ECC 1999, 8). Burnham Hall, the manor of Burnham, remained situated on the northern edge of the town and was built in the 17th century on the moated site at Hall Farm (HER 11224). Other surviving buildings from the 17th – 18th centuries include the red brick Cherry Garden on Maldon Road, the Thatched Cottage, Newman's Farmhouse and the Old Vicarage at Stoneyhills.
- 2.5.2 An important industry for the development of the post-medieval town was the brickworks situated on Green Lane (HER 11309), c.1.2km north-east of the site. A water-filled clay-pit, probably 'Croxtons Pit' remains visible on Brickfield Farm.
- 2.5.3 In 1883 Burnham Railway Station was built on the Wickford to Southminster line. The railway station to the south-west, lies opposite the Mildmay Ironworks (HER 15291), which were opened in 1899 and were the largest employer in the town after boat-building, but have now been demolished.
- 2.5.4 During the Second World War, the defence of the Dengie Peninsular against potential invasion was taken seriously and this is reflected in the survival of defensive installations from the period across the general area. The nearest of these is a road barrier situated on Pannel's Bridge, c.250m west of the site (HER 40973).
- 2.5.5 Chapman and Andre's 1777 map (see Archaeological Solution Ltd 2012) provides an accurate and detailed portrayal of the 18th century landscape on the Dengie Peninsular, including the town of Burnham-on-Crouch and the site. The extent of the town is clearly limited to a simple arrangement of streets on the riverside, while the site is situated to the north in a rural landscape of scattered farms. The site occupies undeveloped, likely agricultural land.
- 2.5.6 The 1849 Tithe Map and Apportionment depicts a similar landscape in the vicinity of the site. The grouping of the church and Hall Farm (later Burnham Hall) are clearly depicted, with Hall Farm lying north of the church. The 1873 OS map shows the site boundaries as they survive today, the site being a single field.
- 2.5.7 The 1880 OS and later mapping show the expansion of Burnham, but at this time the site is at some distance from the town. Despite the construction of the GER Southminster railway line in 1883 and gradual northward growth thereafter, the site itself remains little changed thereafter. A smithy is shown along the southern site boundary on the 1896 map.

2.6 Previous archaeological work

- 2.6.1 Archaeological investigations have recently been conducted at nearby sites and have produced evidence for a Late Bronze Age boundary and associated activity including burials to the south of the site, additional Late Bronze Age occupation further to the south-west and a Middle Iron Age farmstead to the

west. These results are presented in more detail below.

Land West of Southminster Road (ASE 2018a)

- 2.6.2 The investigation (located west of the present site) comprised trial trenching across the 14.68ha site and subsequent targeted excavation of 0.926ha (HER 49137). Residual worked flint of Mesolithic to Neolithic date was recovered providing evidence of a limited and likely transitory earlier prehistoric presence, a possible Late Bronze Age structure perhaps indicative of more permanent land use by the later prehistoric period. The main occupation phase comprised a Middle Iron Age sub-rectangular ditched enclosure (c.4,650sq m) occupied by three ring-gullies indicative of probable roundhouses of similar date, a sub-enclosure and a number of later prehistoric and undated pits and gullies. These features are indicative of a Middle Iron Age farmstead and associated agricultural land use. A further small enclosure of the same date with two large pits were identified to the east of the main enclosure. Only limited evidence was encountered at the site for the Roman period and the small quantities of fragmentary and degraded Late Iron Age/Early Roman and Roman pottery were largely considered intrusive. A single gully north of the Middle Iron Age enclosure was most likely Roman in date; however, its function could not be established. There was also evidence for medieval strip field farming and post-medieval field division.

Land at Pippins Road, Burnham-on-Crouch, Essex (ASE 2018b)

- 2.6.3 The investigation (located south of the present site) comprised trial trench evaluation of 5.57ha and subsequent targeted excavation of 1,771sq m. Geoarchaeological test pitting was also undertaken. A Late Bronze Age to Early Iron Age east/west boundary extended across the site and was supplemented by a parallel boundary to the south over a short distance. A scatter of contemporary pits was concentrated north of the boundary, amongst which were three unurned cremation burials one of which has been radiocarbon dated to 1236–1051 cal BC. An unstratified socketed bronze axe head and associated two further fragments of copper alloy, found together in a modern agricultural drain, probably constitute at least part of a dispersed hoard of Late Bronze Age metalwork. A Middle Iron Age activity area was represented by a cluster of short curving ditches/gullies and pits/postholes to the south of the earlier boundaries. Apparently intrusive finds of Late Iron Age/Roman pottery were encountered in the Late Bronze Age/Early Iron Age boundary ditch and related pit features may constitute deliberate/structured deposits inserted into the boundary remains.

Land Between Chandlers and Creeksea Lane / Land at Maldon Road

- 2.6.4 Investigation (located south-west of the present site) comprised trial trenching and geoarchaeological test pitting across a c.21ha site (Oxford Archaeology East 2018a). The later prehistoric and historic results of the evaluation can be broadly separated into three zones. Archaeological remains revealed in the northern zone pertained to the post-medieval / modern period. The middle of the site contained archaeology from the Late Bronze Age period and consisted of linear ditch features, pits and postholes. Further features dating to the Late Bronze Age period, including ditches and pits were uncovered at the southern

end of site. The ditches appear to correspond to known crop marks and geophysical anomalies in the immediate area. The presence of briquetage in some of the features is possibly indicative of nearby salt production (CgMs 2018).

- 2.6.5 Further Bronze Age features were revealed in mitigation excavation areas subsequently investigated in the southern part of the site (Oxford Archaeology 2018b) where enclosures, ring-ditches and other anomalies had been identified by the geophysical survey. Several cremation burials of probable Middle to Late Bronze Age date were recorded, including a cluster at the western edge of Area 2 that was possibly located between two ditches. Other features included pits, postholes and a large waterhole (possibly Middle Iron Age), with associated assemblages of Late Bronze Age pottery and fire-cracked flint. Several ditches appear to have been related to a contemporary field system. An assemblage of briquetage was recovered from some of the Late Bronze Age features, with one pit being interpreted as a settling tank. A number of Roman ditches and features were also revealed that appear to have been located on the periphery of the Early Roman farmstead previously investigated to the east of the site (EHER 11332).

Land off Southminster Road (ASE 2019, in prep)

- 2.6.6 Most recently, Seventeen evaluation trenches were excavated across a 3.84ha site on the northern periphery of Burnham. Pits and possible postholes of Late Bronze Age / Early Iron Age date were found at two separate locations within the site, in the west and south-east. It is unclear whether these were parts of the same land use activity and whether currently undated remains in their vicinities were associated. Ditches and pits of probable 16th-century date were encountered in the north-central part of the site. The Two boundary ditches of later post-medieval date, one of which appears on 19th-century historic mapping, related to agricultural field systems. The east and north-east of the site did not appear to contain archaeological remains.

Previous work on the site itself

- 2.6.7 A geophysical survey was undertaken by Pre-Construct Geophysics Ltd in March 2019 (PCG 2019). The survey identified anomalies interpreted to be largely natural or modern features, with a large spread of miscellaneous debris in the central part of the site. An isolated ditch-type anomaly of possible archaeological origin was identified in the southwest region of the site, although it was conceded this may just be the result of cultivation or a natural feature.

2.7 Project Aims and Objectives

- 2.7.1 The general objectives of the evaluation, as stated in the WSI (ASE 2019a), were to:
- Identify any archaeological features or deposits that will be impacted by the proposed development, and to enable a mitigation strategy for any identified remains to be implemented before development takes place.

- More specifically, the evaluation aims to establish the location, extent, date, character, significance and quality of preservation of surviving archaeological remains within the development area.

2.7.2 The site-specific aims identified were:

Geoarchaeological Evaluation

- To clarify the nature of the sub-surface stratigraphy across the site.
- To investigate whether the sequences contain any artefact or ecofact evidence for prehistoric or historic human activity.
- To investigate whether the sequences contain any ecofact evidence with the potential for palaeoenvironmental reconstruction.
- Specifically, to seek evidence for Palaeolithic deposits and artefacts and/or of the north-east/south-west aligned palaeochannel identified by geoarchaeological test-pitting south-west of Burnham-on-Crouch (Cgms 2018).

Archaeological Evaluation

- Is there any evidence of later prehistoric activity, possibly relating to the Bronze Age boundary and Bronze occupation identified to the south and southwest, to Middle Iron Age settlement and agricultural landscape identified to the west, or to the Late Iron Age to Romano-British farmstead to the south-west?
- Is there further evidence of Bronze Age cremation burials?
- Is there any evidence of the proposed Roman Road thought to traverse the site and or other Roman activity within the site?
- Is there evidence for Bronze Age, Iron Age prehistoric and / or Roman period salt working?
- Is there any evidence of the early medieval settlement which is presumed to lie in the vicinity of the Church?
- Is there any evidence of medieval agriculture?

2.7.3 With reference to the *East of England research frameworks* (Brown and Glazebrook 2000; Medlycott 2011), the archaeological works were identified to have the potential to contribute to the following regional research objectives:

- What is the nature of the prehistoric remains? Do they constitute agricultural and/or settlement activity in this landscape? How do these remains relate to, other evidence for prehistoric occupation in the immediate locality? The development of the agrarian economy has been identified as requiring further research (Bryant 2000, 16), as have the

topics of Late Bronze Age/Early Iron Age transition (Medlycott 2011, 29) and settlement form and function in the Early and Middle Iron Age (Bryant 2000, 17).

- How does the land use relate to its location in regard to the River Crouch, saltmarsh and the sea? Is there any evidence for salt production, trade or consumption? (cf. Bryant 2000, 17). If so, does it have Late Bronze Age origins (cf. Medlycott 2011, 21)?

3.0 ARCHAEOLOGICAL METHODOLOGY

3.1 Fieldwork Methodology

- 3.1.1 The evaluation originally comprised the investigation of twenty-nine trenches, generally each measuring 30m long and 1.80m wide. All trenches were positioned and excavated in accordance with the WSI (ASE 2018a; Fig. 2). An additional trench and an extension to another trench were subsequently implemented in the field at the request of the ECC Place Services Archaeological Advisor.
- 3.1.2 The trenches were plotted using a Leica GPS. Prior to excavation, the trenches were scanned using a CAT tool by a trained member of ASE staff.
- 3.1.3 Mechanical excavation was conducted under the supervision of ASE staff with a 14-tonne tracked excavator fitted with a 1.8m-wide toothless ditching bucket. The trenches were stripped down to the top of the archaeological horizon or natural deposit, whichever was encountered first. The exposed archaeological horizon was cleaned by hand immediately after machine stripping, as required; any exposed archaeological deposits or negative features were planned as appropriate.
- 3.1.4 Overburden deposits were placed around the edge of the trenches at a distance of 0.5m to create a visible and physical barrier.
- 3.1.5 Trench record sheets were completed, and all archaeological features and deposits were recorded using standard ASE context record sheets. Archaeological features were hand cleaned and excavated, with discrete features half-sectioned and 1m-wide slots excavated across linear features. The exposed sections were recorded by means of 1:10 scale hand drawings and features/deposits planned using GPS.
- 3.1.6 A full photographic record comprising colour digital images was made, and all trenches and excavated contexts were photographed. In addition, a number of photographs representative of the general work on site was taken.
- 3.1.7 All artefacts retrieved from investigated features and deposits were retained for specialist identification and study. These were securely bagged and labelled with the appropriate site code and context number on site, in accordance with the ASE collection policy and ClfA guidelines (2014c).
- 3.1.8 Backfilling and compaction was undertaken by the machine on completion of the work, but there was no reinstatement to existing conditions.
- 3.1.9 The work was undertaken in accordance with the WSI (ASE 2018a), risk assessment method statement (RAMS) (ASE 2018b) and the relevant standards and guidance of the Chartered Institute for Archaeology (ClfA 2014a, b)
- 3.1.10 The methodology of the geo-archaeological work is specified separately in Appendix 5.

3.2 Archive

3.2.1 The archive will be prepared in accordance with guidelines contained in the ClfA *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives* (2014d).

3.2.2 The site archive is currently held at the offices of ASE and will be deposited at the Colchester Museum in due course. The contents of the archive are tabulated below (Tables 1 and 2)

Context sheets	53
Section sheets	4
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	100
Context register	2
Drawing register	1
Watching brief forms	0
Trench Record forms	20

Table 1: Quantification of site paper archive

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

Table 2: Quantification of artefact and environmental samples

4.0 RESULTS

4.1 Introduction

- 4.1.1 Twenty-nine trenches were initially excavated, generally measuring 30m long by 2.1m wide, in accordance with the WSI (ASE 2019a). At the request of the monitor, an additional trench (Trench 30) and extension to Trench 14 were subsequently excavated to further investigate the extent of archaeology uncovered. A programme of geo-archaeological test-pitting was conducted concurrently with the evaluation. This consisted of five test pits spread east/west across the site. The locations of the trenches, test pits and ecological constraints are shown on Figure 2.
- 4.1.2 A deposit sequence of topsoil over subsoil, sealing variable natural deposits was observed in the majority of trenches. At the base of the slope running from Marsh road to Pannel's brook, Trenches 6-9 contained a colluvium deposit under the subsoil, overlying the natural deposit. The topsoil comprised mid brown silty topsoil, 0.12-0.27m thick, and the subsoil was a greyish brown clayey silt with stone inclusions, 0.05-0.18m thick, both of which were heavily rooted. Colluvium, where it was found, consisted of a soft light brown/tan clay-silt, up to 0.20m thick. Natural deposits varied across the site, appearing to run in bands NW/SE. The majority of trenches revealed an orangey brown silty clay natural, with the southern portions of Trenches 1 and 21, and the entirety of Trenches 2 and 3 showing a firm tan coloured clay with occasional to moderate flint. In the far south-east corner of site, Trenches 4 and 5 revealed a light-greyish brown slightly clayey sand with frequent flint fragments. Further description and discussion of the geological strata can be found in the attached geo-archaeological report (Appendix 5).
- 4.1.3 Of the thirty trenches excavated, five (Trenches 14, 20, 24, 25, and 30) contained archaeological remains, which included pits, postholes, and ditch/gullies, largely concentrated within the eastern side of the site. The features were generally recorded underlying the subsoil and cut into the natural deposit. These remains are described individually by trench in sections 4.2-4.6.
- 4.1.4 The remaining twenty-five trenches (Trenches 1-13, 15-19, 21-23, and 26-29) were found to be devoid of archaeological remains. These trenches are summarised in section 4.7, with further details presented in Appendix 1.
- 4.1.5 The results of the geo-archaeological test-pit survey are summarised in Section 4.8 and alluded to in the discussion as appropriate. The full QUEST report is provided as Appendix 5.

4.2 Trench 14 (Fig.3)

Context	Type	Interpretation	Length m	Width m	Depth m	Height m AOD
14/001	Layer	Topsoil	29.65	2.10	0.14-0.16	7.92-8.78
14/002	Layer	Subsoil	29.65	2.10	0.14-0.15	
14/003	Deposit	Natural	29.65	2.10	0.02-0.40+	7.66-8.01
14/004	Cut	Posthole	0.29	0.29	0.13	7.97-7.95
14/005	Fill	Fill, single [14/004]	0.29	0.29	0.13	7.97-7.95
14/006	Cut	Posthole	0.32	0.32	0.11	7.97-7.95
14/007	Fill	Fill, single [14/006]	0.32	0.32	0.11	7.97-7.95
14/008	Cut	Posthole	0.25	0.25	0.06	7.93-7.97
14/009	Fill	Fill, single [14/008]	0.25	0.25	0.06	7.93-7.97
14/010	Cut	Posthole	0.41	0.26	0.23	7.90-7.93
14/011	Fill	Fill, single [14/010]	0.41	0.26	0.23	7.90-7.93
14/012	Fill	Fill, single [14/013]	0.17	0.17	0.12	8.19-8.20
14/013	Cut	Posthole	0.17	0.17	0.12	8.19-8.20
14/014	Fill	Fill, single [14/015]	0.33	0.33	0.13	8.09-8.10
14/015	Cut	Posthole	0.33	0.33	0.13	8.09-8.10
14/016	Fill	Fill, single [14/017]	0.35	0.54	0.12	7.94-7.95
14/017	Cut	Pit or postholes	0.35	0.54	0.12	7.94-7.95
14/018	Fill	Fill, single [14/019]	0.18	0.18	0.08	7.84-7.85
14/019	Cut	Posthole	0.18	0.18	0.08	7.84-7.85
14/020	Fill	Fill, single [14/021]	0.40	0.45	0.23	7.89-7.90
14/021	Cut	Pit, storage	0.40	0.45	0.23	7.89-7.90
14/022	Fill	Fill [14/023] (unex)	-	-	-	-
14/023	Cut	Posthole	-	-	-	-
14/024	Fill	Fill [14/025] (unex)	-	-	-	-
14/025	Cut	Posthole	-	-	-	-
14/026	Fill	Fill [14/027] (unex)	-	-	-	-
14/027	Cut	Pit	-	-	-	-
14/028	Fill	Fill [14/029] (unex)	-	-	-	-
14/029	Cut	Posthole	-	-	-	-
14/030	Fill	Fill [14/031] (unex)	-	-	-	-
14/031	Cut	Posthole	-	-	-	-
14/032	Fill	Fill [14/033] (unex)	-	-	-	-
14/033	Cut	Posthole	-	-	-	-
14/034	Fill	Fill [14/035] (unex)	-	-	-	-
14/035	Cut	Posthole	-	-	-	-
14/036	Fill	Fill [14/037] (unex)	-	-	-	-
14/037	Cut	Posthole	-	-	-	-
14/038	Fill	Fill [14/039] (unex)	-	-	-	-
14/039	Cut	Posthole	-	-	-	-
14/040	Fill	Fill [14/041] (unex)	-	-	-	-
14/041	Cut	Posthole	-	-	-	-
14/042	Fill	Fill [14/043] (unex)	-	-	-	-
14/043	Cut	Posthole	-	-	-	-
14/044	Fill	Fill [14/045] (unex)	-	-	-	-
14/045	Cut	Posthole	-	-	-	-
14/046	Fill	Fill [14/017] (unex)	-	-	-	-
14/047	Cut	Posthole	-	-	-	-

Table 3: Trench 14 list of recorded contexts

- 4.2.1 North/south Trench 14 was 29.65m long and was located in the eastern half of the site, on the edge of the badger exclusion zone. A box-shaped extension, measuring 8.30m by 6.00m, was subsequently cut around the central portion of the trench following the excavation of four postholes here. The postholes were part of a larger cluster totalling nineteen postholes, two pits and a further feature which is either a pit or two intercutting postholes. Eight of the exposed postholes, a pit and the pit/posthole feature were excavated; the remaining pit and postholes were planned but not excavated. At least four land drains were also identified, one of which truncated unexcavated posthole [14/029].
- 4.2.2 At the south end of Trench 14 were three postholes [14/013], [14/015], and [14/023], two of which were excavated. Posthole [14/015] was the larger at 0.33m in diameter, while [14/013] was 0.17m in diameter. Both postholes had vertical sides with flattish bases, and each contained a fill of soft, mid greyish-brown clayey silt, devoid of finds.
- 4.2.3 Encountered features were more numerous and densely-concentrated in the expanded middle of the trench; the nineteen pits and postholes exposed here seemingly defining an area of domestic activity. However, no meaningful spatial patterning was observed in their distribution within the confines of the trench.
- 4.2.4 Rounded to oval postholes [14/004], [14/006], [14/008], [14/010], and [14/019] were excavated, revealing steeply sloping sides and slightly concave or flat bases. Their widths varied between 0.18-0.32m, and depths 0.06-0.23m. Postholes [14/004] and [14/006] were intercutting, but their relationship could not be discerned due to the similarity of their fills; it is suspected they were broadly contemporary. The fills of these excavated postholes were all similar, comprising firm, mid brownish yellow (dry) or greyish brown (wet) clayey silt with charcoal flecks. Two small sherds of Middle Iron Age pottery were recovered from fill [14/005] of posthole [14/004], and small quantities of fire-cracked flint were found in fills [14/009] and [14/011] of postholes [14/008] and [14/010], respectively.
- 4.2.5 Slightly larger feature [14/017], immediately to the west of intercutting postholes [14/004] and [14/006], was an elongated oval, 0.54m across and 0.12m deep. It was not possible to determine if this was a pit or two intercutting postholes with identical fills. The pit/postholes had very steep sides, with an abrupt break of slope and a flat base. The firm, dark brownish grey fill [14/016] consisted of a clayey silt with occasional charcoal flecks, from which a single Middle Iron Age pottery sherd was retrieved.
- 4.2.6 Probable small pit [14/021] was located near the centre of the exposed cluster. It was sub-circular in plan, with very steep, straight sides, an abrupt break of slope and a flat base, measuring up to 0.45m wide and 0.23m deep. It contained a single fill of firm mid greyish brown clayey silt with occasional stone and charcoal inclusions [14/020]. Six Middle Iron Age pottery sherds were recovered, together with a single Roman greyware sherd and an undiagnostic flint flake. It is noteworthy that a further Roman sherd was pressed into the soft natural deposit [14/003] within the trench, suggesting the Roman material is likely intrusive, either by way of agricultural activity or root action.

4.2.7 Bulk soil samples <2> and <3> were collected from pit fills [14/020] and [14/016], respectively, for environmental assessment. Moderate quantities of charcoal were recovered from each sample but were too small to identified species. No charred plant or cereal remains were present.

4.2.8 The remaining twelve unexcavated postholes and pit varied in size but were all circular to oval in plan shape. All contained similar grey-brown clay silt fills. No artefacts were apparent on their exposed surfaces. All were planned and the entire trench base covered with a layer of netlon fencing to assist with relocating the features at a later date.

4.3 Trench 20 (Fig.4)

Context	Type	Interpretation	Length m	Width m	Depth m	Height m AOD
20/001	Layer	Topsoil	29.42	2.10	0.15-0.16	8.42-8.53
20/002	Layer	Subsoil	29.42	2.10	0.10-0.14	
20/003	Deposit	Natural	29.42	2.10	0.01-0.02+	8.14-8.23
20/004	Cut	Storage pit	1.10	0.92	0.28	8.16-8.18
20/005	Fill	Fill, single [20/004]	1.10	0.92	0.28	8.16-8.18
20/006	Cut	Posthole	0.34	0.34	0.13	8.17-8.19
20/007	Fill	Fill, single [20/006]	0.34	0.34	0.13	8.17-8.19
20/008	Fill	Fill, single [20/009]	0.30	0.30	0.16	8.15-8.20
20/009	Cut	Posthole	0.30	0.30	0.16	8.15-8.20
20/010	Fill	Fill, single [20/011]	0.27	0.27	0.10	8.14-8.16
20/011	Cut	Posthole	0.27	0.27	0.10	8.14-8.16
20/012	Fill	Fill, single [20/013]	0.31	0.31	0.06	8.14-8.17
20/013	Cut	Posthole	0.31	0.31	0.06	8.14-8.17
20/014	Fill	Fill, single [20/015]	0.28	0.28	0.10	8.12-8.13
20/015	Cut	Posthole	0.28	0.28	0.10	8.12-8.13
20/016	Fill	Fill, single [20/017]	0.29	0.29	0.08	8.13-8.18
20/017	Cut	Posthole	0.29	0.29	0.08	8.13-8.18
20/018	Fill	Fill, single [20/019]	0.23	0.23	0.07	8.16
20/019	Cut	Posthole	0.23	0.23	0.07	8.16
20/020	Fill	Fill, single [20/021]	0.25	0.25	0.10	8.19
20/021	Cut	Posthole	0.25	0.25	0.10	8.19
20/022	Fill	Fill [20/023] (unex)	-	-	-	-
20/023	Cut	Posthole	-	-	-	-
20/024	Fill	Fill [20/025] (unex)	-	-	-	-
20/025	Cut	Posthole	-	-	-	-
20/026	Fill	Fill [20/027] (unex)	-	-	-	-
20/027	Cut	Posthole	-	-	-	-
20/028	Fill	Fill [20/029] (unex)	-	-	-	-
20/029	Cut	Posthole	-	-	-	-
20/030	Fill	Fill [20/031] (unex)	-	-	-	-
20/031	Cut	Posthole	-	-	-	-
20/032	Fill	Fill [20/033] (unex)	-	-	-	-
20/033	Cut	Posthole	-	-	-	-
20/034	Fill	Fill [20/035] (unex)	-	-	-	-
20/035	Cut	Posthole	-	-	-	-

20/036	Fill	Fill [20/037] (unex)	-	-	-	-
20/037	Cut	Posthole	-	-	-	-
20/038	Fill	Fill [20/039] (unex)	-	-	-	-
20/039	Cut	Posthole	-	-	-	-

Table 4: Trench 20 list of recorded contexts

- 4.3.1 East/west aligned Trench 20, c.60m to the east of Trench 14, was located toward the eastern edge of the site and measured 29.42m long. Seventeen postholes and a pit were revealed in the central portion of the trench cut directly into the natural deposit. A representative sample of features was selected for excavation, with the remaining features being planned only. No features were observed in either the east or western ends of the trench. A single glass fragment, of mid 19th/20th-century date, was recovered from topsoil [20/001].
- 4.3.2 Postholes [20/006], [20/009], [20/011], [20/013], [20/015], [20/017], [20/019], and [20/021] were excavated to provide a sample from across the east/west breadth of the exposed cluster. Postholes [20/006], [20/009], [20/011], [20/015], and [20/021] were all very similar, being sub-circular in plan, with very steep/vertical sides and flat bases, ranging between 0.25-0.34m wide and 0.10-0.16m deep. Postholes [20/013], [20/017] and [20/019] were shallower, between 0.06-0.08m deep, precluding comment on side steepness, but had slightly concave bases between 0.25-0.31m wide. Fills across these excavated examples were comparable, consisting of mid brownish yellow (dry) or mid greyish brown (wet) clayey silt, with occasional charcoal present in [20/007], [20/010], [20/016], [20/018], [20/020] and rooting common to all fills. Other than two tiny fragments of intrusive CBM in fill [20/007] of posthole [20/006], no finds were recovered from them. No meaningful spatial patterning could be observed in the distribution of the postholes within the confines of the trench. The lack of dating evidence precludes their allocation to a period.
- 4.3.3 A single pit [20/004] was located just beyond the east end of the posthole cluster. It was sub-circular in plan, 0.92m long by 1.10m wide, with steeply sloping sides, a sharp break of slope and a flat base. Its single fill [20/005] was a heavily rooted, firm mid brownish yellow (dry) slightly sandy clay-silt with occasional small charcoal flecks. Bulk soil sample <1> collected from this fill yielded poorly preserved fragments of cereal caryopses, a pea/bean and weed seeds of black-bindweed, goosefoot and sedge. Twenty sherds of Middle Iron Age pottery, including at least one plain jar, eight fragments of fire cracked flint, and three quartz-rich daub fragments were recovered both during hand-excavation and from the soil sample residue. Eighty-seven animal bone fragments were also recovered, including cattle, ovicaprid, large and medium mammal species.
- 4.3.4 Three further fragments of Middle Iron Age pottery were recovered from the trench base, impacted into [20/003].

4.4 Trench 24 (Fig.5)

Context	Type	Interpretation	Length m	Width m	Depth m	Height m AOD
24/001	Layer	Topsoil	29.65	2.10	0.12- 0.14	9.32-9.54
24/002	Layer	Subsoil	29.65	2.10	0.16- 0.17	
24/003	Deposit	Natural	29.65	2.10	0.02- 0.03+	9.00-9.21
24/004	Fill	Fill, single [24/005]	2.10	0.32	0.11	9.15-9.16
24/005	Cut	Furrow	2.10	0.32	0.11	9.15-9.16

Table 5: Trench 24 list of recorded contexts

- 4.4.1 East/west Trench 24, in the central eastern part of the site, measured 29.65m long and contained a single agricultural furrow, as well as numerous light plough scars.
- 4.4.2 The V-shaped furrow [24/005] was 0.32m wide and up to 0.11m deep, running north/south across the trench for 2.10m. The compact, pale greyish-brown clayey silt fill [24/004] contained a single sherd of glazed red earthenware, attesting to the agricultural nature of the site in the post-medieval period.

4.5 Trench 25 (Fig.6)

Context	Type	Interpretation	Length m	Width m	Depth m	Height m AOD
25/001	Layer	Topsoil	29.25	2.10	0.14- 0.16	8.90-9.61
25/002	Layer	Subsoil	29.25	2.10	0.12- 0.15	
25/003	Deposit	Natural	29.25	2.10	0.02- 0.05	8.65-9.23
25/004	Fill	Fill, single [25/005]	1.35	0.66	0.08	8.85-8.86
25/005	Cut	?Ditch terminus	1.35	0.66	0.08	8.85-8.86
25/006	Fill	Fill, Single [25/007]	2.80	0.64	0.12	9.12-9.13
25/007	Cut	Ditch	2.80	0.64	0.12	9.12-9.13

Table 6: Trench 25 list of recorded contexts

- 4.5.1 To the south of Trench 20, Trench 25 ran for 29.25m on a north/south alignment. Two features were recorded in the southern half of the trench, cut into the natural deposit. Three small Middle Iron Age pottery sherds were recovered from the topsoil during the machine-excavation of the trench.
- 4.5.2 Near the centre of the trench, a probable NE/SW aligned ditch [25/005] extended from the eastern trench edge for 1.35m, ending in a rounded terminal; though it might have been an elongated pit instead. It measuring 0.66m wide and 0.06m deep with gentle sides and a slightly concave base. It contained a single fill [25/005] of firm, light greyish yellow (dry) slightly sandy, clayey silt, with small charcoal flecks and rounded stone inclusions. No finds were recovered.

4.5.3 A second linear feature, ditch [25/007], extended across the south end of the trench on a a NW/SE orientation. The shallow edges of the 0.64m-wide ditch were very diffuse, with a gentle break of slope and rounded base 0.12m deep, similar in profile to terminus [25/005]. The single fill [25/006] was soft, mid greyish brown and comprised clay/silt with very occasional charcoal, flint and frequent rooting. Two small Middle Iron Age body sherds and an undiagnostic flint flake were recovered from it.

4.6 Trench 30 (Fig. 4)

Context	Type	Interpretation	Length m	Width m	Depth m	Height m AOD
30/001	Layer	Topsoil	27.08	2.10	0.17-0.20	8.25
30/002	Layer	Subsoil	27.08	2.10	0.08-0.10	
30/003	Deposit	Natural	27.08	2.10	0.04-0.07+	7.84-7.89
30/004	Fill	Fill, single [30/005]	0.25	0.25	0.11	7.82-7.85
30/005	Cut	Posthole	0.25	0.25	0.11	7.82-7.85
30/006	Fill	Fill, single [30/007]	0.17	0.17	0.08	7.84-7.85
30/007	Cut	Posthole	0.17	0.17	0.08	7.84-7.85
30/008	Fill	Fill, single [30/009]	0.33	0.33	0.08	7.85
30/009	Cut	Posthole	0.33	0.33	0.08	7.85
30/010	Fill	Fill, single [30/011]	0.45	0.45	0.09	7.82-7.86
30/011	Cut	Pit	0.45	0.45	0.09	7.82-7.86
30/012	Fill	Fill, single [30/013]	-	-	-	-
30/013	Cut	Posthole (unex)	-	-	-	-
30/014	Fill	Fill, single [30/015]	-	-	-	-
30/015	Cut	Pit (unex)	-	-	-	-

Table 7: Trench 30 list of recorded contexts

4.6.1 Trench 30 was an extra trench, cut along the edge of badger exclusion zone in order to test the northern extent of the Middle Iron Age features/activity found in nearby Trench 20. The trench was broadly east/west aligned, measuring 27.08m long, and revealed four postholes and two pits all cut into natural deposit [30/003]. A single burnt fragment of Yorkshire-type sandstone was collected from the natural deposit [30/003].

4.6.2 Three of the four postholes were excavated, [30/005], [30/007], and [30/009], as well as pit [30/011]. The excavated postholes were between 0.17-0.33m wide and 0.08-0.011m deep, with moderate or steep sides and a concave base. Each contained a single fill of soft, mid grey clay/silt with occasional charcoal. Unexcavated posthole [30/013] was similar in plan.

4.6.3 Pit [30/011], toward the west of the postholes, was slightly larger, at 0.45m wide by 0.09m deep. It had moderately steep sides and a slightly concave base. Its fill [30/010] was of a similar composition to the postholes, but a slightly paler greyish brown colour. Unexcavated probable pit [30/015] toward the eastern end of the trench was larger and extended beyond the northern trench limit. It was filled with a similar deposit to [30/010].

4.6.4 No finds were recovered from the excavated Trench 30 features, but they are almost certainly contemporary with those of Trenches 14 and 20, all considered to be Middle Iron Age.

4.7 Archaeologically negative trenches (Figs 7-10)

4.7.1 Twenty-five trenches (Trenches 1-13, 15-19, 21-23, and 26-29) were found to be devoid of archaeological remains.

4.7.2 The blank trenches demonstrated a general stratigraphic sequence of topsoil overlying subsoil and the natural deposits, with colluvium observed below the subsoil only in Trenches 6-9. No significant variation in composition or thickness of these deposits was noted when compared to those of trenches containing archaeological remains. As such, the absence of features in the centre and west parts of site is believed to reflect a real absence of archaeological activity here. The details of all negative trenches are recorded in Appendix 1.

4.7.3 Small quantities of finds were recovered from the topsoil and subsoil in some of the negative trenches:

- Trench 8: Five sherds of Middle Iron Age pottery
- Trench 9: small CBM fragments
- Trench 15: a late 19/20th-century bottle fragment
- Trench 22: sherd of late post medieval Yellow ware
- Trench 27: sherd of refined whiteware
- Trench 29: sherd of porcelain saucer

These finds generally attest to agricultural turning of the soil, and incorporation of household waste, in the later post medieval period.

4.7.4 Several fragments of fire-cracked flint, an undiagnostic flint flake and early/middle Iron Age pottery sherds were recovered from the surface of the soft natural deposit. The latter consisted of twenty-five highly fragmented sherds covered with c.0.02m of natural clay that may have constituted the base of a feature which was not visible. The

4.7.5 A colluvium deposit, up to 0.15m thick, was recorded in Trenches 9, 8, the east of Trench 7 and the south of Trench 6, at the foot of a gentle slope running from Marsh road in the south down to Pannel's Brook in the north. Sondages were cut through the deposit in Trenches 6, 8 and 9, before being mechanically stripped in 8 and 9. No features were revealed in or under the deposit. Occasional fragments of fire-cracked flint (in Trench 7), fired clay/daub and prehistoric pottery (not recovered) were noted to occur in the deposit.

4.7.5 Plough scarring (esp. Trenches 13, 16) and modern land drains (Trenches 1-4, 8, 18, 19, 23, 27-29) were observed intermittently across the site, as well as isolated patches of heavy rooting in Trenches 8, 9 and 25 which were investigated but not recorded.

4.8 Geo-archaeological test-pitting

- 4.8.1 Geoarchaeological testing was conducted across the site in concert with the archaeological trial-trenching (Quest 2019). Five large test pits (TP 1-5), were excavated in an east/west line across the site in order to investigate the natural river gravel deposits for their Palaeolithic potential.
- 4.8.2 The c.2m-long test pits were machine-excavated within the approximate centres of evaluation Trenches 3, 21, 22, 24 and 25 (Fig. 2) to provide samples along a transect across the site. These were dug to a depth of c.3m, to the surface of the local bedrock London Clay, and the exposed sediments were observed, sieve-sampled and recorded from the side due to Health and Safety concerns.
- 4.8.3 A varying sequence of silts, clays, clayey gravel and sandy gravels were recorded across the site. No humanly struck flints were recovered or deposits with palaeoenvironmental potential identified.
- 4.8.4 The full Quest report is provided as Appendix 5.

5.0 FINDS

5.1 Summary

5.1.1 A small assemblage of finds was recovered during the evaluation on Land North of Marsh Road, Burnham-on-Crouch. 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 8; material recovered from the residues of environmental samples is quantified in Appendix 2a. All finds have been packed and stored following ClfA guidelines (2014c).

Context	Lithics	Weight (g)	Pottery	Weight (g)	CBM	Weight (g)	Stone	Weight (g)	Bone	Weight (g)	Fire Cracked Flint	Weight (g)	Fired Clay / Daub	Weight (g)	Glass	Weight (g)
7/004													6	24		
8/002			5	6												
9/002					4	16					2	18				
11/003											7	46				
14/003			1	20												
14/005			2	6							1	6				
14/009											1	2				
14/011											1	4				
14/016			1	22												
14/020	1	12	2	2												
15/002															1	10
15/003	1	2														
20/001															1	40
20/003			3	8												
20/005			20	126					12	80	8	46	3	2		
20/007					2	2							1	2		
22/002	1	14	1	6												
23/003			25	54												
24/004			1	5	7	5										
25/002			3	2												
25/006	1	2	2	6							4	10				
27/001			1	12												
29/001			1	10												
30/003							3	16								
<i>Total</i>	4	30	68	285	13	23	3	16	12	80	24	132	10	28	2	50

Table 8: Quantification of hand-collected bulk finds

5.2 Flintwork by Karine Le Hégarat

- 5.2.1 The evaluation produced five pieces of worked flint weighing 30g. They came from contexts [14/016] <02>, [14/020], [15/003], [22/002] and [25/006]. The small assemblage consists entirely of waste flakes. Based on morphological and technological traits, most of the flints are likely to pre-date the Middle Bronze Age.
- 5.2.2 A small quantity of unworked burnt flint (191g) was also recovered from nine numbered contexts (Table 8). The fragments are mainly small-sized and only slightly burnt.
- 5.2.3 The evaluation provides limited evidence for prehistoric presence in the vicinity of the site. The pieces of worked flint may be residual in later contexts.

5.3 Prehistoric and Roman Pottery by Anna Doherty

- 5.3.1 A small assemblage of 64 hand-collected prehistoric and Roman pottery sherds, weighing 252g, was recovered during the evaluation, in addition to a small quantity recovered from environmental samples. The assemblage is primarily of Middle Iron Age date, with the possibility of marginally earlier dating in one or two features. Two Roman sherds were also noted. At present, the pottery has been examined with a x 20 binocular microscope for the purposes of spot-dating and characterisation. It has not been fully quantified according to a fabric and form type-series. The pottery will be retained for possible further recording in the event of future archaeological mitigation at the site, leading to an assessment/analysis programme.
- 5.3.2 Prehistoric pottery was recovered from nine contexts in five trenches (subsoil [8/002], fill [14/005] of post-hole [14/014], fill [14/016] of pit/post-hole [14/017], fill [14/020] of pit [14/021], fill [20/005] of pit [20/004], subsoil [25/002] and fill [25/006] of ditch [25/006]). Sherds were also retrieved from the surfaces of natural deposits [20/003] and [23/003]. This material is predominantly of similar character, made up by hand-made sandy wares, which range from fairly fine (with quartz sand predominantly of 0.1-0.2mm) to coarse (inclusions ranging up to 0.8-1mm), in a few cases containing rare or sparse linear organic matter. Groups dominated by quartz-sand fabrics and lacking flint-temper tend to be characteristic of well-developed Middle Iron Age assemblages, of the 3rd century BC or later.
- 5.3.3 In the current assemblage, flint-tempering did occur in three estimated vessels. In two cases, contexts [20/003] and [25/006], these were sandy fabrics containing sparse, fairly fine flint, and occurred with more typical Middle Iron Age sandy fabrics. In a third, context [23/003], sherds of one very fragmented vessel contained moderate well-sorted flint of 0.5-1.5mm in a matrix with sparse quartz sand; no sherds of other vessels were present in the context. All of these flint-tempered fabrics may well have remained current into the Middle Iron Age although mixed sandy/flint-tempered assemblages tend to be more characteristic of transitional Early/Middle Iron Age assemblages and flint-tempering tends to become less and less common throughout the course of the Middle Iron Age. None of these groups is considered large enough to make a very confident assessment of date based on fabric composition.

- 5.3.4 Just one diagnostic Middle Iron Age form was noted, a jar with a plain, neckless profile and ovoid/inturning rim, from the largest individual group retrieved from context [20/005]. The extremely fragmented vessel in [23/003] also appeared to be from a jar with a necked profile, which would be broadly consistent with Iron Age dating, although no rimsherds are present.
- 5.3.5 A partial Roman rimsherd was recovered from deposit [14/003]. It represents a large necked jar, of slightly smaller proportions than most storage jars, although it is associated with a coarse grey storage jar-like fabric. This vessel is not considered closely datable within the Roman period. Another small, fine grey ware bodysherd was found with Middle Iron Age fabrics in sample <3>, collected from fill [14/020] of pit [14/021].

5.4 Post-Roman Pottery by Luke Barber

- 5.4.1 The archaeological work recovered just four sherds of post-Roman pottery, weighing 28g, from four individually numbered contexts. The material has been fully listed by common ware name in Table 9. Overall, the pottery consists of small to medium-sized sherds with moderate signs of abrasion. As such the material appears to have been subjected to notable reworking.

Context	Fabric	Period	No	Weight	Comments (including estimated number of different vessels represented by type. ? = undiagnostic of form)
22/002	Yellow ware	LPM	1	6g	Bowl or oven dish x1
24/004	Glazed red earthenware	EPM/LPM	1	2g	?x1 (clear glaze all over)
27/001	Refined whiteware	LPM	1	12g	?Jar x1 (vertical corrugation on exterior face)
29/001	Bone china (porcelain)	LPM	1	8g	Saucer x1

Table 9: Pottery assemblage (EPM = Early Post-Medieval c.1525/50-1750; LPM = Late Post-Medieval c.1750-1900+)

- 5.4.2 The assemblage of pottery is too small to pass meaningful comment on, but it would be in keeping with occasional periods of manuring the fields with domestic waste during the 18th and, more commonly, 19th centuries.

5.5 Ceramic Building Material by Rae Regensberg

- 5.5.1 Twelve spalled fragments of ceramic building material (CBM), collectively weighing 22g, were retrieved from three contexts; [9/002], [20/007] and [24/004]. Two different types of CBM were identified; the first was from roof tiles with a reasonably quartz rich, orange fabric with some black oxidised material. The other type had a similar fabric but with less quartz, and included some calcareous material. The fragments however, were too small to identify whether they came from brick or tile.
- 5.5.2 The CBM was quantified by form, weight and fabric and recorded on standard recording forms. This information was entered into a digital Excel table. Fabrics were identified with the aid of a x20 binocular microscope.

5.6 Fired Clay by Trista Clifford

5.6.1 Three contexts ([7/004], [20/005] and [20/007]) produced 10 fragments of fired clay weighing a total of 28g. Fabric was assessed with the aid of a x10 magnification hand lens. One principle fabric is present, a moderately tempered with medium quartz and occasional grassy voids. Variations of this fabric have sparse medium quartz temper. Four fragments from [7/004] are reduced; however, there are no pieces within the assemblage diagnostic of form or function.

5.7 Glass by Elke Raemen

5.7.1 Two fragments of glass with a combined weight of 48g were recovered from two different contexts. Topsoil [20/001] contained an aqua base fragment from a cylindrical mineral water bottle dating to the mid 19th to early 20th century. A blue body shard from a cylindrical bottle of late 19th- or 20th- century date was found in subsoil [15/002]. Like the post-medieval pottery, this probably derives from the manuring the fields with domestic waste.

5.8 Geological Material by Luke Barber

5.8.1 The evaluation produced a single piece of hand-collected stone, as well as some tiny granules from soil sample residues. The hand-collected example (context [30/003]) consists of a burnt and worn 14g fragment of Yorkshire-type sandstone, almost certainly natural to the area following glacial/fluvial transportation.

5.8.2 The environmental residues produced three granules (<1g) of burnt coal shale (context [20/005]) and 10+ tiny flecks (<1g) of coal (context [14/020]). These are certainly later post-medieval but could easily be residual or intrusive considering their small size.

5.9 Metallurgical Remains/Magnetic Material by Luke Barber

5.9.1 The residues from three bulk soil samples produced magnetic fractions (contexts [14/016] <1g, [14/020] 1g and [20/005] 1g). These were carefully search at x10 magnification to establish the presence/absence of micro slags. The vast majority of the magnetic fractions consisted simply of granules of ferruginous fine stone whose magnetic properties had been enhanced through burning. This is not indicative of any industrial process as such burning could be the result of domestic hearths or stubble burning.

5.9.2 Only context [20/005] produced any true slag – four tiny granules of clinker derived from burning coal. Although these are almost certainly of later post-medieval date they are so small they could easily be intrusive in this deposit. The slag assemblage is not considered to hold any potential for further analysis and has been discarded.

5.10 Animal Bone by Emily Johnson

5.10.1 An assemblage of 152 animal bones, weighing c.147g in total, was retrieved during the evaluation. Material derived from both hand-collected and bulk-

sampled contexts. The preservation of the assemblage was generally poor to moderate, with a high degree of fragmentation affecting the material from this site (Table 10).

Context	Sample	N	HC	ENV	NISP	Preservation %		
						Poor	Moderate	Good
20/005	<1>	87	21	66	15	70.1	25.3	4.6
14/016	<2>	11	0	11	0	45.5	54.5	0
14/020	<3>	54	0	54	2	88.9	11.1	0
<i>Total</i>		<i>152</i>	<i>21</i>	<i>131</i>	<i>17</i>	<i>75.0</i>	<i>22.4</i>	<i>2.6</i>

Table 10: Zooarchaeological assemblage by context showing total fragment count (N), the number of hand-collected (HC) and bulk-sampled (ENV) specimens, the number of identifiable specimens (NISP) and the proportion of bones displaying varying preservation levels

- 5.10.2 The assemblage has been recorded onto an Excel spreadsheet. Where possible, bones were identified to species and element (Schmid 1972; Hillson 1999) and the bone zones present noted (Serjeantson 1996). Elements that could not be confidently identified to species, such as long bone, rib, cranial and vertebral fragments, have been categorised by taxa size (large/ medium/ small) and type (mammal/ bird/ fish).
- 5.10.3 Mammalian age-at-death data was collected where possible. No specimens were suitable for analysis of epiphyseal fusion. Dental eruption and attrition was recorded on one ovicaprid mandible, with age determination following Payne (1973). Specimens have been studied for signs of butchery, burning, gnawing, non-metric traits and pathology. The assemblage contained no measurable long bones of domestic mammals.
- 5.10.4 A total of 11 bones were identifiable to taxa, and a further six to taxa size (Table 11). The vast majority of the assemblage was indeterminate.

Taxa	NISP	Context		
		20/005	14/016	14/020
Cattle	5	3		2
Ovicaprid	6	6		
Large mammal	5	5		
Medium mammal	1	1		
Indeterminate	135	72	11	52

Table 11: Taxa abundance in the overall and phased assemblages by NISP

- 5.10.5 Context [14/016] <2>, the fill of a small pit or inter-cutting postholes, contained only indeterminate material, some of which had been burnt at high temperatures (calcined).

- 5.10.6 Context [14/020] <3>, the fill of a pit, contained identifiable material in the form of two cattle maxillary molars. Additionally many indeterminate fragments were recovered, including six that had been calcined.
- 5.10.7 Context [20/005] <1>, the fill of a pit, contained a cattle right humerus diaphysis and part of an ovicaprid mandible, in six fragments. The mandible was assigned an age of 6-12 months as the second molar was erupting (Payne 1973). In addition, several large and medium mammal partially identifiable fragments were recorded, alongside a number of wholly indeterminate fragments, some of which were scorched (n=2), carbonised (n=2) or calcined (n=2). This represents different temperature burning affecting specimens from this context.
- 5.10.8 In overview, this small and poorly-preserved assemblage contains little zooarchaeological information. It likely represents food refuse and possibly hearth sweepings, given the high-temperature burning that may be a result of discarding bone into fires.

6.0 Environmental Samples by Lucy Allott

6.1 Introduction

6.1.1 Three samples were collected during the evaluation at Marsh Road, Burnham on Crouch from pits/postholes. Sample <1> derives from the fill [20/004] of a pit in which Middle Iron Age pottery fragments were recorded. Samples <2> and <3> were extracted from [14/020] and [14/016] respectively, the fills of two further pit/posthole features that formed part of a cluster of pit features. Both deposits produced MIA pottery with one Roman pot sherd also noted in [14/020]. This work aimed to establish evidence for environmental remains such as charred plant macrofossils, charcoal, faunal remains and mollusca and consider the evidence for arable activities, diet and the local vegetation environment.

6.2 Methodology

6.2.1 The samples were floated in their entirety with the heavy residues retained on a 500µm mesh and the flots captured on 250µm meshes and were air dried prior to sorting. The residues were passed through 8, 4 and 2mm geological sieves and each fraction sorted for environmental remains and artefacts (Appendix 2a). Finds extracted from the residues have been integrated into the relevant reports. The flots were scanned under a stereozoom microscope at 7-45x magnifications and their contents recorded (Appendix 2b).

6.2.2 Identification of the charred plant macrofossils was based on gross morphology and surface cell structure and where necessary relevant identification manuals (Cappers *et al.* 2006) and modern reference material were consulted. Quantification was based on the minimum number of individuals and nomenclature used follows Stace (1997).

6.3 Results and Discussion

6.3.1 Flots from each of the three samples contained high percentages of uncharred botanical remains such as roots and seeds suggesting the potential for post-depositional intrusion within these pit/posthole features. Charred plant macrofossils were evident in sample <1> [20/005] and the assemblage comprised poorly preserved fragments of cereal caryopses, a pea/bean (*Pisum/Vicia* sp.) and seeds of weed taxa including black-bindweed (*Fallopia convolvulus*), goosefoot (*Chenopodium* sp.) and sedge (*Carex* sp.). These weeds are commonly associated with settlements, waste-places or may have occurred in close proximity to crops. The limited assemblage of plant macrofossils provides very little indication of the local vegetation, arable landuse activities or diet.

6.3.1 Small flecks of wood charcoal, measuring <2mm and 2-4mm, were moderately common in each of the samples however larger fragments >4mm were uncommon and the assemblages were too small to merit further identification work. The residues produced small amounts of faunal remains including some burnt bone fragments; however, no mollusca were evident.

7.0 DISCUSSION AND CONCLUSIONS

7.1 Overview of stratigraphic sequence

- 7.1.1 The evaluation has established a general deposit sequence of topsoil overlying subsoil, sealing the natural deposit, with a colluvial layer being present in between the natural and subsoil deposits along the north edge of site. The topsoil comprised a mid brown silt, 0.12-0.27m thick, and a subsoil of a greyish brown clayey silt, 0.05-0.18m thick, both of which were heavily rooted.
- 7.1.2 At the base of a slope running from Marsh road in the south down to Pannel's brook in the north, the colluvium consisted of a soft light brown/tan clay/silt, up to 0.20m thick. Small quantities of prehistoric pottery and flint present in the colluvium probably originated from higher up on the slope.
- 7.1.3 The undisturbed natural deposits varied across the site, appearing to run in bands NW/SE. The majority of trenches revealed an orangey brown silty clay, a light-greyish brown slightly clayey sand with frequent flint fragments occupied the south-west corner, separated by a band of firm tan coloured clay with occasional to moderate flint. These deposits were encountered at their highest point in the south of site at 12.48m AOD (Trench 4), and at their lowest in the north at 7.09m AOD (Trench 9).
- 7.1.4 Five of the 30 excavated trenches contained archaeological features, all located in the eastern half of the site. The majority of recorded features comprised postholes and pits in two dense clusters, with at least one outlying ditch, all tentatively dated to the Middle Iron Age. All features were recorded underlying subsoil and cut into the natural deposit. No archaeological features were found below the colluvium deposit.

7.2 Deposit survival and existing impacts

- 7.2.1 The archaeological features appeared to be relatively well preserved, generally surviving below 0.25-0.31m of overburden deposits. It is evident that all surviving remains have been impacted by horizontal truncation as a result of post-medieval/modern ploughing.
- 7.2.2 Plough scars and a small number of land drains were recorded in several of the trenches across the site, resulting from post-medieval and modern agricultural practices. Unexcavated posthole [14/029] was cut by and an east/west land drain to an unknown depth. No other modern truncation was observed across the evaluation trenches.

7.3 Discussion of archaeological remains by period

- 7.3.1 A low complexity, but high density of archaeological remains was encountered in the north-east of the site, in Trenches 14, 20 and 30, comprising pits and postholes probably defining two distinct clusters, and small number of outlying ditches. A single linear feature in Trench 25, also in the east of the site, might be associated. Other than a probable late agricultural feature in Trench 24, no below-ground archaeological features were present within the remainder of the evaluated area of the site.

- 7.3.2 The recorded archaeological features, where possible, have been dated on the basis of their diagnostic artefact content and are discussed below by broad period.

Prehistoric

- 7.3.3 No evidence of Palaeolithic activity in the form of lithic assemblages was recovered during the course of geo-archaeological testing of lower gravel deposits. Five flint flakes were collected from contexts [14/016], [14/020], [15/003], [22/002] and [25/006], but were largely undiagnostic and could range in date from the Mesolithic to Early Bronze Age. Given their presence in Middle Iron Age pit/postholes [14/017], pit [14/021], and ditch [25/007], the worked flint assemblage is likely to be residual here; though still serving to attest to a low-level, transient, presence in the earlier prehistoric landscape.

- 7.3.4 The vast majority of the archaeological remains recorded during the evaluation are of probable Middle Iron Age date. The postholes and pits define two clusters across Trenches 14, and 20/30. A number of the excavated examples have yielded diagnostic Middle Iron Age pottery and the remainder are of similar enough nature (size/shape, fill type, etc.) to be regarded as being very likely contemporary. The ditch in Trench 25 that contained two Middle Iron Age pottery sherds might define part of an associated boundary or field system. However, other than an undated ditch terminus, also in Trench 25, no further linear boundary features were found in the vicinity of the pit/posthole clusters.

- 7.3.5 The posthole clusters are presumed to be indicative of one or more settlement sites, perhaps comprising multiple post-built structures. However, within the confines of the trenches, even where extended, no meaningful spatial patterning was readily evident in their distribution. The presence of apparent small pits containing charred animal bone, burnt flint and charcoal, as well as generally small assemblages of pottery, suggests a domestic nature for this settlement activity. The soil samples from pits in Trenches 14 and 20 have produced only very modest assemblages of charred weed seeds, cereals and pulses pea/bean, but are not inconsistent with domestic occupation.

Roman

- 7.3.6 Two greyware pottery sherds, one from a large necked jar, were collected from Trench 14 and are the sum of Roman activity recorded on the site. Neither sherd is closely datable nor gives insight into the nature of Roman activity within the immediate area. Both appear to be intrusive in their contexts.

Post-medieval/modern

- 7.3.7 Ordinance survey mapping through the 19th century shows little change in the nature of land use until the present day. This is corroborated by the lack of post-medieval features within the evaluation trenches. The single agricultural furrow in Trench 24 is evidently post-medieval in date, while pottery and glass in topsoil and subsoil probably derives from the practice of incorporating domestic waste in the manuring of fields.

Undated

7.4.10 As previously noted, most, if not all, of the undated and/or unexcavated pit and posthole features found in Trenches 14, 20 and 30 display sufficient similarity of form and fill-type with the excavated and dated examples to be considered to be most probably of contemporary date. As such, only a very small quantity of features, such as the ditch terminal in Trench 25, need be considered as being of unknown date.

7.5 Consideration of research aims

7.5.1 The archaeological evaluation has succeeded in its general aim of determining the presence and nature of archaeological remains within the site (2.7.1). The majority of the recorded features are considered to be of Middle Iron Age date and to define two distinct concentrations of pits and postholes constituting possibly separate settlement foci. The site-specific aims and objectives identified in 2.7.2-3 are considered below.

7.5.2 The geo-archaeological investigation of the river gravel deposits established the presence of cemented sand and sandy gravel, with Asheldham gravel deposits identified in Trenches 3 and 22, with the former also present in Trench 23. No significant gravel deposits were identified in the east half of site, in Trenches 24 and 25, where substrata consisted of London clay deposits. No humanly struck flints were recovered or deposits with palaeoenvironmental potential identified.

7.5.3 Extensive Bronze Age occupation of the area has been recorded to the south at Pippins road (ASE 2018) and Maldon Road to the southwest (OA 2018), including major land boundaries, unurned cremations, a probable dispersed metal hoard, and pits at the former, and enclosure and ring-ditches, and evidence of salt production at the latter. However, at Marsh Road, no remains predating the Middle Iron Age were found, suggesting activity predating this period was predominantly focused on the lower-lying land to the south, where access to the Crouch allowed for salt production, as well as providing access to the sea and marine resources.

7.5.4 Salt production has been a longstanding industry on the Dengie peninsula and the wider Essex coastline from the Late Bronze Age to Roman times. The present site's location c.1.2km north of the River Crouch restricts access to salt water and made it unsuitable for salt production. No structures, or briquetage, or other material indicative of salt production was found at Marsh Road.

7.5.5 The remains uncovered at Marsh Road appear to constitute small-scale occupation of the site in the Middle Iron Age, perhaps by one or more small farmsteads. The remains are poorly understood; the two posthole and pit clusters, extending beyond Trench 14 and 20/30, appear to define domestic structures and activity, though no alignments could be identified and their specific function is unclear. It is equally unclear whether this/these settlement foci were enclosed or not; one or both of the ditches in Trench 25 may be associated, perhaps the remains of an enclosure boundary or part of a larger field system? How this relates to the more substantial Iron Age enclosure c.1km to the west at Southminster road (ASE 2018a) is unknown. It is likely

that the landscape was fairly well populated by farmstead and village settlements of varying scale in the Iron Age. Both finds and environmental assemblages recovered from individual features were small, and provide very limited data. These provide little new data to address questions about the agrarian economy (Bryant 2000, 16), though further fieldwork might produce larger and better assemblages with greater research potential.

- 7.5.6 No remains post-dating Middle Iron Age occupation were encountered during the course of evaluation, until the post medieval period. There appears to be no potential for the site to provide insights into how settlement here transitions/develops through the Iron Age and into the Roman periods. There is no evidence for a Roman road / routeway passing through or close to the site.
- 7.5.7 Early medieval settlement does not appear to have extended this far east of the vicinity of the Church of St Mary the Virgin, nor is there any evidence for medieval agriculture here. Land use appears to have been exclusively agricultural from at least the medieval period onwards.

7.6 Conclusions

- 7.6.1 The archaeological evaluation has demonstrated the presence of a significant density, though low complexity of archaeological remains present in five of the thirty trenches investigated these are all located in the east of the site.
- 7.6.2 The recorded archaeological remains predominantly comprise pits and postholes forming two distinct clusters (in Trench 14 and in Trenches 20 / 30), with a few outlying linear features that are possibly associated (in Trench 25).
- 7.6.3 No Palaeolithic artefacts or significant geo-archaeological deposits were identified by the geological test pitting survey.
- 7.6.4 The two posthole and pit clusters appear to be the remains of Middle Iron Age domestic settlement activity, perhaps of one or more farmsteads. At least some of the postholes may define parts of post-built structures such as houses and fences. The few ditch remains to their south could constitute a contemporary boundary or field system. It is probable that Middle Iron Age remains continue northward into the north-eastern part of the site currently designated as a badger exclusion zone and therefore not evaluated.
- 7.6.5 There is no evidence for land use activity in any later periods. It is probable that the site lay within an agricultural landscape up until the present day.

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Appendix 1: Archaeologically negative trenches: list of recorded contexts

Area	Context	Type	Interpretation	Thickness	Height m AOD
T1	1/001	layer	topsoil	0.20-0.22	10.04-10.99
T1	1/002	layer	subsoil	0.10-0.10	
T1	1/003	deposit	natural		9.72-10.64
T2	2/001	layer	topsoil	0.18-0.20	11.30-11.66
T2	2/002	layer	subsoil	0.07-0.10	
T2	2/003	deposit	natural		10.94-11.27
T3	3/001	layer	topsoil	0.15-0.17	10.74-11.60
T3	3/002	layer	subsoil	0.09-0.13	
T3	3/003	deposit	natural		10.51-11.28
T4	4/001	layer	topsoil	0.20-0.23	12.04-12.85
T4	4/002	layer	subsoil	0.08-0.10	
T4	4/003	deposit	natural		11.76-12.48
T5	5/001	layer	topsoil	0.22-0.25	11.96-12.18
T5	5/002	layer	subsoil	0.06-0.08	
T5	5/003	deposit	natural		11.60-11.77
T6	6/001	layer	topsoil	0.20-0.23	9.14
T6	6/002	layer	subsoil	0.05-0.09	
T6	6/003	deposit	natural		8.66
T6	6/004	layer	colluvium	0.05-0.10	
T7	7/001	layer	topsoil	0.16-0.20	8.13-8.46
T7	7/002	layer	subsoil	0.10-0.12	
T7	7/003	deposit	natural		7.79-8.15
T7	7/004	layer	colluvium	0.13	
T8	8/001	layer	topsoil	0.18-?	7.56-8.37
T8	8/002	layer	subsoil	0.05-?	
T8	8/003	deposit	natural	0.26	6.82-7.60
T8	8/004	layer	colluvium	0.05-0.15	
T8	8/005	deposit	natural	0.21	7.45-8.08
T9	9/001	layer	topsoil	0.14-0.19	7.85-7.85
T9	9/002	layer	subsoil	0.16-0.20	
T9	9/003	deposit	colluvium	0.03-0.05	
T9	9/004	fill	fill	0.06	
T9	9/005	cut	root disturbance	0.06	7.35
T9	9/006	deposit	natural		7.25-7.46
T10	10/001	layer	topsoil	0.14-0.17	8.74-9.51
T10	10/002	layer	subsoil	0.11-0.12	
T10	10/003	deposit	natural		8.44-9.14
T11	11/001	layer	topsoil	0.13-0.16	8.67-8.94
T11	11/002	layer	subsoil	0.14-0.15	
T11	11/003	deposit	natural		8.31-8.63
T12	12/001	layer	topsoil	0.13-0.15	8.11-8.99
T12	12/002	layer	subsoil	0.13-0.13	
T12	12/003	deposit	natural		7.85-8.67
T13	13/001	layer	topsoil	0.14-0.16	8.12-8.42
T13	13/002	layer	subsoil	0.10-0.15	
T13	13/003	deposit	natural		7.84-8.19
T15	15/001	layer	topsoil	0.14-0.16	9.31-10.23
T15	15/002	layer	subsoil	0.14-0.15	
T15	15/003	deposit	natural		9.01-9.75
T16	16/001	layer	topsoil	0.12-0.20	9.41-9.68
T16	16/002	layer	subsoil	0.12-0.14	
T16	16/003	deposit	natural		9.09-9.39

T17	17/001	layer	topsoil	0.12-0.16	8.86-9.68
T17	17/002	layer	subsoil	0.12-0.16	
T17	17/003	deposit	natural		8.55-9.41
T18	18/001	layer	topsoil	0.12-0.14	8.92-9.09
T18	18/002	layer	subsoil	0.16-0.18	
T18	18/003	deposit	natural		8.62-8.86
T19	19/001	layer	topsoil	0.14-0.16	8.28-9.08
T19	19/002	layer	subsoil	0.12-0.14	
T19	19/003	deposit	natural		8.01-8.79
T21	21/001	layer	topsoil	0.13-0.16	10.10-11.24
T21	21/002	layer	subsoil	0.11-0.12	
T21	21/003	deposit	natural		9.88-10.95
T22	22/001	layer	topsoil	0.14-0.18	9.88
T22	22/002	layer	subsoil	0.10-0.14	
T22	22/003	deposit	natural		9.57
T23	23/001	layer	topsoil	0.15-0.15	9.37-10.33
T23	23/002	layer	subsoil	0.10-0.12	
T23	23/003	deposit	natural		9.12-10.05
T26	26/001	layer	topsoil	0.20-0.20	10.64-11.38
T26	26/002	layer	subsoil	0.06-0.08	
T26	26/003	deposit	natural		10.38-11.03
T27	27/001	layer	topsoil	0.13-0.15	10.38-10.80
T27	27/002	layer	subsoil	0.12-0.14	
T27	27/003	deposit	natural		10.10-10.56
T28	28/001	layer	topsoil	0.13-0.15	9.79-10.52
T28	28/002	layer	subsoil	0.10-0.16	
T28	28/003	deposit	natural		9.53-10.14
T29	29/001	layer	topsoil	0.13-0.20	10.06
T29	29/002	layer	subsoil	0.06-0.17	
T29	29/003	deposit	natural		9.73

Appendix 2: Environmental data

2a: Residue Quantification (* = 0-10, ** = 11-50, * = 51 – 250, **** = >250) and weights (in grams)**

Sample Number	Context	Context / deposit type	Sample Volume (L)	Charcoal >4mm	Weight (g)	Charcoal <4mm	Weight (g)	Bone and Teeth	Weight (g)	Burnt bone >8mm	Weight (g)	Burnt bone 4-8mm	Weight (g)	Burnt Bone 2-4mm	Weight (g)	Other (eg ind, pot, cbm)
1	20/005	Pit	40			*	1	**	18					*	1	Pottery (* /10g); Slate (* /1g); Coal (* /1g); Ind waste (* /1g); FCF >4mm (** /16g); Mag mat >2mm (** /2g); Mag mat <2mm (***/2g)
2	14/020	Pit/ Posthole	10	*	1	**	1	*	1	*	1			*	1	Pottery (* /14g); Fired Clay (* /6g); FCF >4mm (* /11g); ?Cement (* /2g); Coal (* /1g), Cu (* /1g); Lithic (* /4g); Mag mat >2mm (* /1g); Mag mat <2mm (** /1g)
3	14/016	Pit/ Posthole	10	*	1	**	2	**	42			*	2	*	1	Pottery (* /8g); Fired Clay (* /2g); Coal (* /1g); Ind waste (* /1g); FCF >4mm (* /32g); Mag mat >2mm (* /2g); Mag mat <2mm (** /1g)

Table 2b: Flot Quantification (* = 0-10, ** = 11-50, *** = 51 – 250, **** = >250) and weights (in grams)

Sample Number	Context	Context / Deposit Type	Weight (g)	Flot volume (ml)	Uncharred (%)	Sediment (%)	Charcoal >4mm	Charcoal 2-4mm	Charcoal <2mm	Crop Seeds Charred	Identifications	Preservation	Weed Seeds Charred	Identifications	Preservation
1	20/005	Pit	36.5	150	75	20	*	**	****	*	cerealia indet (2), <i>Vicia/Pisum</i> sp. (1)	+ / ++	*	<i>Fallopia convolvulus</i> , <i>Carex</i> sp., <i>Chenopodium</i> sp.,	++
2	14/020	Pit/ Posthole	16	100	75	10	**	****	****						
3	14/016	Pit/ Posthole	17.5	80	85	5		****	****						

Appendix 3: HER Summary

Site name/Address: Land at North of Marsh Road, Burnham on Crouch, Essex	
Parish: Burnham on Crouch	District: Maldon
NGR: TQ 95152 97053	Site Code: BCMR19
Type of Work: Trial-trench evaluation	Site Director/Group: C. Carvey, Archaeology South-East
Date of Work: 7-16 October 2019	Size of Area Investigated: 5.5ha
Location of Finds/Curating Museum:	Funding source: Developer
Further Seasons Anticipated?: Yes	Related HER No's: None
Final Report: ADS Grey lit library	OASIS No: 374901
Periods Represented: Middle Iron Age, Post-Medieval/Modern	
SUMMARY OF FIELDWORK RESULTS:	
<p>An archaeological and geo-archaeological evaluation was carried out in advance of residential development. Thirty evaluation trenches were excavated across the 5.5ha site, which is situated to the north of Burnham-on-Crouch. Archaeological features were recorded in five trenches in the east of the site, the remaining 25 trenches being devoid of such remains.</p> <p>Two distinct clusters postholes and pits were identified in Trench 14 and across Trenches 20 and 30. These are interpreted as being remains of Middle Iron Age domestic structures, potentially constituting a farmstead. However, only a small quantity of diagnostic pottery sherds, from four of the features, were recovered. An Iron Age ditch and another undated ditch to the south may define a contemporary settlement boundary or part of a wider field system. This Iron Age land use activity is likely to extend into the currently un-evaluated north-eastern part of the site.</p> <p>A post-medieval agricultural furrow and a small number of unstratified finds were also recorded.</p> <p>The geo-archaeological investigation recorded a sequence of silts, clays, clayey gravel and sandy gravel, but no humanly-struck flints or deposits with palaeoenvironmental potential were encountered.</p>	
Previous Summaries/Reports:	
CSA Environmental. 2019, <i>Land at Burnham-on-Crouch, Essex Heritage Assessment</i> . Unpubl. Rep.	
Author of Summary: C. Carvey	Date of Summary: 11/11/2019

Appendix 4: OASIS Form**OASIS ID: archaeol6-374901****Project details**

Project name	Marsh Road, Burnham-on-Crouch
Short description of the project	Thirty evaluation trenches were excavated across the 5.5ha site. Archaeological features were recorded in five trenches in the east of the site, with two distinct clusters of postholes and pits identified in Trench 14 and across Trenches 20 and 30. These are interpreted as being remains of Middle Iron Age domestic structures, potentially constituting a farmstead. However, only a small quantity of diagnostic pottery sherds, from four of the features, were recovered. An Iron Age ditch and another undated ditch to the south may define a contemporary settlement boundary or part of a wider field system. The geo-archaeological investigation recorded a sequence of silts, clays, clayey gravel and sandy gravel, but no humanly-struck flints or deposits with palaeoenvironmental potential were encountered.
Project dates	Start: 07-10-2019 End: 16-10-2019
Previous/future work	No / Yes
Associated project reference codes	BCMR19 - Sitecode 190426 - Contracting Unit No.
Type of project	Field evaluation
Site status	None
Current Land use	Cultivated Land 4 - Character Undetermined
Monument type	DITCH Middle Iron Age
Monument type	FURROW Post Medieval
Monument type	PIT Middle Iron Age
Monument type	POSTHOLE Middle Iron Age
Significant Finds	POTTERY Middle Iron Age
Significant Finds	POTTERY Roman
Significant Finds	FCF Late Prehistoric
Significant Finds	STRUCK FLINT Late Prehistoric
Methods & techniques	"Sample Trenches", "Test Pits"
Development type	Housing estate
Prompt	National Planning Policy Framework - NPPF
Position in the planning process	Pre-application

Project location

Country	England
Site location	ESSEX MALDON BURNHAM ON CROUCH Land North of Marsh Road
Postcode	CM0 8LZ

Study area 55088 Square metres
Site coordinates TQ 95152 97053 51.637829484275 0.820524844971 51 38 16 N 000 49
13 E Point

Project creators

Name of Organisation Archaeology South-East
Project brief originator RPS Consulting
Project design originator ASE
Project director/manager Gemma Stevenson
Project supervisor Craig Carvey
Type of sponsor/funding body client

Project archives

Physical Archive recipient Colchester Museum
Physical Contents "Animal Bones","Ceramics","Environmental"
Digital Archive recipient ASE
Digital Media available "Database","Images raster / digital photography"
Paper Archive recipient Colchester Museum
Paper Media available "Context sheet","Report","Unspecified Archive"

Project bibliography

Publication type Grey literature (unpublished document/manuscript)
Title Archaeological and geo-archaeological evaluation. Land North of Marsh Road, Burnham on Crouch, Essex
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Other bibliographic details ASE Rep. 2019341
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Entered by Mark Atkinson (mark.atkinson@ucl.ac.uk)
Entered on 3 December 2019

Appendix 5: Geo-archaeological report

MARSH ROAD BURNHAM-ON-CROUCH, ESSEX

Geoarchaeological Fieldwork Report

NGR: TQ 59520 19705

Date: 22nd October 2019

Written by: P. Allen

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1. NON-TECHNICAL SUMMARY

A program of geoarchaeological fieldwork was carried out by Quaternary Scientific (University of Reading) in connection with the proposed development of land at Marsh Road, Burnham-on-Crouch, Essex. The work was commissioned and carried out on behalf of, and in collaboration with Archaeology South East. The main aims of the investigation were to: (1) observe and record the sediments excavated; (2) interpret the sub-surface stratigraphy across the site and (3) highlight sediments of potential Pleistocene and Palaeolithic significance.

The results of the investigation revealed a sequence of silts, clays, clayey gravel and sandy gravel, but no humanly struck flints or deposits with palaeoenvironmental potential were recorded. No further work is recommended.

2. INTRODUCTION

2.1 Site context

This report summarises the findings arising out of the geoarchaeological investigations undertaken by Quaternary Scientific (University of Reading) in connection with the proposed development at Marsh Road, Burnham-on-Crouch, Essex (NGR: TQ 59520 19705; Figures 1 & 6). The work was commissioned and carried out on behalf of, and in collaboration with Archaeology South East.

2.2 Local Topography and Geology

Burnham-on-Crouch lies on the south-east corner of the Dengie Peninsula, on the north shore of the River Crouch. The site lies immediately adjacent to the eastern limit of the built-up area of Burnham-on-Crouch (Figure 1). The site has gentle gradient, falling from ca. 11.0m OD on its western side to ca. 9.0 m OD at its eastern limit.

Regional Geology

The underlying geology is London Clay, overlain by terrace gravels and slope deposits mainly mapped as head (British Geological Survey, 1976, 1:50,000 Sheet 258-259, Southend and Foulness) (Figure 2). The terrace gravels fall into two groups running northwards (Figure 3). The highest gravels form the High-level East Essex Gravel (HEEG) at around 50m OD. These were deposited over 500,000 years ago along an early course of the Medway at a time when the Thames flowed across mid-Essex. Following blockage by Anglian ice about 450,000 years ago, the early Thames was diverted into its present valley, joining the early Medway in the Southend area. Thus to the east of the HEEG, at lower levels, are the Thames-Medway gravels of the Low-level East Essex Gravel (LEEG). The most extensive terrace gravel of the LEEG is the Asheldham Gravel, mapped by the British Geological Survey (BGS) as Terrace 3 (Figure 2).

Local Geology and Geomorphology

The Pleistocene geology of the site is complex.

1. BGS mapping (Sheet 258-259) shows the southern part of the site to lie on Thames-Medway Terrace 3 which locally has a surface height of 15 – 20m OD. The site is on the eastern edge of the terrace, on ground losing height from 11.0 to 9.0m OD., falling to below 5m OD beyond the site. The northern part of the site is on river deposits of the Pannel's Brook, a modern stream that makes a superficial cut into the surface of the terrace (Figure 2). Thus the site is assumed to be on the outer edge of Terrace 3, part of the Asheldham Gravel complex dated to MIS 12 - 10 (Figure 3) (Bridgland, 2014), where the deposits would be thinner or eroded away.
2. The site is also on the edge of the Burnham Channel, only about 200m to the east (Figure 3) (Bridgland, 2014), which locally cuts down 16m below the present ground surface (Simmons, 1978), now filled with silts and clays, (Figures 4, 5), dated to MIS 10 – 8 and forming Terrace 1 (Figure 4) (Bridgland, 2014).
3. From BGS publications it is not clear what the nature of the slope deposits comprise. Simmons (1978) considered that the channel silts and clays reached ca. 20m OD, subsequently to be eroded back to ca. 8m OD, leaving a veneer of the channel deposits covering the underlying London Clay (Figure 4). However, BGS map 258-259 (Figure 2) shows at least the lower part of

the slope is covered by Head Brickearth. Simmons recognises the Head Brickearth, but present only over the channel and not extending to the slope (Figure 5).

4. On the bluff between Terraces 3 and 1, the cover of terrace-related sediments would be thin and the surface of the underlying London Clay could be weathered and have moved downslope in saturated conditions.

2.3 Geoaerchaeological, Pleistocene and Palaeolithic potential

The site has the potential to contain both Pleistocene and Palaeolithic remains. Pleistocene remains are the geological and biological deposits laid down by various agents – water, wind and ice between 2.6 million and 11,500 years ago. In some places, artefacts, plant and animal remains are contained within Pleistocene deposits. Palaeolithic remains therefore form part of the Pleistocene record and can include stone tools and the flakes produced when making them, and, much more rarely, tools of wood and bone, bones bearing marks of butchery, rudimentary structures and the remains of early humans (hominins). Such remains are important as they are the evidence that enables us to understand our earliest prehistory – how the landscape of Britain was shaped and where and how our earliest ancestors fit into it.

The Asheldham Terrace is regarded as the equivalent of the Boyn Hill Terrace of the Lower Thames, as at Swanscombe, and of the Clacton Channel deposits, both areas being noted for their Palaeolithic archaeology, associated with MIS 12 – 10 and Clactonian and Acheulian flint industries. However, only a small number of artefacts have been recovered from the Asheldham Gravel, despite extensive quarrying around Southminster, Asheldham, Tillingham and Bradwell (Curry Farm). This may be a reflection of the low level of attention paid to the deposits by Palaeolithic archaeologists, compared to the Lower and Middle Thames and elsewhere. On a short visit to Goldsands Road Quarry, Southminster, in 1983, two broken hand-axes and a few flakes were found by P. Harding (Wymer, 1985; Bridgland, 1994).

At Burnham itself:

1. Oakley and Leakey (1937) cite Burnham-on-Crouch as yielding large cores and flakes in gravels at about 60 feet (ca. 18.25m) OD
2. Warren (1933) "*traced the Clactonian industry in gravel at Burnham-on-Crouch at about 60 feet O.D [ca. 18.25m OD]. At Burnham [he] obtained besides a few flakes, etc., one Clactonian chopper that is entirely in the heavy Swanscombe style. They might thus be of nearly the same age as the lower gravel of Swanscombe.*" The finds have not been provenanced but at ca. 18.25m OD, the artefacts must be associated with areas immediately to the west and north of Burnham, where the Asheldham Gravel lies at 15 - 20m OD (Figures 1-2).
3. To the south-west of the town, a hand-axe in sharp condition was found at Creeksea Place, at ca. 15m OD.
4. Two Palaeolithic cores and some flakes (EHER 11310, 11350) were found approximately 0.5km to the west of the site, from head deposits in the valley of the Pannel's Brook draining Terrace 3. There is a strong probability that these were derived the higher parts of the terrace.

Even in the absence of artefact remains, the Pleistocene sediments and their contained biological remains can be significant as they enable the reconstruction of landforms, climatic conditions and environments occupied by Palaeolithic. In many cases we already have, in museum collections, artefacts from geological units equivalent to those being investigated (often river terrace gravels), but because of the way in which Palaeolithic artefacts were collected in the 19th and early 20th centuries, we often lack the environmental record that modern investigations of the deposits can supply. In addition, it is important to build up an understanding of the way in which the character and preservation of Pleistocene remains varies from place to place, even in the same geological unit. Recent advances in direct dating techniques, including OSL (optically stimulated luminescence), ESR (electron spin resonance), and AAR (amino acid racemization), have added further significance to Pleistocene remains, enabling us to achieve more reliable dating, relevant both to artefacts and to an understanding of landscape evolution.

2.4 Aims and objectives

During recent investigations on the site, six trial-pits were excavated for geoarchaeological purposes. The main aims of the investigation were to: (1) observe and record the sediments excavated; (2) interpret the sub-surface stratigraphy across the site and (3) highlight sediments of potential Geoarchaeological, Pleistocene or Palaeolithic significance.

3. METHODS

Five trial pits were cut, measuring 2m x 2m to the surface of the local bedrock London Clay. The trial pits were numbered GTP1-5 (Figure 6). The trial pits reached a maximum depth of 3.0m. Because of the danger of sidewall collapse, the pits were not entered and were recorded by geological logging at a scale of 1:25 (4 cm = 1 m) and photography, with a surveying staff as a scale. Changes in the sediment type were noted as the machine cut the pit. Samples (2 x 100 litres) from GTP1 (Unit 1.5) and GTP2 (Unit 2.5) were passed through 10mm mesh sieves.

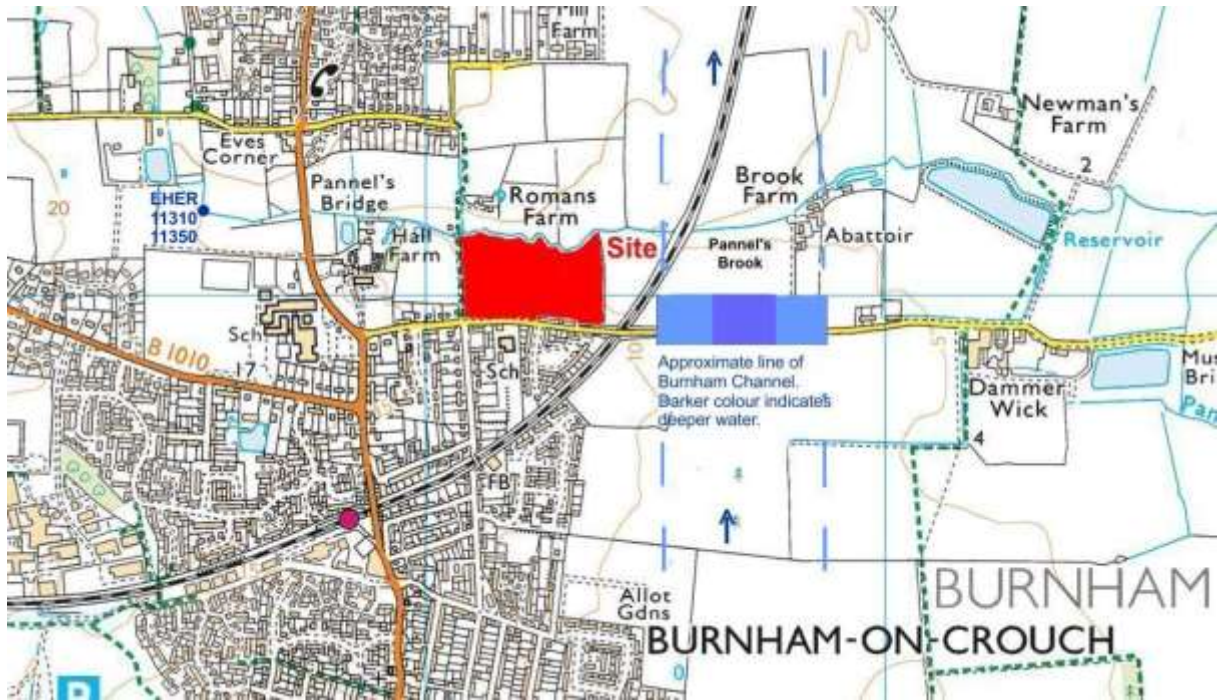


Figure 1: Location of the Marsh Road Site (Ordnance Survey, 2019)

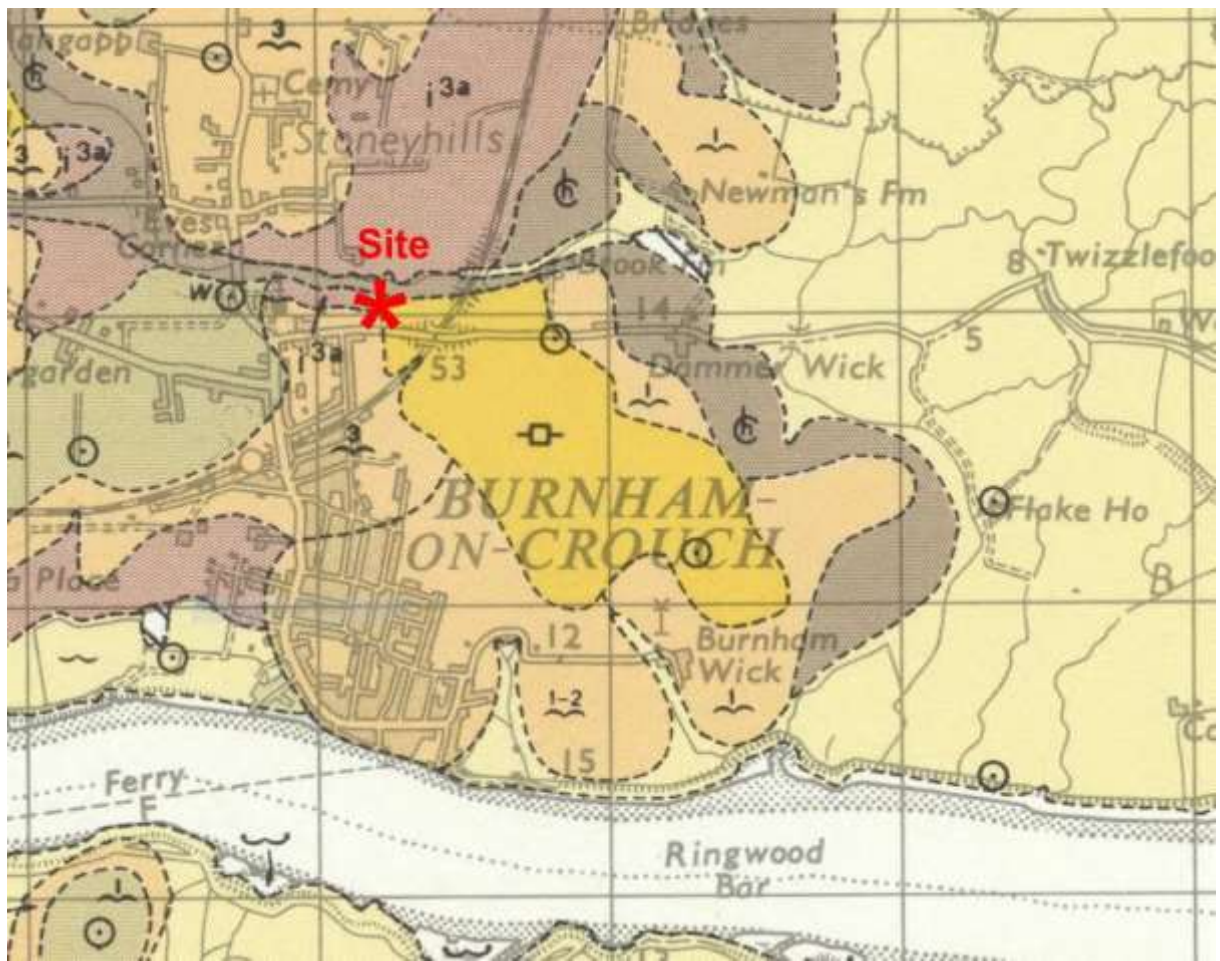


Figure 2: Geology of the Burnham-on-Crouch area (British Geological Survey and Ordnance Survey, 2019)

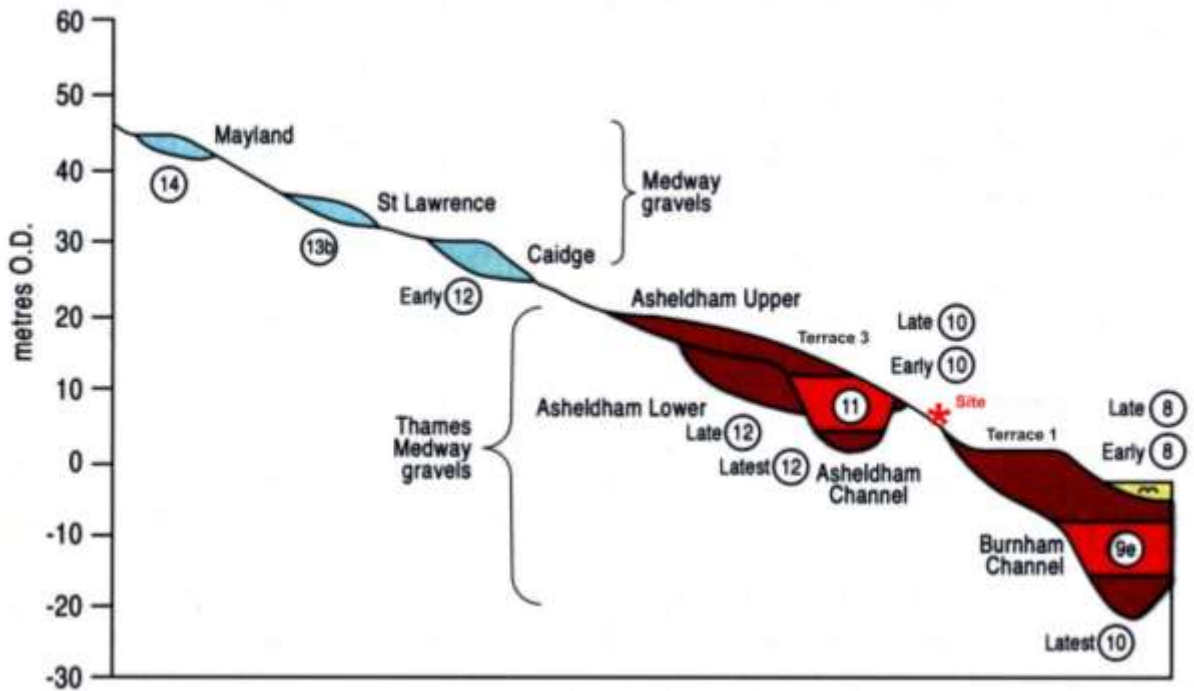


Figure 3: Transverse section through the terrace sequence of the Dengie Peninsula

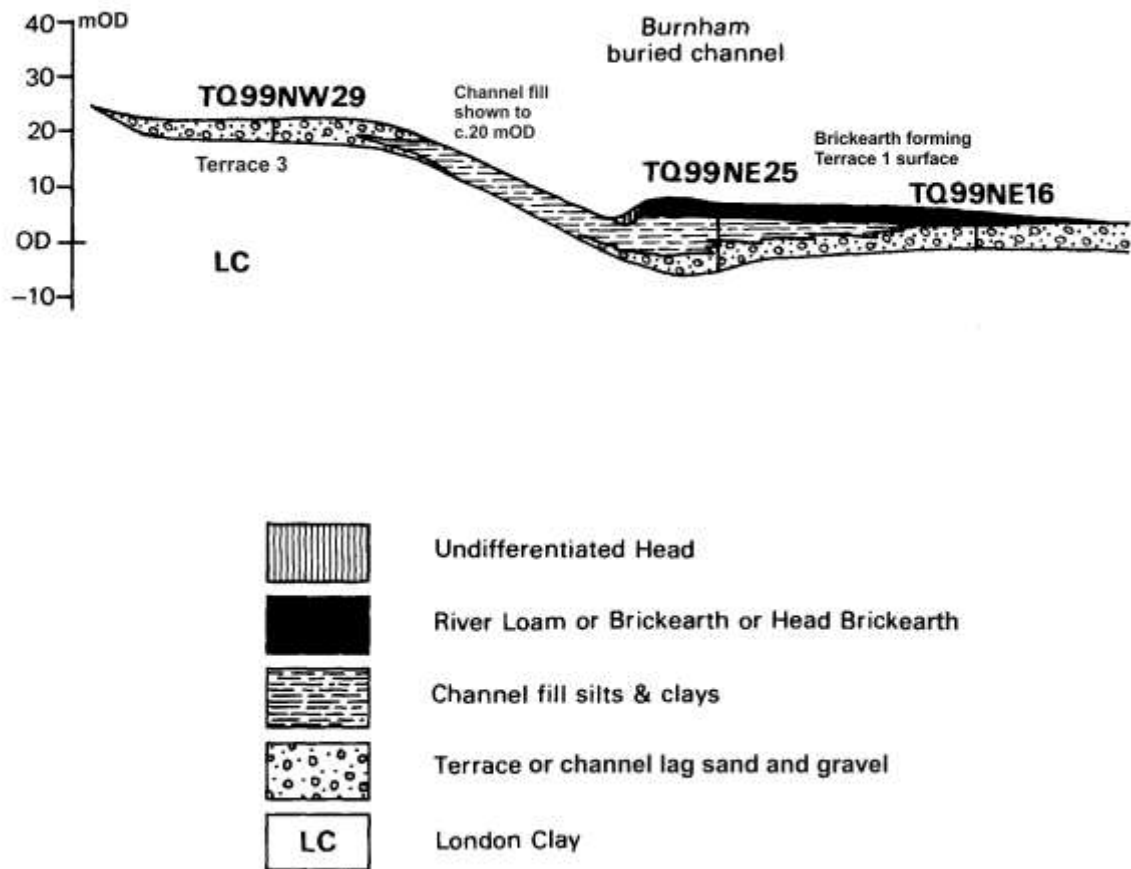


Figure 4: Northwest – southeast borehole section (Simmons, 1978, British Geological Survey, Mineral Assessment Unit)

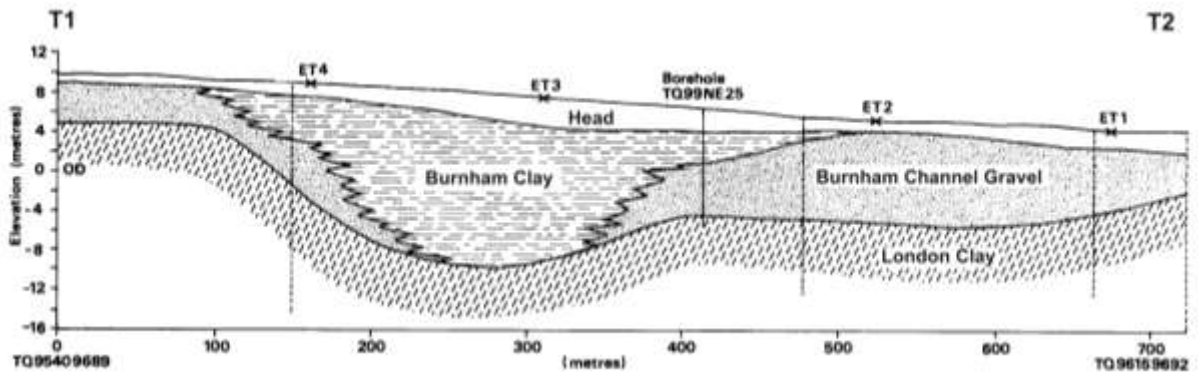


Figure 5: West - east resistivity survey section (Simmons, 1978, British Geological Survey, Mineral Assessment Unit)



Figure 6: Locations of archaeological and geotechnical trial pits on site (reproduced from Archaeology South East)

4. RESULTS & INTERPRETATION OF THE GEOARCHAEOLOGICAL INVESTIGATIONS

Details of the test pits are given in Tables 1–5 and Figures 6 – 16. A generalised stratigraphy can be constructed from the trial pits: (1) Soil; (2) Silt, loessic; (3) Silty clay; (4) Sandy and sandy gravel, clayey, cemented; (5) Coarse gravel; (6) Gravelly sand; (7) Reworked London Clay with calcium CaCO_3 precipitate and sandy gravel inclusions, and (8) London Clay.

Clast lithology. Mostly flint, variously rounded (brown or grey, mostly 2–3cm long), sub-angular (often with white cortex, up to 7cm long) or sub-angular (with white patina, 2–3cm).

Soil. Loam covering the whole site and seen in all the Geoarchaeological Trial Pits.

Silt, loessic. Occurred in all 5 trial pits, readily identified by its light brown colour, varied from barely discernible to ca. 5cm thick. Thought to be a wind-blown silt (loess).

Silty clay. Occurred in all 5 trial pits. Orange-brown, blocky, virtually stoneless. Could be part of the Brickearth deposits of south-east Essex, as mapped by the BGS (Sheet 258-259) or part of channel fill deposits of the Burnham Channel, as postulated by Simmons (1978).

Cemented sand and sandy gravel. Occurred in GTP1, 2 and 3, on the higher part of the slope and extending slightly further downslope than the Coarse Gravel below. Bedded in places. The clasts were slightly smaller and less frequent than the Coarse Gravel. They are thought to be the result of surface wash reworking material from the unit below, and to have been cemented by calcium carbonate-rich groundwater. An ice-wedge cast originated from the upper boundary of the gravel, indicating that it was a ground surface after deposition, during cold periglacial conditions in which the ice wedge formed. The wedge penetrated down into Gravelly Sand below. On melting, the surrounding material collapsed in the void. The amount of carbonate water can hold increases in lower temperatures. The cast indicates there could have been more carbonate in the groundwater in the cold conditions, leading to the cementing when the groundwater froze.

Coarse gravel. Poorly bedded and larger clasts more frequent, mostly orientated at various angles, suggesting flood deposition. Could be the Asheldham Gravel of Terrace 3, but its thinness (maximum 0.35m) and crop (restricted to GTP1 and 2) would suggest a feather-edge position.

Gravelly Sand. Horizontal bedding, planar-bounded cross-bedding, and channelling indicate fluvial bedding. As with the coarse gravel above, likely to be the feather edge of the Ashedham Gravel.

Reworked London Clay. Found in GTP4 and 5. It is very similar in colour and texture to the parent London Clay below. The presence of calcium carbonate nodules, particularly in its upper part, indicate that the London Clay has been weathered and that carbonate in the groundwater has precipitated out in dry conditions. This is likely to be linked with the cementing of the sand gravel on higher parts of the slope. Inclusions of sandy gravel within the clay suggests surface water flows brought down sand and fine gravel from the terrace gravels higher upslope. As they lie within, as well

as at the top of, the clay, the clay must have been soliflucting downslope to cover the surface channels. This unit appears to be the lateral equivalent of the sands and gravels higher upslope, which may have protected the London Clay there so that it was less susceptible to weathering and movement.

London Clay. Recognised by its stoneless nature, colour and texture. The brown colour is typical of a near ground-surface position, allowing the iron present to weather to a brown colour as the iron present weathers to its ferric form. Also the Clay is brecciated (fragmented) due to wetting and drying and/or freezing and thawing. A boundary between the *in situ* and reworked London Clay was not discerned, but as the reworked clay was at least in part just a weathering of the parent clay, a transition rather than a junction would be likely. Also it should be noted that reworked London Clay can be difficult to discern from the parent clay, as is the case for parts of the Langley Silt and Ilford Silt either side of London, both involving reworked London Clay, where gravels can intervene between the two. Thus there is uncertainty about the point at which *in situ* London Clay is reached.

Sieving of 100 litres of sandy gravel from GTP1 (Unit 1.5) and GTP2 (Unit 2.5) (total 200 litres), yielded no humanly struck flints. Nor were sediments present that yielded biological material of palaeoenvironmental value.

5. RECOMMENDATIONS

The only *in situ* finds of note in the area were from the sand and gravel pit at Goldsands Road, Southminster. The finds at Burnham-on-Crouch were from superficial situations. No further Palaeolithic archaeological investigation is recommended. The prospect of retrieving any palaeoenvironmental material is low and no further action is recommended.

6. REFERENCES

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Warren, S.H. (1933) The Palaeolithic industries of the Clacton and Dovercourt districts. Essex Naturalist, 24, 1–29.

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Table 1: Lithostratigraphic description of trial-pit GTP1, Marsh Road, Burnham-on-Crouch

Depth (m bgl)	Depth (m OD)	Thickness (m)	Description	Unit
0 to 0.25	11.10 to 10.85	0.25	Soil.	1.1
0.25 to 0.30	10.85 to 10.80	0.05	Silty clay (?loess).	1.2
0.30 to 0.70	10.80 to 10.40	0.4	Clay, stoneless, massive to blocky. Brown (10YR5/6, reddish brown) with orange (7.5YR7/8, strong brown) mottles. Surface shows geometrical pattern of cracking infilled with loess, could be due to ground shrinkage on dry conditions or cold (periglacial) shrinkage due to freezing.	1.3
0.70 to 0.95	10.40 to 10.15	0.25	Cemented sandy gravel. Horizontal bedding shown by variation in pebble size. Matrix medium sand, pebbles rounded and sub-angular flint, 2-3 cm, maximum 4-5 cm. Grey-brown (7.5YR6/4, light brown).	1.4
0.95 to 1.20	10.15 to 9.90	0.25	Coarse sandy gravel. Gravel rounded and sub-angular flints, 2-3 cm, some up to 6 cm. Sand medium-coarse. No overt bedding; clasts of variable orientation. Yellow (7.5YR6/6, reddish yellow), but more orange at top (5YR5/8, yellowish red).	1.5
1.20 to 1.70	9.90 to 9.40	0.5	Gravelly medium-coarse sand, cross-bedded with recurrence horizon, rounded flints c.3cm. Gravel lag at base (orange) rounded; fines upwards from gravelly sand to sand with occasional pebbles.	1.6
1.70	9.40	-	London Clay	1.7

Table 2: Lithostratigraphic description of trial-pit GTP2, Marsh Road, Burnham-on-Crouch

Depth (m bgl)	Depth (m OD)	Thickness (m)	Description	Unit
0 to 0.25	10.50 to 10.25	0.25	Soil	2.1
0.25 to 0.35	10.25 to 10.15	0.1	Silty clay (?loess)	2.2
0.35 to 0.90	10.15 to 9.6	0.55	Clay, stoneless, massive to blocky. Brown (10YR5/6, reddish brown) with orange (7.5YR7/8, strong brown) mottles	2.3
0.90 to 1.2	9.60 to 9.30	0.3	Cemented sandy gravel. Horizontal bedding shown by variation in pebble size. Matrix medium sand, pebbles rounded and sub-angular flint, 2-3 cm, maximum 4-5 cm. Grey-brown (7.5YR6/4, light brown). Cross-bedded, apparent dip to south. An ice-wedge cast, originates from interface of 2.3 and 2.4, extends into 2.5.	2.4

1.20 to 1.55	9.30 to 8.95	0.35	Coarse sandy gravel. Gravel rounded and sub-angular flints, 2-3 cm, some up to 6 cm. Sand medium-coarse. No overt bedding; clasts of variable orientation. Yellow (7.5YR6/6, reddish yellow), but more orange at top (5YR5/8, yellowish red). Ice-wedge casts reaches into 2.5.	2.5
1.55 to 2.25	8.95 to 8.25	0.7	Gravelly medium-coarse sand, cross-bedded with recurrence horizon, rounded flints c.3cm. Gravel lag at base (orange) rounded; fines upwards from gravelly sand to sand with occasional pebbles. Cross-bedded, apparent dip to north.	2.6
2.25 to 2.8	8.25	-	London Clay.	2.7

Table 3: Lithostratigraphic description of trial-pit GTP3, Marsh Road, Burnham-on-Crouch

Depth (m bgl)	Depth (m OD)	Thickness (m)	Description	Unit
0 to 0.25	10.00 to 9.75	0.25	Soil	3.1
0.25 to 0.35	9.75 to 9.65	0.1	Silty clay (?loess)	3.2
0.35 to 1.05	9.65 to 8.95	0.7	Clay, stoneless, massive to blocky. Brown (10YR5/6, reddish brown) with orange (7.5YR7/8, strong brown) mottles	3.3
1.05 to 1.85	8.95 to 8.15	0.8	Cemented sandy gravel. Horizontal bedding shown by variation in pebble size. Matrix medium sand, pebbles rounded and sub-angular flint, 2-3 cm, maximum 4-5 cm. Grey-brown (7.5YR6/4, light brown).	3.4
1.85 to 2.10	8.15	-	?London Clay	3.5

Table 4: Lithostratigraphic description of trial-pit GTP4, Marsh Road, Burnham-on-Crouch

Depth (m bgl)	Depth (m OD)	Thickness (m)	Description	Unit
0 to 0.15	9.50 to 9.35	0.15	Soil	4.1
0.15 to 0.25	9.35 to 9.25	0.1	Silty clay (?loess)	4.2
0.25 to 0.85	9.25 to 8.85	0.6	Clay, stoneless, massive to blocky. Brown (10YR5/6, reddish brown) with orange (7.5YR7/8, strong brown) mottles	4.3
0.85 to 2.45	8.85 to 7.25	1.60	Clay, with calcareous nodules, typically c. 0.5 cm frequent in top 0.5 m. Inclusions of pebbly sand, typically 0.3 x 0.3 m, flints - 5 cm.. Occasional flints, up to 4 cm, in top 20 cm. .Reworked London Clay.	4.4
2.45 to 2.60	7.25		?London Clay	4.5

Table 5: Lithostratigraphic description of trial-pit GTP5, Marsh Road, Burnham-on-Crouch

Depth (m bgl)	Depth (m OD)	Thickness (m)	Description	Unit
0 to 0.25	9.20 to 8.95	0.25	Soil	5.1
0.25 to 0.35	8.95 to 8.85	0.1	Silty clay (?loess)	5.2
0.35 to 1.05	8.85 to 8.15	0.7	Clay, stoneless, massive to blocky. Brown (10YR5/6, reddish brown) with orange (7.5YR7/8, strong brown) mottles	5.3
1.05 to 1.19	8.15 to 7.65	0.5	Sandy gravel with core of sand. Channelled into surface of 5.5	5.4

			Matrix of sandy gravel, medium sand, brown (5YR5/6, yellowish red), flints, rounded mostly 2-3 cm, up to 7 cm, sub-rounded with white cortex, to 7 cm, sub-angular with white patina, to 2 cm. Core of medium sand, brown (5YR5/6, yellowish red).	
1.20 to 1.6	8.15 to 7.50	1.65	Clay, brown (10YR5/4, yellowish brown), brecciated (but fragments sub-rounded, as if remoulded). Blocky with polished surfaces (not slickensided), columnar breakage. Calcareous nodules, up to 0.5 cm, frequent in upper part, occasional in lower part. Sand inclusions. Reworked London Clay	5.5
1.60 to 1.75	7.5	-	?London Clay	5.6

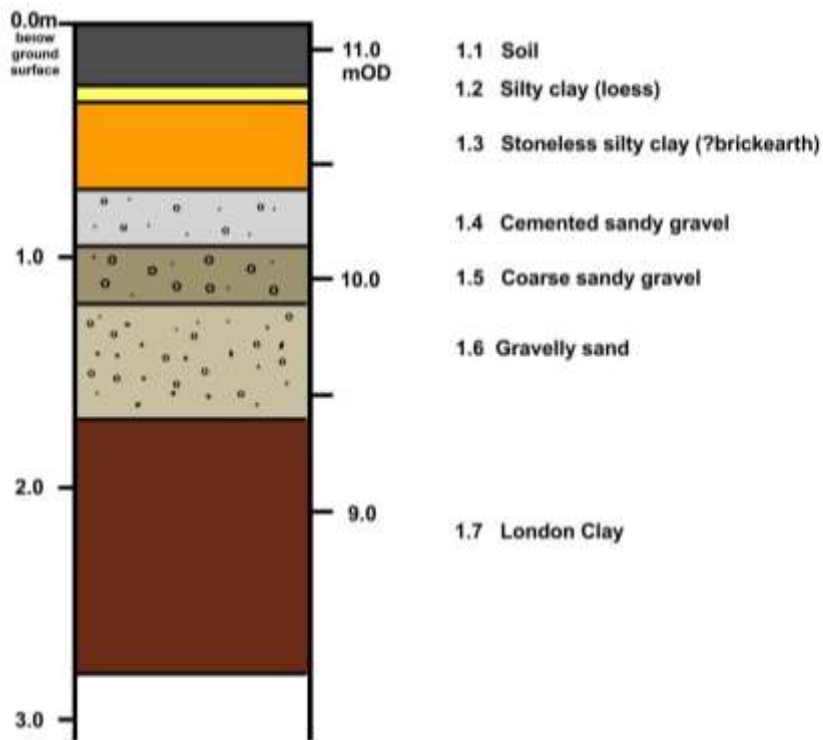


Figure 7: Geoarchaeological Trial Pit 1, stratigraphic log.



Figure 8: Geoarchaeological Trial Pit 1, photographic log.

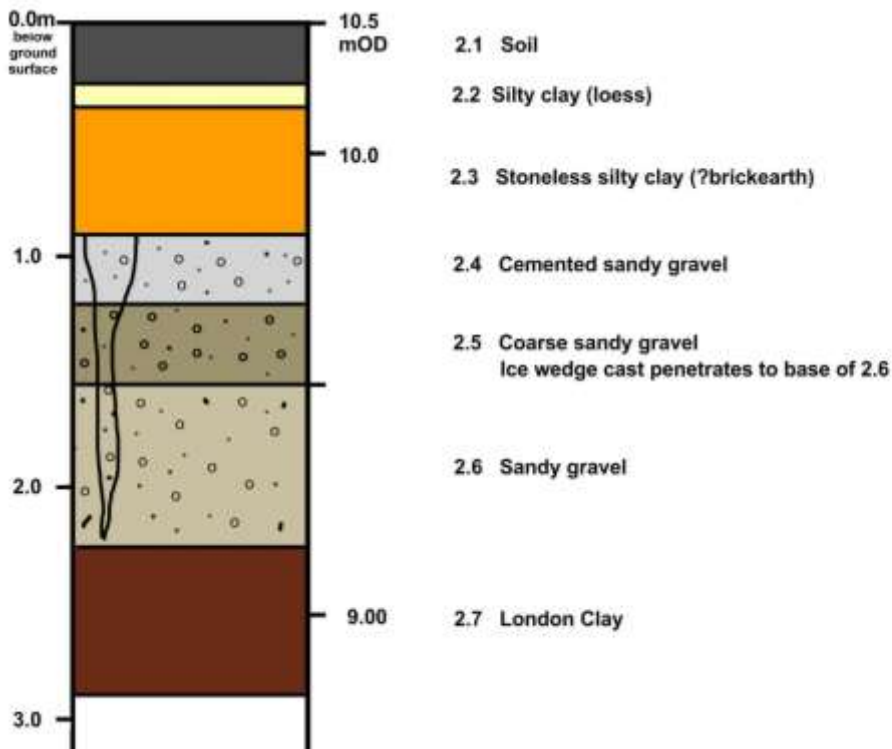


Figure 9: Geomorphological Trial Pit 2, stratigraphic log.

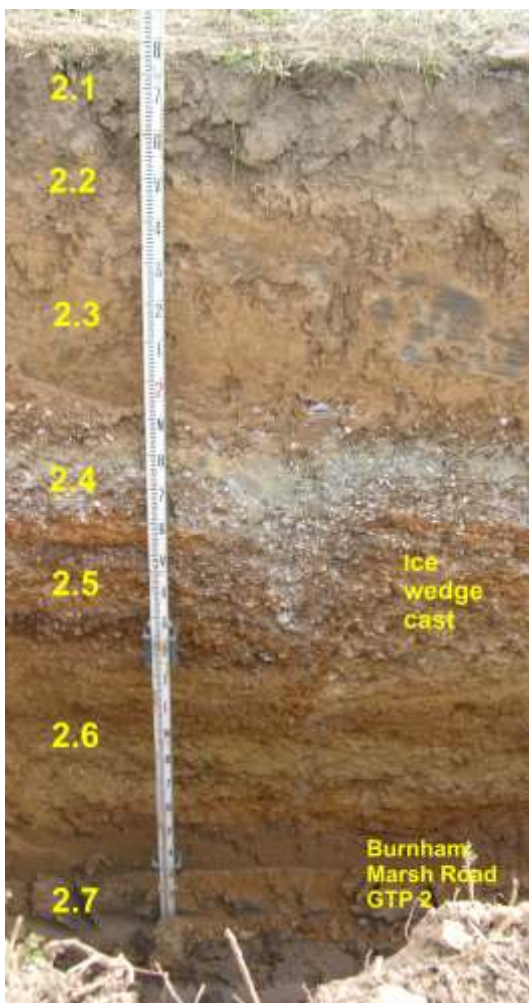


Figure 10: Geomorphological Trial Pit 2, photographic log.

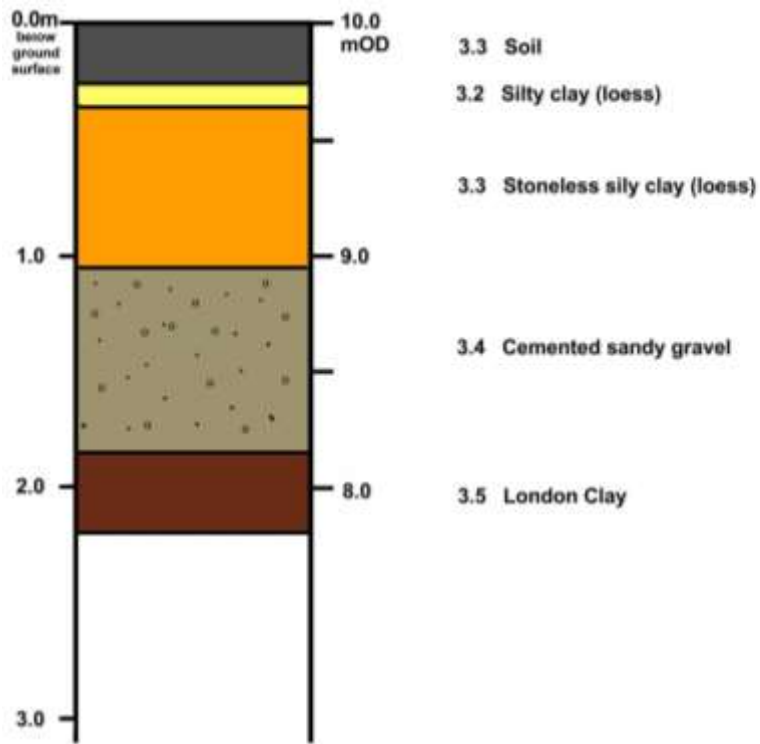


Figure 11: Geoarchaeological Trial Pit 3, stratigraphic log.

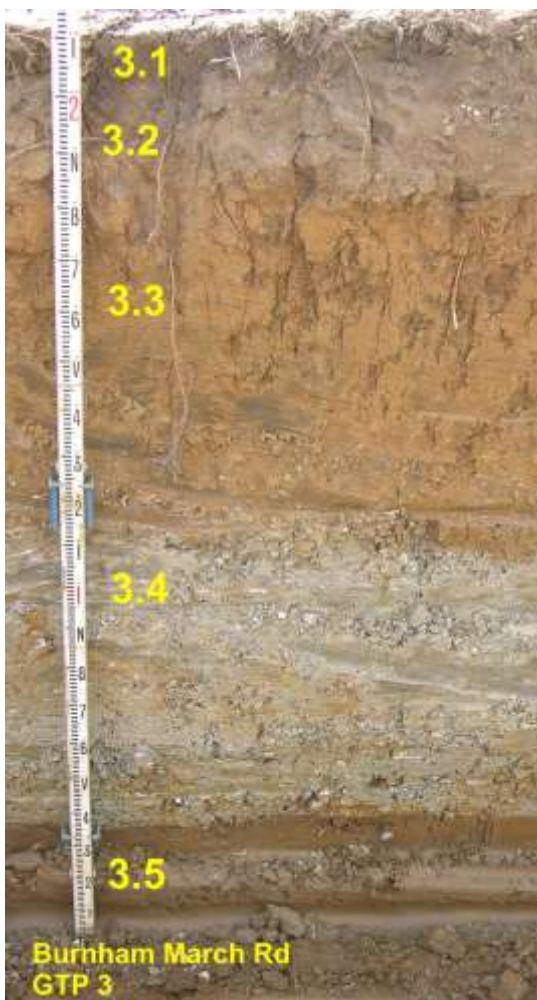


Figure 12: Geoarchaeological Trial Pit 3, photographic log.

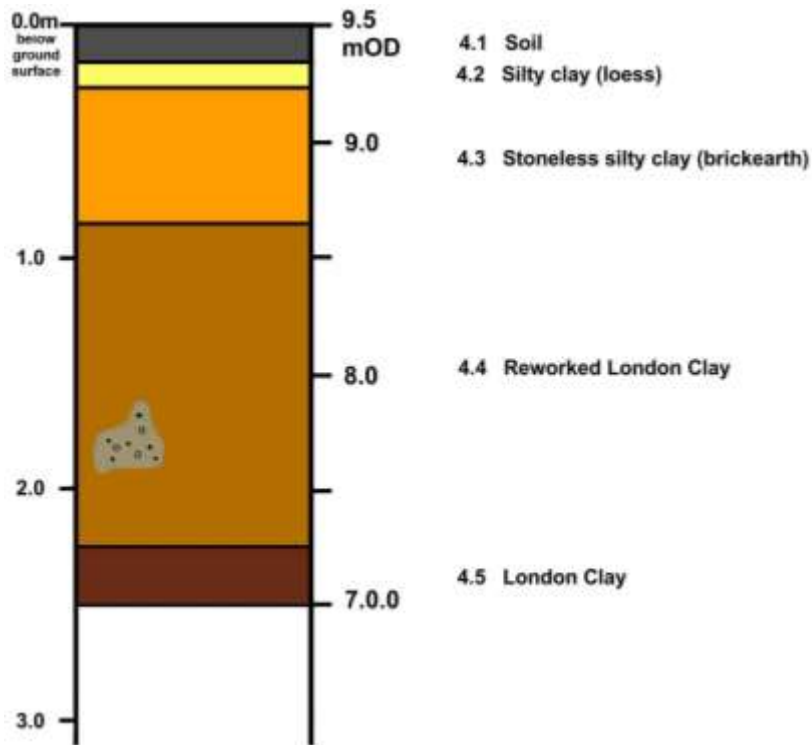


Figure 13: Geoarchaeological Trial Pit 4, stratigraphic log.

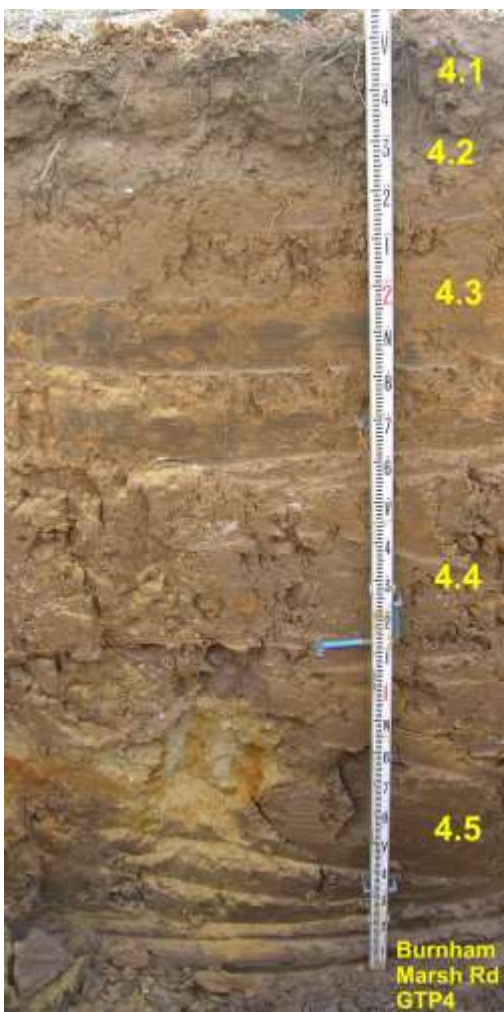


Figure 14: Geoarchaeological Trial Pit 4, photographic log.

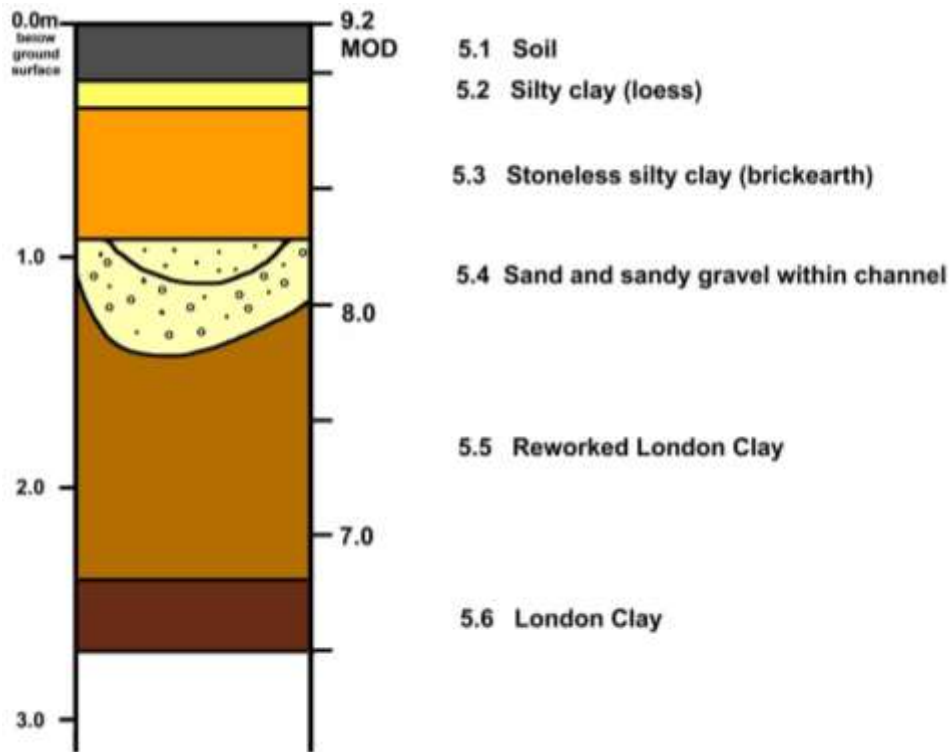


Figure 15: Geoarchaeological Trial Pit 5, stratigraphic log.

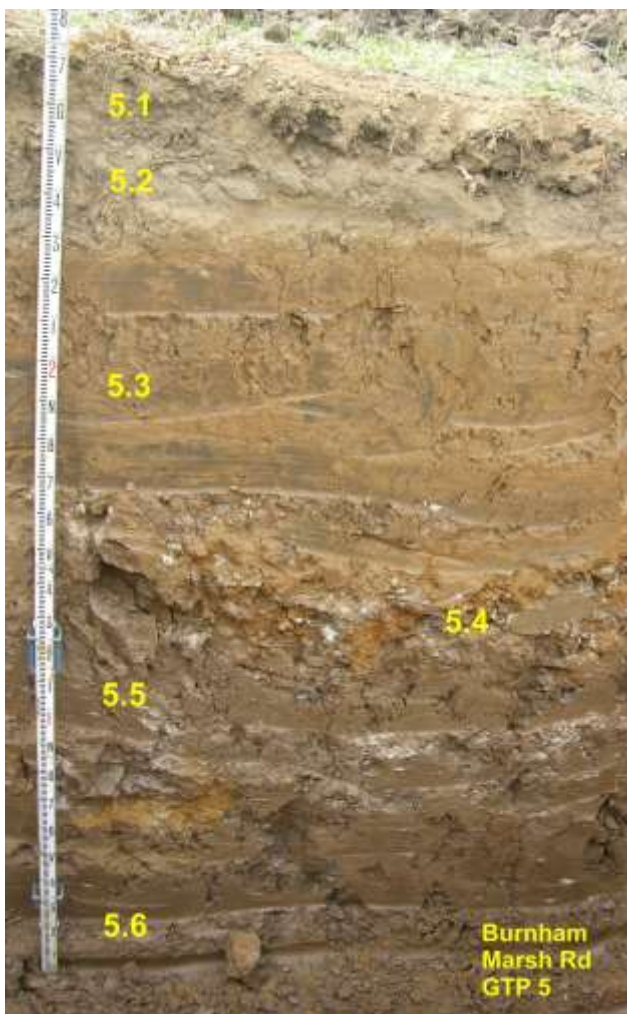


Figure 16: Geoarchaeological Trial Pit 5, photographic log.

FIGURES



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Project Ref: 190426	Nov 2019	Site location and selected HER references	
Report No: 2019341	Drawn by: APL		



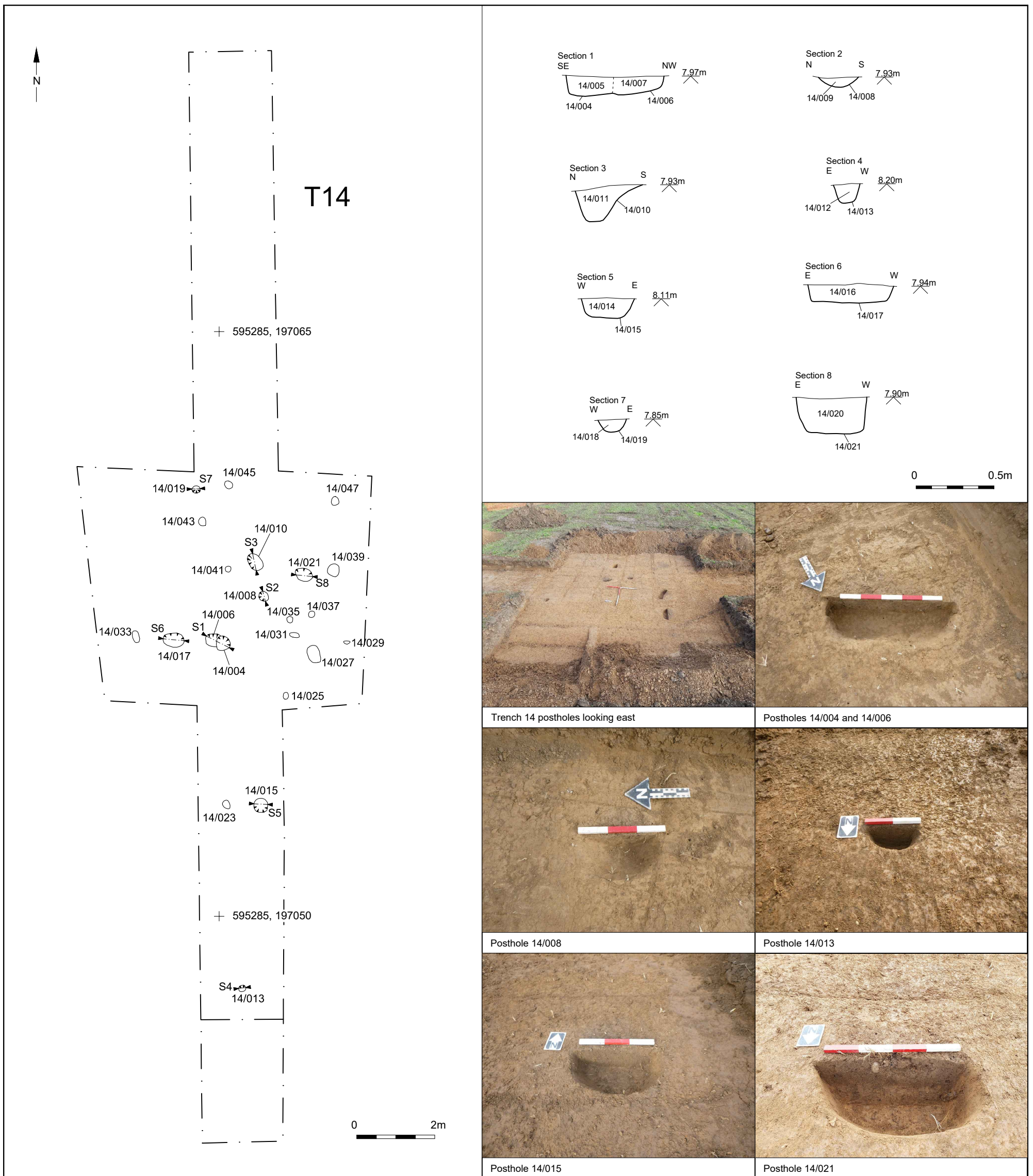
© Archaeology South-East		Land north of Marsh Road, Burnham-on-Crouch	Fig. 10
Project Ref: 190426	Nov 2019	Trench 25 - 30 photographs	
Report Ref: 2019341	Drawn by: APL		



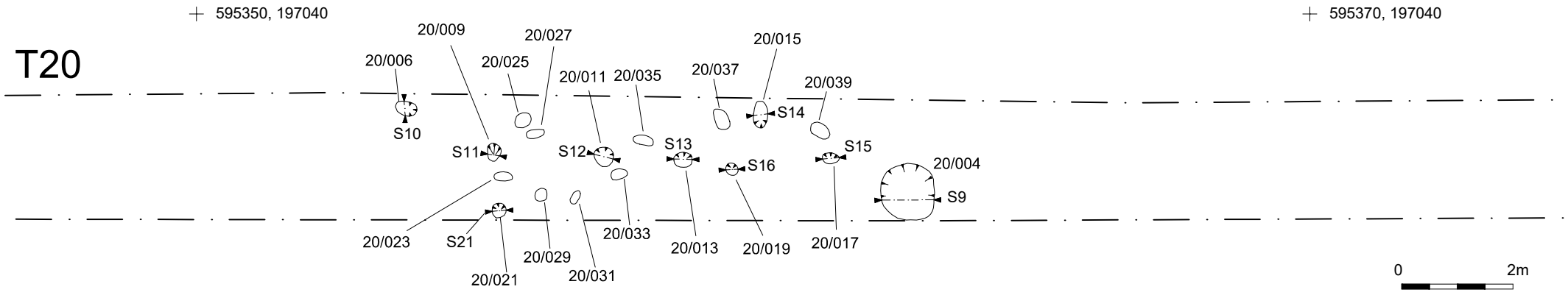
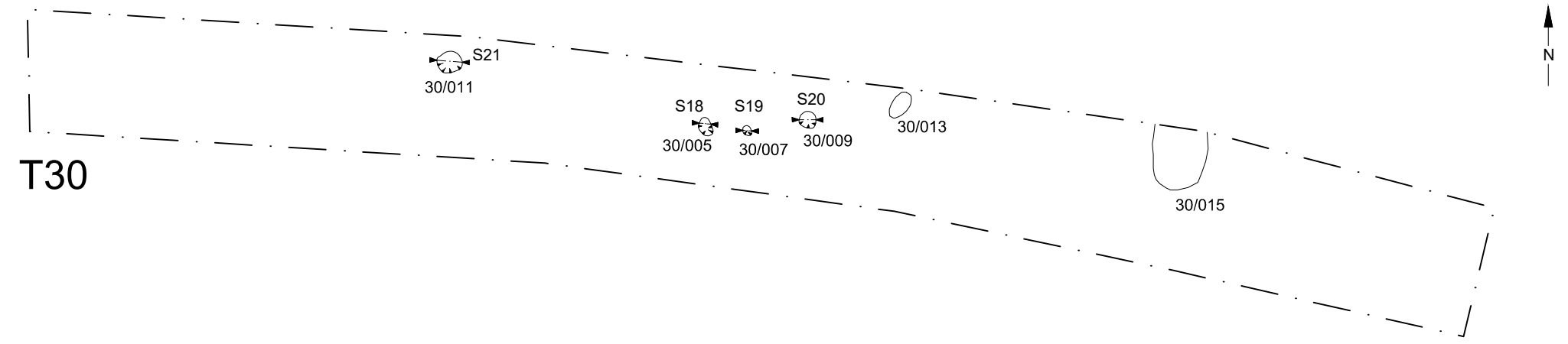
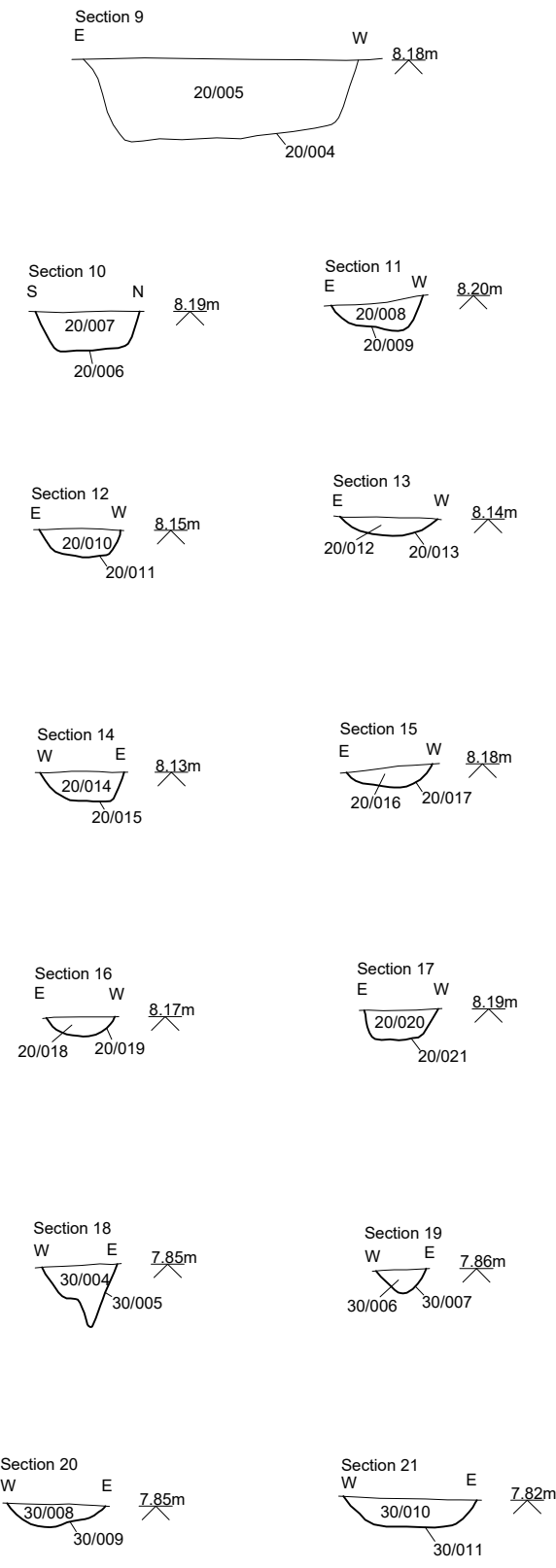
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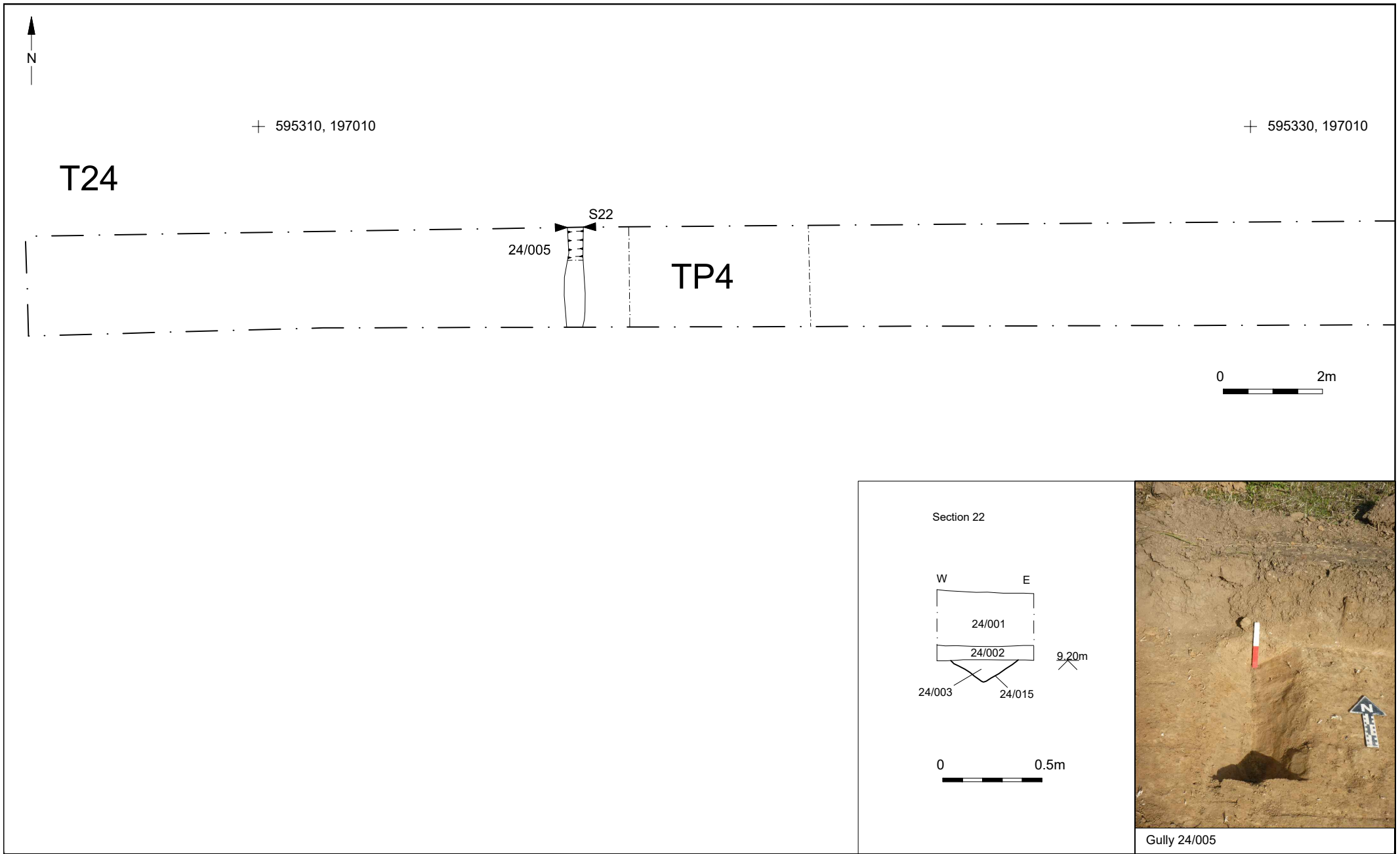


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Project Ref: 190426	Nov 2019	Trench and test pit locations with site constraints	
Report Ref: 2019341	Drawn by: APL		

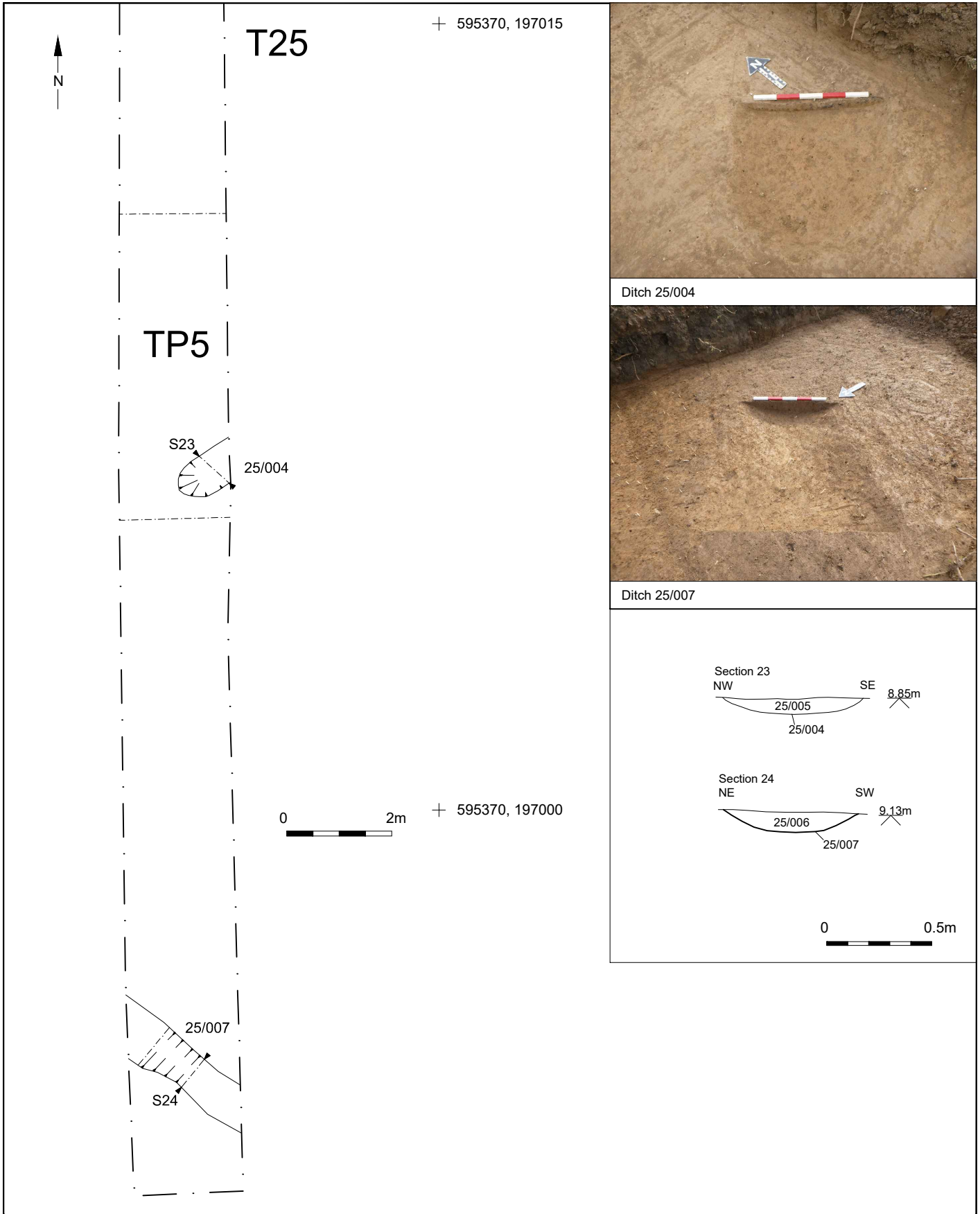


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Project Ref: 190426	Nov 2019	Trench 14 plan, sections and photographs	
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Project Ref: 190426	Nov 2019	Trench 24 plan, section and photographs	
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Project Ref: 190426	Nov 2019	Trench 25 plan, sections and photographs	
Report Ref: 2019341	Drawn by: APL		



Trench 1



Trench 2



Trench 3



Trench 4



Trench 5



Trench 6



Trench 7



Trench 8

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Project Ref: 190426	Nov 2019	Trench 1 - 8 photographs	
Report Ref: 2019341	Drawn by: APL		



Trench 9



Trench 10



Trench 11



Trench 12



Trench 13



Trench 14

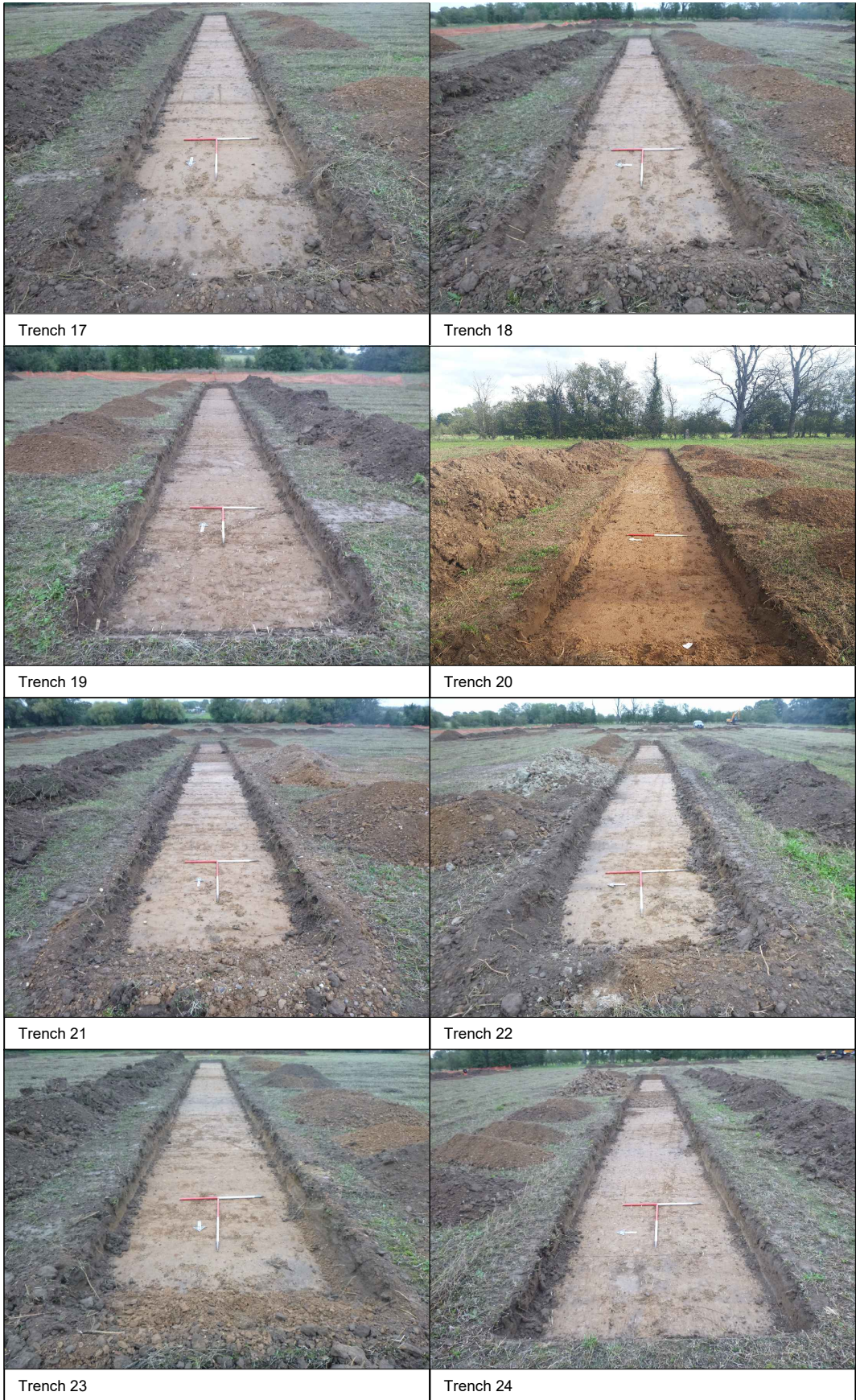


Trench 15



Trench 16

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Project Ref: 190426	Nov 2019	Trench 9 - 16 photographs	
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Project Ref: 190426	Nov 2019	Trench 17 - 24 photographs	
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