Archaeology South-East

ASE

Archaeological and Geoarchaeological Evaluation Report
Land West of Sompting, West Sussex
(Phase 1 – Trenches 19 –39 and 104 – 105; GTP 1 – 4)

NGR 516440 105056
TQ 16440 05056
WBC Planning Ref: AWDM/0323/19

ASE Project No: 220014
Site Code: LWS 22

ASE Report No: 2022209
OASIS id: archaeol6-508614

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Abstract

Archaeology South-East were commissioned by Orion Heritage to undertake an archaeological and geoarchaeological evaluation at land west of Sompting, West Sussex. The fieldwork was carried out between the 26th June and 5th July 2022. This report details the results of 23 evaluation trenches and 4 geoarchaeological test pits.

The archaeological evaluation encountered no archaeological features; however, artefacts of prehistoric and medieval date were recovered from unstratified, disturbed and overburden contexts.

The geoarchaeological evaluation has shown a complex sequence of deposits related to a previous high sea level event, subsequent periods of landscape stabilisation, and overlying calcareous, and decalcified head, including some finer grained units to be present in this part of the site. Deposits are considered to have a regionally significant potential for palaeoenvironmental and landscape reconstruction, along with the potential to preserve Palaeolithic remains.

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1.0 INTRODUCTION

1.1 Site Background

1.1.1 Archaeology South-East (ASE), the contracting division of the Institute of Archaeology, University College London, was commissioned by Orion Heritage to undertake an archaeological and geoarchaeological evaluation of land west of Sompting, West Sussex (centred on NGR 516440 105056; Figure 1).

1.2 Geology and Topography

1.2.1 According to the British Geological Survey 1:50,000 scale geological mapping available online (BGS 2022) the solid geology of the site comprises the Tarrant Chalk Member overlain by superficial head deposits of clay, silt, sand and gravel. Alluvium is mapped to the southeast and raised beach deposits to the south.

1.2.2 The site lies on the western periphery of Sompting, straddling numerous agricultural fields bisected by West Street, c. 44.5 ha in extent. to the west of Fulbeck Avenue. It is bounded by the A27 to the north, fields to the south, Loose Lane and associated residential plots to the east and a strip of fields separating the site from the outskirts of Worthing to the west (Figures 2 and 3).

1.3 Planning Background

1.3.1 A hybrid application has been made to the Worthing Borough Council for residential development of the site, with associated infrastructure (AWDM/0323/19).

1.3.2 Consultation advice provided by the WSCC Archaeologist makes provision for archaeological evaluation of the site and recommends the following condition wording:

No development shall commence within the site until:
a) A written scheme of investigation (archaeological work) which should include on-site field survey and recording and the analysis reporting publishing and archiving of the results, has been submitted to and approved by the Local Planning Authority;
b) The approved programme of archaeological work has been carried out in accordance with the approved details.

REASON: In order to assure that heritage assets of archaeological interest will be adequately recorded before development and subsequently will be adequately reported.

1.3.3 A recent geoarchaeological desk-based assessment includes a deposit model constructed using available geotechnical data (ASE 2022a). As a result of this work staged evaluation comprising test pits and boreholes has been recommended.

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1.3.4 Accordingly, a Written Scheme of Investigation for the archaeological and geoarchaeological evaluation of the site (ASE 2022b) was prepared by ASE and approved by all parties prior to the commencement of fieldwork.

1.4 Scope of Report

1.4.1 This report details the results of the trial trench evaluation, and geoarchaeological evaluation undertaken between the 26th June and 5th July 2022.

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2.0 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The following historical and archaeological background is paraphrased from the WSI (ASE 2022b), which draws upon a desk-based assessment (DBA) carried out for the site (CgMs 2019).

2.1.2 The desk-based assessment states the following in respect of the site's potential:

A low theoretical archaeological potential has been identified for Prehistoric, Anglo-Saxon and medieval evidence. A moderate theoretical potential is identified for the Roman period and a high theoretical potential for post-medieval agricultural activity and 20th Century military use

2.1.3 The Roman potential is elevated due to the proximity of the projected line of the Chichester to Portslade Roman road, numerous nearby spot finds and settlement activity to the north at Sylvan Road

2.1.4 A WWII pillbox is located on the site and aerial photography dating to 1947 suggests that part of the site lying south of West Street was occupied by a military camp.

2.1.5 The consultation response provided by the WSCC Archaeologist (WSCC 12/4/2019) provides further background and rationale for the current scope of works:

It should be mentioned also that the site's location not far from, but above the flood plains of two watercourses, the Broadwater Brook and Cokeham Brook, may have made the land attractive to ancient settlement and agriculture. In addition, the recent discovery in archaeological excavations of a former small stream course just to the west of the site and north of West Street may be an indication of a spring line at the foot of the dip slope of the Downs just north of the site, another attraction for ancient settlement and agriculture. There is no good reason to assume, as stated in the Assessment Report (3.2.5), that the geological Head deposits of the site would have been unfavourable to prehistoric settlement.

An additional recent discovery are the sites of a probable 17th -century malthouse and associated buildings (and the former stream mentioned above), recently investigated by Worthing Archaeological Society immediately to the west of the application area, and on the north side of West Street. The site's eastward limits are not yet known, and may extend into the footprint of the proposed northern attenuation pond. The need for geoarchaeological desk-based assessment and investigation was referred to in the pre-application advice, in respect of the possible survival of buried coastlines and coastal deposits, contemporary with human occupation of north-west Europe.

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2.2 Geoarchaeological background

2.2.1 The following section summarises the known information relating to Pleistocene and early Holocene deposits and archaeology within the area and the wider landscape.

The Lower Coastal Plain

2.2.2 The Sussex coastal plain is known to have a complex succession of raised beaches. These are generally split into two groups the Upper Coastal Plain and the Lower Coastal Plain. The present site sits on the Lower Coastal Plain.

2.2.3 At least two raised beach sequences are known to exist on the Lower Coastal Plain. Here there is less surface topography in comparison with the Upper Coastal Plain, giving little evidence of the underlying sequence (Bates et al. 2010). Consequently these are less well mapped being less exposed, less quarried, and often existing below the water table. Marine sequences known on the Lower Coastal Plain include the Brighton-Norton raised beach and the Pagham raised beach.

2.2.4 The Brighton-Norton raised beach is generally present over 5m OD and deposits consist of fine sands and silts, along with a buried soil above the marine deposits (Bates et al. 2010). Faunal evidence and dating suggest these deposits are from MIS 7, a period of human occupation in Britain. The Pagham raised beach is younger and thought to have formed during the last interglacial, MIS5e. It is not known to have produced any artefacts and there is very limited evidence of human occupation in Britain at this time. However, deposits of the Pagham raised beach have been known to produce important palaeoenvironmental evidence (Bates et al. 2010).

Fluvial and alluvial deposits

2.2.5 The Coastal Plain is dissected by north-south trending valleys which begin life within the chalk escarpment as dry valleys but coalesce through confluences into relatively major channels forming streams (Rifes) and estuary, intertidal environments (Harbours) where they meet the English Channel. The dry valleys truncate older head and marine deposits as they leave the South Down escarpment and cross the Coastal Plain. As they approach the modern coast as deeper channels they contain complex sequences of Holocene alluvium in their lower reaches.

2.2.6 The site lies to the west of the River Adur and the east of the now dry Findon valley. While no extensive fluvial or alluvial deposits are currently mapped on site by the BGS, it is possible that alluvial deposits from either of these water courses extend into the site. Smaller streams are also present to the west of the site and alluvium is mapped in the south east of the site as it falls into a dry valley.

Head deposits

2.2.7 Extensive head deposits are mapped along the south coast of Britain. These vary from fine grained ‘Brickearth’ deposits formed on wind-blown or

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redeposited loess, to coarse grained reworking of fluvial or beach gravels. Head deposits are frequently calcareous and therefore provide good potential for palaeoenvironmental preservation, and often contain fine grained units or buried soils with potential for primary context archaeological signatures, such as the Palaeolithic site of Red Barnes in Hampshire (Wenban-Smith 2000).

2.3 Geoarchaeological Desk Based Assessment and Deposit Model

2.3.1 As part of the geoarchaeological desk based assessment, site investigation logs were used to create a lithostratigraphic model of deposits on site. Based on the descriptions of deposits and their position on the Lower Coastal Plain of Sussex the assessment reached the following conclusions (ASE 2022a).

- *The site has been shown to have up to 8m of surviving Quaternary deposits overlying chalk at depth.*
- *At the base of the sequence across the site is a sand, thought to potentially be marine in origin related to a raised beach.*
- *Fine grained calcareous deposits overly the potential marine sand and have high geoarchaeological potential for archaeological and palaeoenvironmental remains.*
- *Deposits need further geoarchaeological assessment through a program of test pitting and boreholing in order to more accurately model the sequence and fully assess their geoarchaeological potential. Geoarchaeological assessment could be carried out in conjunction with any intrusive archaeological evaluation should it be deemed necessary*

2.4 Project Aims and Objectives

2.4.1 The general aims of the evaluation were:

- *To ensure that any archaeological deposit, feature, artefact or ecofact exposed, is recorded, interpreted and reported on to appropriate standards and to enable appropriate mitigation methods*

2.4.2 The site-specific research aims of the evaluation with reference to the South-East Research Framework (SERF) are outlined below:

- *Colonisation and occupation issues: To what degree is the region a crossroads or a backwater in terms of Upper Palaeolithic and early Mesolithic occupation patterns [SERF, Upper Palaeolithic and Mesolithic]*

- *Communications: complete the main road network; gather all vehicle evidence [SERF, Roman]*

- *Landscape, environment and settlement evidence [SERF, Roman]*

- *An understanding of the multifaceted landscape [SERF, Post-medieval and modern periods]*

- *Second World War – (a) Possible extension of the KCC Defence of Kent 'research, search and record' Project to the whole of the region, to establish*

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the pattern of the whole militarised landscape (b) understand more fully provision for Operation Overlord and British Fortitude deception plan [SERF, Defence]

2.4.3 Site-specific geoarchaeological research aims are proposed below with reference to the South-East Research Framework (SERF):

Raised beaches

- Improved mapping, sub-surface deposit modelling and dating of raised beach deposits.
- Modelling of raised beach deposit zones/types more likely to contain undisturbed or minimally disturbed remains and biological remains

Colluvial/solifluction/aeolian deposits

- Identification of areas of colluvial/solifluction deposits that may contain undisturbed or minimally disturbed concentrations of Palaeolithic remains (cf Red Barns)
- More attention to "brickearth", and characterisation as colluvial or aeolian (or fluvial)

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3.0 METHODOLOGY

3.1 Archaeological Methodology

3.1.1 All work was carried out in accordance with the WSI (ASE 2022b), the *Regulations, Standards and Guidelines* of the Charted Institute for Archaeologists (CIfA 2021) and *Sussex Archaeological Standards* (WSCC 2019).

3.1.2 The archaeological fieldwork comprised Phase 1 of the archaeological evaluation involving the excavation of 23 of the proposed 105 trenches, each measuring c.30m x c.2.00m.

3.1.3 A Cable Avoidance Tool (CAT) was used to scan all trench locations prior to excavation to check for underlying services.

3.1.4 All trenches were then excavated, under archaeological supervision, using an 8-tonne 360º mechanical excavator equipped with a toothless ditching bucket. Each trench was excavated in spits of c.100mm until the top of the underlying natural substrate was revealed.

3.1.5 All exposed potential archaeological features were then investigated by hand and photographed, recorded and drawn as appropriate. Sections were hand-drawn at a scale of 1:10.

3.1.6 All trenches and exposed archaeological features were accurately planned and surveyed using a Leica CS15 RTK GNSS.

3.1.7 Spoil heaps were examined to recover and collect any possible unstratified finds.

3.2 Geoarchaeological Methodology

3.2.1 The geoarchaeological fieldwork comprised Phase 1 of the geoarchaeological evaluation. Four geoarchaeological test pits (GTPs) and one cable percussion borehole (BH) were excavated of the 21 test pits and 2 boreholes proposed. All work was supervised by an experienced geoarchaeologist.

Geoarchaeological Test Pits

3.2.2 The geoarchaeological test pits were excavated in the footprint of open evaluation trenches. Care was taken to only excavate test pits in parts of trenches that were archaeologically negative.

3.2.3 The test pits were excavated by machine with a 1.8m flat bladed bucket in spits of no more than 100mm, following sedimentary units where possible. Each test pit was taken to the reach of the machine, or the solid geology where possible. Excavation was constantly monitored by a geoarchaeologist and smaller spits of 50mm where taken for deposits with potential for *in situ* artefacts. 100L of sediment was sifted through at regular intervals, at minimum every 0.2m excavated, in order to search for artefacts. Test pits were entered after the removal of each spit and trowelled in order to search for artefacts up to a depth

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of 1.2m. Beyond this depth the test pits were not entered.

3.2.4 The sequence of sedimentary units was recorded for each test pit. This included detailed descriptions of colour, lithological make up, and structure. A representative section from each test pit was photographed. Samples were taken of deposits that showed potential for palaeoenvironmental remains or dating.

3.2.5 Once excavated and recorded each test pit was backfilled as soon as possible.

Cable percussion borehole

3.2.6 The location for the cable percussion borehole was chosen on the basis of the results from the four geoarchaeological test pits. It was positioned in a location thought to have good preservation of Quaternary deposits, raised beach deposits, and where reaching the underlying solid geology would aid interpretation and modelling of deposits.

3.2.7 Drilling was carried out by an experienced contractor using an A-Frame rig under the primary supervision of the drilling operative. Drilling was constantly monitored by a geoarchaeologist.

3.2.8 Regular, accurate depth measurements were made by the driller and communicated to the geoarchaeologist. These were made whenever arisings were logged and sampled, and at each recorded interface between two sedimentary units. Each unit encountered was logged and described.

3.2.9 Where deposits with apparent or suspected palaeoenvironmental or archaeological potential were encountered, sealed U100 samples were taken.

3.3 Archive

3.3.1 The site archive has been assembled in accordance with the guidelines set out in Historic England's Management of Research Projects in the Historic Environment (Historic England 2015) and Guidelines for the Preparation of Excavation Archives for Long-term Storage (UKIC 1990) and Standards in the Museum Care of Archaeological Collections (Museums and Galleries Commission 1994). The archive is currently held at ASE offices in Portslade and will be offered to a suitable museum in due course.

Context sheets	5
Section sheets	0
Plans sheets	0
Colour photographs	0
B&W photos	0
Digital photos	50
Context register	2
Drawing register	0
Watching brief forms	0
Trench Record forms	23

Table 1: Quantification of site paper archive

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Bulk finds (quantity e.g. 1 bag, 1 box, 0.5 box 0.5 of a box)	1 bag
Registered finds (number of)	0
Flots and environmental remains from bulk samples	0
Palaeoenvironmental specialists sample samples (e.g. columns, prepared slides)	7
Waterlogged wood	0
Wet sieved environmental remains from bulk samples	0

Table 2: Quantification of artefact and environmental samples

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4.0 RESULTS (Figures 3–5)

4.1 Site Overburden and Geology

4.1.1 A Top/plough soil was present across the 23 trenches recorded. It measured between c.0.19m and 0.32m in thickness. The natural geological substrate was immediately below the plough soil, except within Trenches 31, 36 and 38.

4.1.2 In Trench 31, an alluvial deposit [31/002] up to 0.80m in thickness was recorded at the east end of the trench. It was immediately below plough soil and overlying the natural substrate.

4.1.3 In Trenches 36 and 38, a deposit of disturbed brickearth or alluvium was recorded immediately above the natural undisturbed brickearth substrate and immediately below the plough soil ([36/002] and [38/002]). These deposit measured between 0.28m and 0.35min thickness and yielded a few pieces of worked flint.

4.1.4 No archaeological deposits or features were recorded.

4.1.5 Deposits recorded in the 23 archaeologically negative trenches are tabulated in Appendix 2 at the back of this report.

4.5 Geoarchaeological Results

4.5.1 The initial evaluation of the Phase 1 area of the site allowed an initial evaluation and assessment of deposits. Logs of each individual geoarchaeological intervention are provided in Appendix 1. The broad stratigraphic sequence is described below.

Solid geology

4.5.2 The solid geology of the chalk was reached in BH01 only at a depth of 6.5m (c. 3m OD).

Marine deposits

4.5.3 Deposits related to a previous high sea level event were recorded in all geoarchaeological interventions. Encountered at a depth of 6.3m OD and sitting on a platform at c. 3m OD, these deposits are tentatively expected to correspond to the Brighton-Norton raised beach, deposited during MIS7 and overlapping with a period of human occupation in the Britain. However, deposits are as yet undated, and the marine deposits could potentially relate to a younger high sea level event. These deposits consisted of the following units:

- Fine grained bedded and calcareous silts and sands directly overlying the chalk, recorded directly on the chalk platform in BH01 only (the geoarchaeological test pits did not assess to this depth). It was not possible to fully assess the unit during drilling, however it is hoped that the unit has been recovered in a sealed U100 sample for further investigation. The unit may have high potential to preserve

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palaeoenvironmental remains.

- Marine sands were encountered in all interventions, however BH01 was the only intervention to the reach the base of this deposits. This was a stone free fine to medium pure sand that proved to be 2.5m thick in BH01. Samples of the marine sands have been preserved in sealed U100 tubes.

- Overlying the marine sands was a further unit of fine-grained bedded silts, clays and sands, potentially related to marine regression. These again have a high potential for palaeoenvironmental remains, and the potential for primary context archaeological remains.

Buried land surfaces

4.5.4 At least two potential buried land surfaces have been recorded during this stage of work. An apparent buried land surface was found overlying the marine sediments in GTPs 1, 2 and 3. If present in the location of BH01 this has also potentially been preserved in a sealed U100 sample. A second potential buried land surface was encountered above the calcareous head in GTP3. These units potentially represent periods of landscape stabilisation.

Head deposits

4.5.5 Overlying the marine deposits are deposits of calcareous head, a pale grey sandy silt with frequent chalk fragments. This contained frequent flint gravel, but became finer grained and less gravelly with depth. The unit was generally close to a meter thick.

4.5.6 Overlying the calcareous head were decalcified head deposits of fine grained brickearths with occasional flint gravel, and more gravelly decalcified head deposits. These deposits were up to two metres thick.

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5.0 THE FINDS

5.1 Summary

5.1.1 A small assemblage of finds was recovered during the evaluation on land west of Sompting. 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 3. All finds have been packed and stored following CIfA guidelines (2014).

Context	Lithics	Lithics (g)	Pottery	Pottery (g)	Burnt Flint	Burnt Flint (g)
us	11	103			2	23
35/001			3	31		
36/002	7	86				
37/001						
37/002	2	24	3	3		
104/001	3	6	8	18		
Total	23	219	14	52	2	23

Table 3: Quantification of hand-collected bulk finds

5.2 **The Flintwork** by Karine Le Hégarat

5.2.1 The evaluation produced a total of 23 pieces of worked flint weighing 219g and two fragments of unworked burnt flint weighing 23g. A summary of the assemblage of worked flint by category type and context is provided in Table 4. No diagnostic pieces were recovered; however, based on technological and morphological grounds, the artefacts from disturbed brickearth or potential alluvial deposits [38/002], [37/002] and top/ploughsoil [104/001] are likely to predate the Middle Bronze Age. A broad Neolithic to Early Bronze Age is most likely for these artefacts. On the other hand, the artefacts recovered unstratified are more mixed, and include pieces which are likely to be Middle Bronze Age to Late Bronze Age / Iron Age in date. All the artefacts were manufactured using chalk-derived flint.

Context	Parent	Parent interpretation	Flake	Blade-like flake	Retouched flake	Misc retouched piece	Total
36/002	36/002	Disturbed brickearth/alluvium	3	2	1	1	7
38/002	38/002	Disturbed brickearth/alluvium	2				2
104/001	104/001	topsoil	1	2			3
U/S	U/S		9	2			11
Total			15	6	1	1	23

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Table 4: The flintwork

5.3 **The Pottery** by Anna Doherty

5.3.1 A small assemblage of 14 sherds, weighing 52g was recovered from disturbed brickearth or alluvium and top/ploughsoil contexts during the evaluation. Potentially the earliest material was pressed into brickearth [37/002], comprising three small body sherds from two vessels. One is a flint-tempered ware with moderate, moderately sorted flint of *c*. 0.2-2.5mm in a non-sandy matrix, the other is a similar fabric with rare fine flint of <1mm. These are likely later prehistoric fabrics but it is difficult to date them precisely within a Late Bronze Age to Iron Age range. Context [35/001] produced a mixed assemblage of three Late Iron Age/early Roman grog-tempered sherds and two fragments in medieval sandy fabrics, one containing flint. Context [104/001] produced five later prehistoric – likely later Iron Age – flint-tempered fabrics with well-sorted flint of <2mm, alongside examples of Middle/Late Iron Age hand-made coarse sandy wares and a single example of Roman Arun Valley oxidised ware.

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6.0 GEOARCHAEOLOGICAL SAMPLES

6.1 Four sealed U100 samples were taken from the geoarchaeological borehole.

The following samples were collected:

- Depth 3.0-3.45m – Taken from the contact between the overlying calcareous head and the marine sands in order to capture any intertidal silts or buried land surfaces that may be present.
- Depth 3.5-3.95m and 4.2-4.75m – Taken from the marine sands.
- Depth 6.25-6.7m – Taken from the silts underlying the marine sands and the contact with the chalk.

6.2 The samples have not been opened and recorded and so far no post excavation assessment has been undertaken on the samples.

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7.0 DISCUSSION AND CONCLUSIONS

7.1 Overview of stratigraphic sequence

7.1.1 Natural geological substrate, comprising brickearth and Head Deposit – gravels, was encountered between 6.75m AOD in Trench 33 in the south and 10.46m AOD in Trench 21, in the north. A plough soil was recorded in all the 23 trenches. Alluvial deposits were recorded in Trench 31 and possibly within 36 and 38. There was between c.0.20m and c.1.00m of overburden in each trench.

7.1.2 No archaeological deposits or features were recorded. Archaeological artefacts were retrieved from plough soil and from disturbed brickearth or possible alluvium in trenches 36 and 38. A small number of finds were retrieved from unstratified contexts.

7.2 Overview of geoarchaeological results

7.2.1 The geoarchaeological investigation has shown the initial deposit model to have been reasonably accurate in that there are close to 7m of surviving Quaternary deposits present in this part of the site. These deposits are thought to date to the Pleistocene and consist of raised beach deposits of sands and silts relating to a previous high sea level event. These appeared to be overlain by a buried land surface in three test pits (GTPs 1, 2 and 3). Calcareous and decalcified head deposits were also present overlying the raised beach deposits, and fine grained head (brickearth) deposits were also recorded.

7.3 Deposit survival and existing impacts on Quaternary deposits

7.3.1 The initial geoarchaeological evaluation has shown there to be good survival of Quaternary deposits in this part of the site. The marine deposits appear to be intact showing good survival, with 2.5m of marine sands being present along with marine or intertidal silts recorded above and below the sand units. The fine grained and more gravelly units of brickearth and calcareous and decalcified head also appeared to be untruncated and intact.

7.4 Discussion of quaternary deposits

7.4.1 Overall deposits mapped on site as part of this first stage evaluation have proved to be similar to what was expected on the basis of the deposit model. As predicted, raised beach deposits extend to this part of the site and are present below the overlying head deposits, despite not having been mapped on the BGS (BGS 2022).

7.4.2 The raised beach deposits consist of bedded marine silts overlain by sands, which are in turn overlain by further bedded clays, silts and sands. These deposits have high palaeoenvironmental potential and could provide a regionally significant sequence for palaeonvironmental and landscape reconstruction. As yet undated the raised beach deposits could correspond to the Brighton-Norton raised beach, formed during the interglacial MIS 7 (c. 190-250 kya) or the younger Pagham raised beach formed during the last interglacial, MIS 5e (c. 100-126 kya). The Brighton-Norton raised beach

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formed during a period of known human occupation of the Britain (Ashton & Scott 2016), and has potential to preserve archaeological remains. The Pagham raised beach was formed during a period when there is no definitive evidence for occupation of Britain. However, while the potential for archaeological remains in the Pagham raised beach is low, if any were recovered these would be of high significance.

7.4.3 The potential land surface overlying the raised beach deposits may represent a period of landscape stabilisation following marine regression. The later potential land surface in GTP3 within the calcareous head may represent a subsequent period of landscape stabilisation. These potential land surfaces may hold significant palaeoenvironmental remains, along with, depending on their age, the potential for primary context archaeological material.

7.4.4 The calcareous nature of much of the sequence means there is high potential for palaeoenvironmental remains such as molluscs, ostracods, small vertebrates and larger faunal remains to be preserved.

7.5 Discussion of archaeological remains by period

Prehistoric and medieval

7.5.1 Despite an absence of archaeological features encountered within the investigated part of the site (Trenches 19 – 39, 104 - 105), a small number of finds were retrieved from plough soil and from disturbed natural or shallow alluvial deposits. The finds include worked flint and pottery sherds of prehistoric date, possibly dating from as early as the Neolithic to the Late Iron Age/early Roman period. A few medieval sherds were also recovered from the top/plough soil in Trench 35.

7.6 Consideration of research aims

7.6.1 The general aims of the evaluation were met. All deposits encountered were investigated and finds retrieved. No archaeological features were encountered. Worked flint was recovered from disturbed natural deposits or shallow alluvium in Trenches 36 and 38 may relate to prehistoric activity on the edge of seasonally wet areas.

7.6.2 None of the site-specific archaeological research aims can be adequately addressed on the basis of the limited findings of the evaluation.

7.6.3 It was possible to partially address the site-specific geoarchaeological research aims detailed below with reference to the South-East Research Framework (SERF):

Raised beaches

- Improved mapping, sub-surface deposit modelling and dating of raised beach deposits.
- Modelling of raised beach deposit zones/types more likely to contain undisturbed or minimally disturbed remains and biological remains

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Raised beach deposits have been found to be present in this part of the site, however no scientific dating has been undertaken. As yet only minimal modelling at a site wide level has been done, and no regional modelling has been undertaken. Deposits are considered to have potential to contain undisturbed or minimally disturbed remains and biological remains, but will need further evaluation.

Colluvial/solifluction/aeolian deposits

- Identification of areas of colluvial/solifluction deposits that may contain undisturbed or minimally disturbed concentrations of Palaeolithic remains (cf Red Barns)
- More attention to "brickearth", and characterisation as colluvial or aeolian (or fluvial)

The overlying head deposits are potentially Pleistocene colluvial or solifluction deposits, with finer grained brickearth units present. While no Palaeolithic remains have been recovered to date, evaluation has been minimal and fine-grained units within these deposits have the potential to hold minimally disturbed archaeological remains.

7.7 Conclusions

7.7.1 Four geoarchaeological test pits and 23 archaeological evaluation trenches were excavated across the site. The absence of a subsoil horizon suggests a moderate level of truncation that may have impacted archaeological remains. Unstratified and plough soil finds were retrieved and shallow, potential alluvial deposits sealing the natural undisturbed brickearth substrate encountered to the south of the evaluated area also produced a small number of finds dating to the prehistoric period (Neolithic – Late Iron Age).

7.7.2 The geoarchaeological evaluation has shown a complex sequence of deposits related to a previous high sea level event, subsequent periods of landscape stabilisation, and overlying calcareous, and decalcified head, including some finer grained units. The sequence is undated but may extend back as far as c. 250 kya and provide an important palaeoenvironmental record and landscape history for the area. It is expected that the sequence includes units from known periods of human occupation of Britain and some of the finer grained units also have the potential for primary context archaeological signatures. Further evaluation would be needed in order to fully assess the potential of deposits in this part of the site.

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8.0 RECOMMENDATIONS

8.1 The first stage evaluation showed deposits with potential for palaeoenvironmental and archaeological remains to exist within the Phase 1 area of the site. This includes the presence of intact raised beach deposits. A further program of geoarchaeological test pitting would allow these deposits to be further assessed, evaluating for the presence of archaeological material and ecofacts, and appropriate sampling to be undertaken for palaeoenvironmental reconstruction and scientific dating.

8.2 The following is proposed as a Stage 2 evaluation for the Phase 1 area. Proposed locations for Geoarchaeological interventions are shown in Figure 6.

- Excavation of 12 standard Geoarchaeological Test Pits. This would allow the potential buried soil in the north of the area to be further constrained, allow the relationship between deposits to be better understood and modelled, further assess deposits in the southern part of Phase 1, and assess deposits for the presence of archaeological and faunal remains.

- Excavation of one large stepped Test Pit in the north of the area. This would be excavated with a footprint of 8mx8m and stepped each meter to a depth of 4m. This would allow deposits in this part of the site to be recorded in detail, including the buried soil and upper portion of the marine deposits. It would allow samples to be obtained for palaeoenvironmental analysis and scientific dating from the test pit sections.

- Option to excavate a second large stepped test pit in another part of the Phase 1 depending on the results of the initial 12 test pits.

- Further mitigation may be required following the Stage 2 evaluation, in particular if test pitting uncovers archaeological material or deposits with high potential to hold regionally significant palaeoenvironmental sequences.

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geoarchaeological evaluation. Paul Mason managed the excavations, Jim Stevenson and Andy Margetts the post-excavation process.

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HER Summary

Site code	LWS 22					
Project code	220014					
Planning reference	AWDM/0323/19					
Site address	Loose Lane, BN15, Sompting West Sussex					
District/Borough	Worthing Borough Council					
NGR (12 figures)	516440 105056					
Geology	Lambeth Group Clay, Silt and Sand; Superficial Head Deposit – clay, silt, sand and gravel					
Fieldwork type	Eval					
Date of fieldwork	27th June to 5th July 2022					
Sponsor/client	Orion Heritage					
Project manager	Paul Mason					
Project supervisor	Teresa Vieira, Ed Blinkhorn					
Period summary	Prehistoric X	Medieval X				
Project summary	*The fieldwork was carried out between the 26th June and 5th July 2022. This report details the results of 23 evaluation trenches and 4 geoarchaeological test pits.* *The archaeological evaluation encountered no archaeological features. Artefacts of prehistoric and medieval date were recovered from unstratified, disturbed and overburden contexts.* *The geoarchaeological evaluation showed a sequence of deposits related to a previous high sea level event, subsequent periods of landscape stabilisation, and overlying calcareous, and decalcified head, including some finer grained units to be present in this part of the site. Deposits are considered to have a regionally significant potential for palaeoenvironmental and landscape reconstruction, along with the potential to preserve Palaeolithic remains.*					

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OASIS Form

OASIS ID (UID)	archaeol6-508614
Project Name	Archaeological and Geoarchaeological Evaluation at Land West of Sompting
Sitename	Land West of Sompting
Activity type	Evaluation
Project Identifier(s)	ASE Project No: 220014
Planning Id	WBC Planning Ref: AWDM/0323/19
Reason For Investigation	Planning requirement
Organisation Responsible for work	Archaeology South-East
Project Dates	26-Jun-2022 - 05-Jul-2022
Location	Land West of Sompting NGR : TQ 16440 05056 LL : 50.8333344994878, -0.34787923729143 12 Fig : 516440,105056
Administrative Areas	Country : England County : West Sussex District : Adur Parish : Sompting
Project Methodology	23 archaeological evaluation trenches and 4 geoarchaeological test pits

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Project Results	Archaeology South-East were commissioned by Orion Heritage to undertake an archaeological and geoarchaeological evaluation at land west of Sompting, West Sussex. The fieldwork was carried out between the 26th June and 5thJuly 2022. This report details the results of 23 evaluation trenches and 4 geoarchaeological test pits. The archaeological evaluation encountered no archaeological features; however, artefacts of prehistoric and medieval date were recovered from unstratified, disturbed and overburden contexts. The geoarchaeological evaluation has shown a complex sequence of deposits related to a previous high sea level event, subsequent periods of landscape stabilisation, and overlying calcareous, and decalcified head, including some finer grained units to be present in this part of the site. Deposits are considered to have a regionally significant potential for palaeoenvironmental and landscape reconstruction, along with the potential to preserve Palaeolithic remains.
Keywords	
Funder	
HER	West Sussex HER - unRev - STANDARD
Person Responsible for work	Letty, Ingrey, Teresa, Vieira
HER Identifiers	
Archives	

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Appendix 1 – Geoarchaeological Intervention Logs

				Recorded on site	
Unit	**Depth (m bgl)**	**Height (m AOD)**	**Strat**	**Description**	**Coarse component**
1	0.00 – 0.25		Ploughsoil	Grey medium-fine sandy silt	A-SR 10-80mm flints
Sharp					
2	0.25 – 0.45		Reworked Brickearth	Light orange-brown fine sandy clay	10% <50mm SA-A flints
Sharp					
3	0.45 – 0.60		Reworked Brickearth	Orange-brown silty-clay	50% 10-30mm SR-A filnts
Diffuse					
4	0.60 – 0.90		Brickearth	Orange-brown silty-clay	10% SA-SR <50mm flints
Diffuse					
5	0.90 – 1.20		Admixed Brickearth and Gravel	Dark orange-brown slightly sandy silty clay	25% SA-A <50mm flints
Sharp / Undulating					
6	1.20 – 2.75		Calcareous Head	Yellow-grey / grey / white silty sandy gravel. Periglacial fissuring with blueish dark brown sandy-clay and 10-80mm angular flints.	66% Angular and nodular flints. Increasing to 80% at base.
Sharp					
7	2.75 – 3.30		Fine-grained calcareous Head	Calcareous light grey clay silt. Structureless.	5% <50mm A flints.
Sharp / Undulating					
8	3.30 – 3.40		Land surface	Very dark brown silty fine-medium sandy gravel.	60% 30mm A-SR flints; organic staining?
Sharp					
9	3.40 – 3.60+		Marine Sands	Olive / orangey-green glauconitic slightly clayey fine sands	None

GTP1 – Tr19 S End

				Recorded on site	
Unit	**Depth (m bgl)**	**Height (m AOD)**	**Strat**	**Description**	**Coarse component**

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1	0.00 – 0.30		Ploughsoil	Grey medium-fine sandy silt	A-SR 10-80mm flints
Sharp					
2	0.30 – 0.85		Reworked Brickearth	Light orange-brown fine sandy clay	10% <50mm SA-A flints
Sharp					
3	0.85 – 1.50		Head Gravels	Dark grey-brown silty sandy gravel	85% <80mm A-R and nodular flints
Diffuse					
4	1.50 – 2.15		Head Gravels	Orange Brown clayey silty gravel	85% <100mm A-r and nodular flints
Sharp					
5	2.15 – 3.10		Head Gravels	Greyish brown slightly sandy clayey silty gravel	70% <100mm A-SA and nodular flints
Sharp					
6	3.10 – 3.70		Calcareous semi/terrestrial Head / land surface	White / yellowish grey dense silt. Rooted. Blocky structure in places?	5% <1mm chalk fragments.
Sharp / Undulating					
7	3.70 – 3.80		Land surface	Very dark rown silty fine-medium sandy gravel. Organic staining.	70% <30mm A-SR flints
Sharp					
8	3.80 – 4.00+		Marine Sands	Olive / orangey-green glauconitic slightly clayey fine sands	None

GTP2 – Tr21 W end

				Recorded on site	
Unit	**Depth (m bgl)**	**Height (m AOD)**	**Strat**	**Description**	**Coarse component**
1	0.00 – 0.45		Ploughsoil	Grey medium-fine sandy silt	A-SR 10-80mm flints
Sharp					
2	0.45 – 2.30		Decalcified Gravel Head	Silty medium-coarse sandy gravel. Stiff.	80% 10-80mm R-A flints.
Sharp					
3	2.30 – 2.40		Land surface?	Dark brownish grey gravel.	<50mm SR-A flints.

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Sharp / undulating.					
4	2.40 – 3.30		Calcareous Gravel Head	Grey silty sandy gravel. Stiff	50% <80mm A-SA flints.
Diffuse					
5	3.30 – 4.05		Land surface / semi-terrestrial	Cohesive light grey unrooted clay silt. Massive. Dark grey cecalcified fine <50mm A-SR gravel pockets locally.	10% <1mm chalk fragments.
6	4.05 – 4.10+		Marine Sands	Olive / orangey-green glauconitic slightly clayey fine sands	None

GTP3

				Recorded on site	
Unit	**Depth (m bgl)**	**Height (m AOD)**	**Strat**	**Description**	**Coarse component**
1	0.00 – 0.30		Ploughsoil	Grey medium-fine sandy silt	A-SR 10-80mm flints
Sharp					
2	0.30 – 1.00		Decalcified Gravel Head	Slightly clayey sandy gravel	90% A-SR and nodular flints
Diffuse					
3	1.00 – 2.20		Semi-calcareous Gravel Head	Dark grey brown medium-coarse sandy clayey gravel	70% 10-80mm SR-A flints.
Sharp					
4	2.20 – 3.70+		Marine Sands	Yellow-green / greenish grey and orange brown locally, glauconitic fine sands. Massive.	None

GTP4 – Tr30 South

Unit	Depth	OD	Strat	Description	Coarse Component	Samples	Notes
1	0	9.58	Topsoil				
2	0.3	9.28	Decalcified Head/Brickearth	Mid reddish brown silty clay	40% A-SA-SR flint gravel. 10-50mm		

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3	2.8	6.78	Calcareous Head	Pale brownish yellow silty clay. Becoming stone free towards base	Frequent SA chalk <40mm and chalk pellet gravel. 30% A-SA flint gravel <60mm	U100 3.0-3.45m	Contact with unit below not observed - will be preserved in U100 sample
4	3.3	6.28	Marine Sand	Fine to medium sand. Pale greyish yellow	Stone free	U100 3.0-3.45m	Unit proved difficult to sample using U100s as very loose.
						U100 3.5-3.95m	
						U100 4.2-4.7m	
5	5.8	3.78	Silt with chalk	Fine grained bedded silts, pale grey to mid grey	Occ chalk pellet gravel	U100 6.25-6.7m	Unit only partially observed, however will be preserved in U100 sample
6	7	2.58	Weathered Chalk				

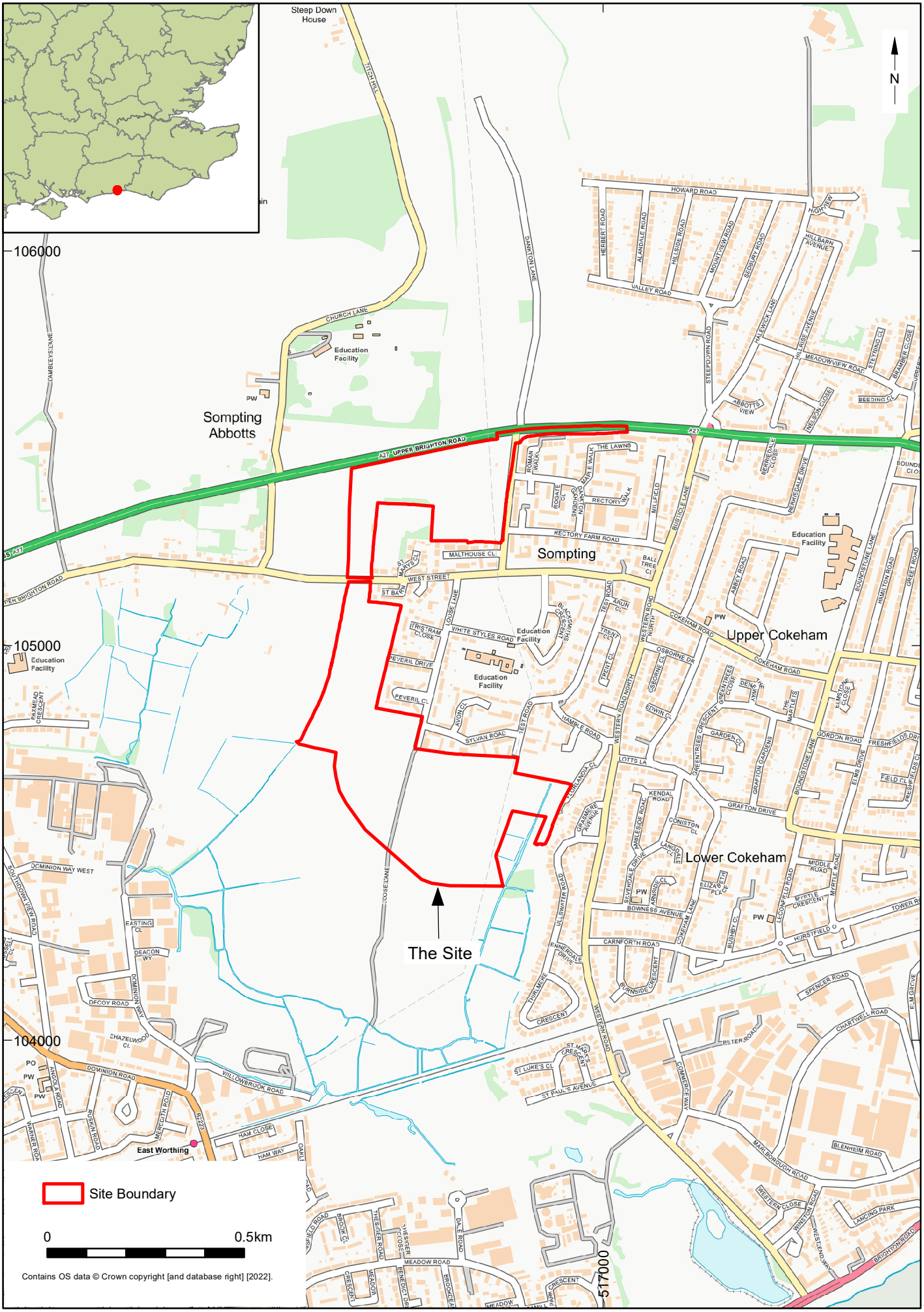
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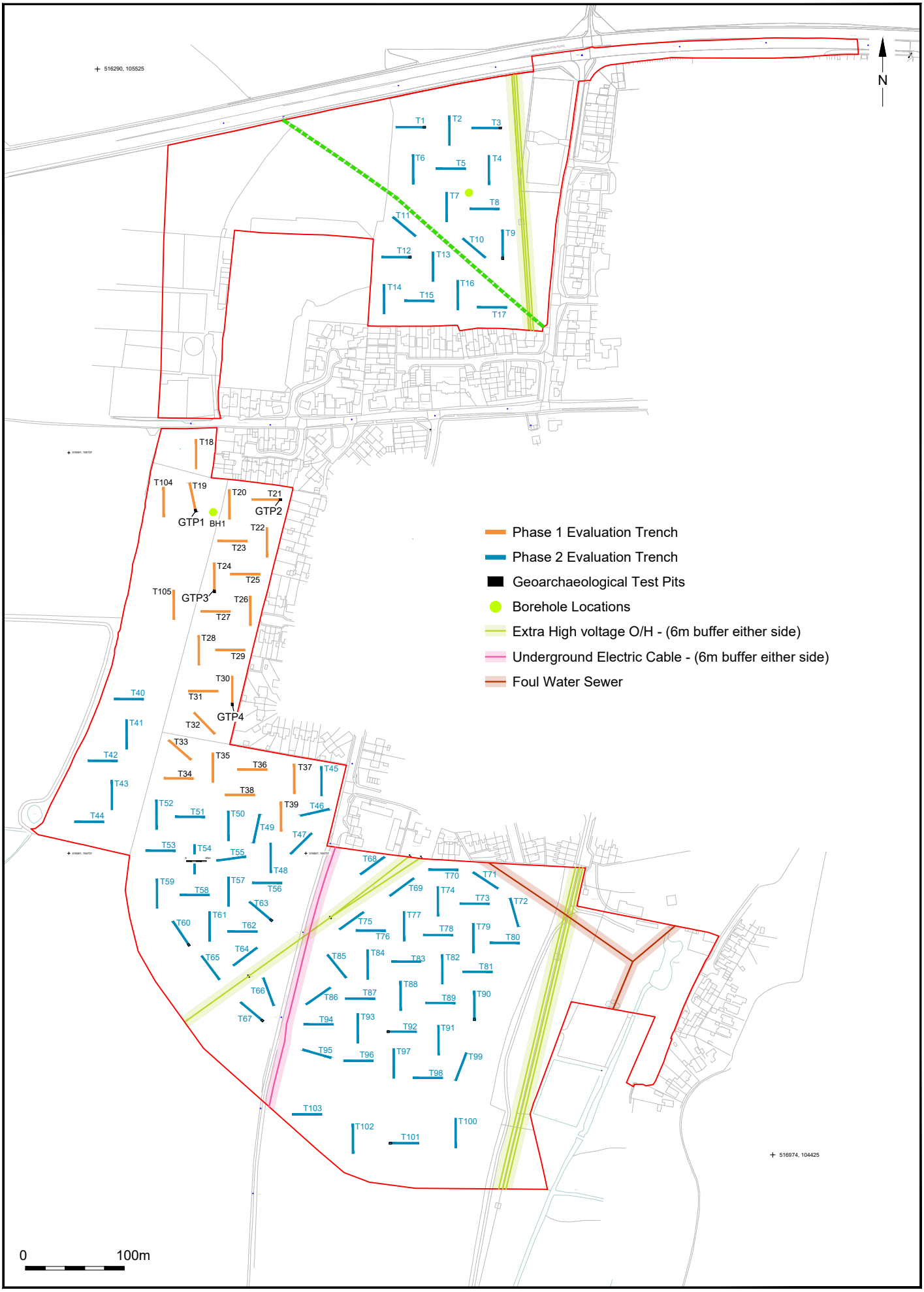
Appendix 2: Archaeologically negative trenches: list of recorded contexts

Context	Type	Interpretation	Length m	Width m	Thickness m	Height mAOD
19/001	layer	Topsoil	Trench	Trench	0.26	9.58-9.81
19/002	layer	Natural (brickearth)	Trench	Trench		
20/001	layer	Topsoil	Trench	Trench	0.27	9.81-10.15
20/002	layer	Natural (brickearth)	Trench	Trench		
21/001	layer	Topsoil	Trench	Trench	0.28	10.36-10.75
21/002	layer	Natural (brickearth)	Trench	Trench		
22/001	layer	Topsoil	Trench	Trench	0.25	10.17-10.36
22/002	layer	Natural (brickearth)	Trench	Trench		
23/001	layer	Topsoil	Trench	Trench	0.27	9.61-10.06
23/002	layer	Natural (brickearth)	Trench	Trench		
24/001	layer	Topsoil	Trench	Trench	0.24	9.31-9.45
24/002	layer	Natural (brickearth)	Trench	Trench		
25/001	layer	Topsoil	Trench	Trench	0.28	9.71-10.06
25/002	layer	Natural (brickearth)	Trench	Trench		
26/001	layer	Topsoil	Trench	Trench	0.24	9.44-9.79
26/002	layer	Natural (brickearth)	Trench	Trench		
27/001	layer	Topsoil	Trench	Trench	0.19	8.97-9.48
27/002	layer	Natural (brickearth)	Trench	Trench		
28/001	layer	Topsoil	Trench	Trench	0.20	8.74-8.84
28/002	layer	Natural (brickearth)	Trench	Trench		
29/001	layer	Topsoil	Trench	Trench	0.28	8.98-9.18
29/002	layer	Natural (brickearth)	Trench	Trench		
30/001	layer	Topsoil	Trench	Trench	0.24	8.50-8.91
30/002	layer	Natural (brickearth)	Trench	Trench		
31/001	layer	Topsoil	Trench	Trench	0.27	8.04-8.57
31/002	layer	Natural (alluvium)	Trench	Trench	0.80	
31/003	layer	Natural (brickearth)	Trench	Trench		
32/001	layer	Topsoil	Trench	Trench	0.28	7.87-8.06
32/002	layer	Natural (brickearth)	Trench	Trench		
33/001	layer	Topsoil	Trench	Trench	0.25	7.02-7.51
33/002	layer	Natural (brickearth)	Trench	Trench		
34/001	layer	Topsoil	Trench	Trench	0.25	7.21-7.37
34/002	layer	Natural (brickearth)	Trench	Trench		
35/001	layer	Topsoil	Trench	Trench	0.28	7.63-7.80
35/002	layer	Natural (brickearth)	Trench	Trench		
36/001	layer	Topsoil	Trench	Trench	0.28	8.04-8.48
36/002	layer	Natural (disturbed/re-worked brickearth)	Trench	Trench	0.28	
36/003	layer	Natural (brickearth)	Trench	Trench		
37/001	layer	Topsoil	Trench	Trench	0.20	8.53-8.76
37/002	layer	Natural (brickearth)	Trench	Trench		
38/001	layer	Topsoil	Trench	Trench	0.25	7.83-8.23
38/002	layer	Natural (disturbed/re-worked brickearth)	Trench	Trench	0.16	
38/003	layer	Natural (brickearth)	Trench	Trench		
39/001	layer	Topsoil	Trench	Trench	0.24	8.22-8.36
39/002	layer	Natural (brickearth)	Trench	Trench		
104/001	layer	Topsoil	Trench	Trench	0.24	9.37-9.68
104/002	layer	Natural (brickearth)	Trench	Trench		
105/001	layer	Topsoil	Trench	Trench	0.26	8.64-8.76
105/002	Layer	Natural(brickearth)	Trench	Trench		

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© Archaeology South-East		Land West of Sompting	Fig. 1
Project Ref: 220014	Aug 2022	Site Location	
Report Ref: 2022209	Drawn by: LG		



© Archaeology South-East		Land West of Sompting	Fig.2
Project Ref: 220014	Aug 2022	Overall Trench Location and Constraints	
Report Ref: 2022209	Drawn by: LG		



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Project Ref: 220014	August 2022	Phase 1- Evaluation Trench Location Plan	
Report Ref: 2022209	Drawn by: FG		


Trench 19 looking south


Trench 20 looking north


Trench 21 looking east


Trench 22 looking south


Trench 23 looking west


Trench 24 looking north


Trench 25 looking west


Trench 26 looking south


Trench 27 looking east


Trench 28 looking north


Trench 29 looking west


Trench 30 looking south


Trench 31 looking west


Trench 32 looking east


Trench 33 looking south-east


Trench 34 looking east


Trench 35 looking south


Trench 36 looking west


Trench 37 looking north


Trench 38 looking east


Trench 39 looking north


Trench 104 looking north


Trench 105 looking south

© **Archaeology South-East**		Land west of Sompting	Fig. 4
Project Ref: 220014	August 2022	Evaluation Trench Photographs T19-T39, 104 and 105	
Report Ref: 2022209	Drawn by: FG		



GTP1 looking east



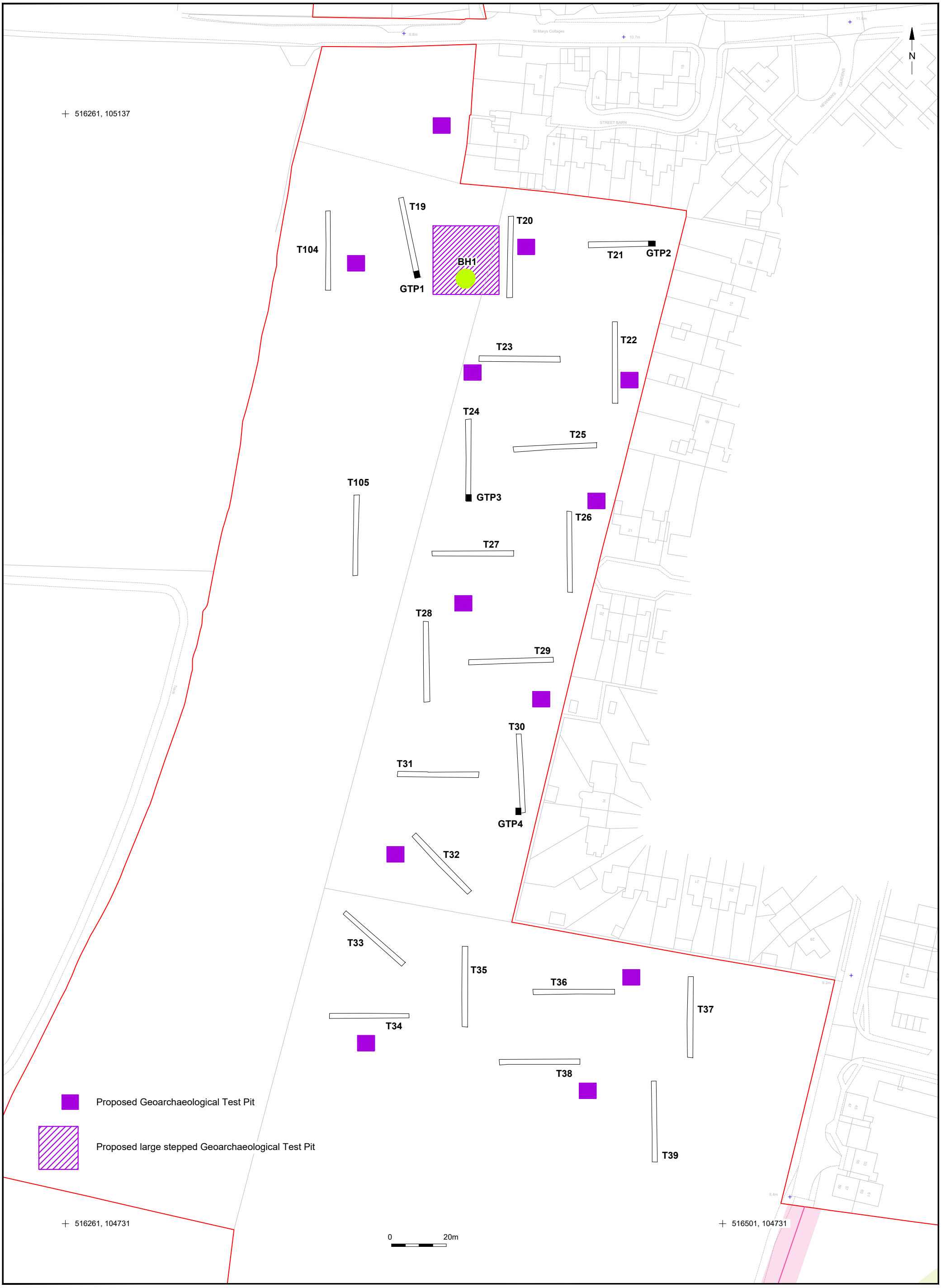
GTP2 looking south



GTP3 looking east



GTP4 looking west



© Archaeology South-East		Land west of Sompting	Fig. 6
Project Ref: 220014	August 2022	Recommended Phase 2 Geoarchaeological evaluation of Phase 1 area	
Report Ref: 2022209	Drawn by: FG		

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