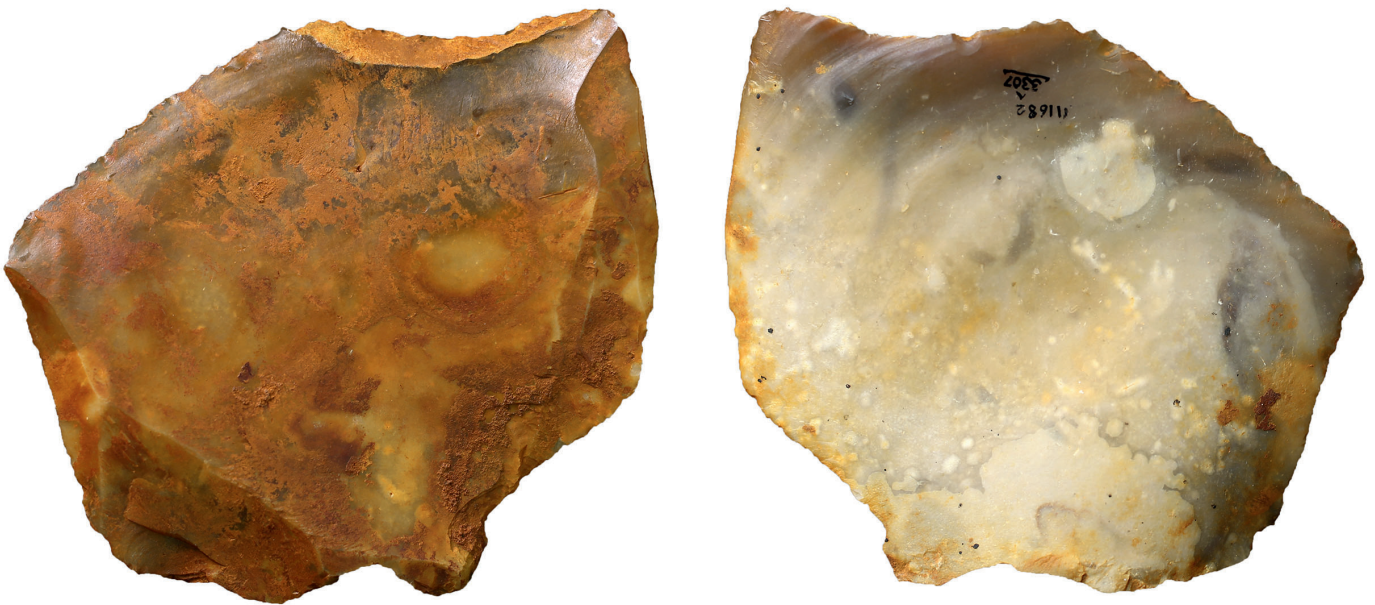




Grange Road, Netley Southampton

Archaeological Evaluation Report



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

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Contents

1	INTRODUCTION	1
1.1	Project and planning background.....	1
1.2	Scope of the report	2
1.3	Location, topography and geology	2
2	ARCHAEOLOGICAL AND HISTORICAL BACKGROUND.....	3
2.1	Introduction.....	3
2.2	Previous investigations related to the proposed development.....	3
2.3	Geological, archaeological and historical context.....	3
3	AIMS AND OBJECTIVES.....	4
3.1	General aims	4
3.2	General objectives	5
3.3	Site-specific objectives.....	5
4	METHODS.....	5
4.1	Introduction.....	5
4.2	Geoarchaeological test pits.....	5
	<i>General</i>	5
	<i>Sampling</i>	6
4.3	Sample trenches.....	7
	<i>General</i>	7
	<i>Recording</i>	8
4.4	Artefactual and environmental strategies	8
4.5	Monitoring.....	8
5	ARCHAEOLOGICAL RESULTS	9
5.1	Geoarchaeological test pits.....	9
	<i>Stratigraphic evidence</i>	9
	<i>Deposit modelling</i>	10
	<i>Artefactual evidence</i>	10
	<i>Scientific dating potential</i>	11
5.2	Sample trenches.....	11
	<i>Introduction</i>	11
	<i>Soil sequence and natural deposits</i>	12
	<i>Iron Age (800 BC–AD 43)</i>	12
	<i>Anglo-Saxon (AD 410–1066)</i>	12
	<i>Uncertain date</i>	13
	<i>Modern</i>	14
	<i>Natural Features</i>	15
6	ARTEFACTUAL EVIDENCE	15
6.1	Introduction.....	15
6.2	Pottery	16
6.3	Worked flint.....	16
6.4	Building materials	16
6.5	Glass	17
7	ENVIRONMENTAL EVIDENCE.....	17
7.1	Introduction.....	17
7.2	Aims and Methods	17
7.3	Results	17
7.4	Discussion	17
8	CONCLUSIONS	18
8.1	Summary	18



<i>Early prehistoric</i>	18
<i>Later periods</i>	18
8.2 Discussion	19
<i>Early prehistoric</i>	19
<i>Later periods</i>	21
8.3 Assessment of significance.....	21
<i>Early prehistoric</i>	21
<i>Later periods</i>	22
8.4 Impacts.....	22
<i>Anticipated extent of groundworks for construction</i>	22
<i>Landscaping</i>	22
<i>Surface water drainage</i>	22
<i>Foul water drainage</i>	23
<i>Building foundations</i>	23
8.5 Extent	23
<i>Early prehistoric</i>	23
<i>Later periods</i>	23
8.6 Recommendations.....	24
<i>Early prehistoric</i>	24
<i>Later periods</i>	24
9 ARCHIVE STORAGE AND CURATION.....	25
9.1 Museum.....	25
9.2 Preparation of the archive.....	25
9.3 Selection policy.....	25
9.4 Security copy	25
9.5 OASIS	25
10 COPYRIGHT	26
10.1 Archive and report copyright	26
10.2 Third party data copyright	26
REFERENCES	27
APPENDICES	29
Appendix 1 Geophysical survey report.....	29
Appendix 2 Geoarchaeological test pit summaries	30
Appendix 4 Trench summaries	42

List of Figures

- Figure 1** Site and test pit locations
Figure 2 Cross-sections 1 and 2
Figure 3 Plan of site highlighting area with Palaeolithic potential
Figure 4 Evaluation trench results
Figure 5 Section drawings

List of Plates

- Cover:** Dorsal and ventral view of definite Levallois flake
Plate 1 TP37 north-north-west facing section illustrating solifluction gravels overlying Selsey Sand Formation
Plate 2 TP32 north-north-east facing section illustrating Selsey Sand Formation overlain by Phase I: river terrace and Phase II: 'Head brickearth' deposits
Plate 3 TP33 north-east facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits
Plate 4 TP33 detail of lower part of north-east facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits



- Plate 5** TP34 north facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits
- Plate 6** TP33 north facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits
- Plate 7** Dorsal and ventral view of definite Levallois flake (artefact no: 3307)
- Plate 8** Dorsal and ventral view of possible Levallois flake (artefact no: 3406)
- Plate 9** Dorsal and ventral view of possible hard hammer flake (artefact no: 3405)
- Plate 10** Two faces of handaxe (artefact no: 3207)
- Plate 11** South-east facing section of ditch 1715
- Plate 12** Brick-lined drain 1103 within Trench 11
- Plate 13** Modern square-cut features 1609

List of Tables

- Table 1** Number of litres of sampled by stratigraphic context
- Table 2** Finds by material type (number of pieces/weight in grammes)



Summary

Wessex Archaeology was commissioned by Stratland Estates Ltd to undertake an archaeological evaluation of a 3.5 ha parcel of land located off Grange Road, Netley, Southampton, centred on National Grid Reference (NGR) 445679 109193.

The evaluation comprised the excavation of eight machine-excavated geoarchaeological test pits, and 25 sample trenches. The former were focussed on testing the potential for early prehistoric deposits and the latter on testing the potential for later deposits.

River terrace deposits of the Test are mapped underlying the site. These have potential to preserve Lower and Middle Palaeolithic archaeology. To evaluate the Palaeolithic geoarchaeological potential of the site direct prospection was required. This report details the results of Palaeolithic geoarchaeological test pitting evaluation.

The evaluation established that Palaeolithic artefacts are preserved within Pleistocene fluvial sands and gravels present within the central, eastern and southern part of the Site. These deposits are overlain by colluvial and solifluction deposits. The fluvial sands and gravels are equated with Terrace 4 and/or 3 of the River Test.

The potential for the deposits to preserve artefacts, ecofacts and to provide dating samples was assessed. Six definite Palaeolithic lithic artefacts were recovered from the fluvial sands and gravels. Three are in fresh condition and were all recovered from broadly equivalent stratigraphic positions in the upper part of the fluvial sequence. They include a techno-typologically diagnostic Middle Palaeolithic Levallois flake. They reflect hominin activity on banks and bars of the river at, or very near, the points from which they were recovered. Based on current understanding of the age of the associated terrace deposits, this material is likely to be early Middle Palaeolithic in date (MIS 9–MIS 6; 337–191 kya). The other three pieces, including a handaxe, are fluvially abraded and reworked.

The results of this evaluation demonstrate that the Palaeolithic potential of the fluvial sands and gravels underlying the site is high. Consideration of the significance of the archaeology associated these deposits demonstrates that the minimally disturbed early Middle Palaeolithic archaeology is high with the potential to contribute to regional and national research questions and priorities, whilst the fluvially abraded material is of medium significance.

The results of the sample trenches included a few Iron Age and or Anglo-Saxon postholes and ditches, associated with pottery. An environmental sample demonstrated the presence of poorly preserved carbonised plant remains associated with crop production. Perhaps surprisingly given the most obvious association of the site with the adjacent abbey and grange, deposits of medieval date were not identified, though there were a number of undated deposits that could be of this period.



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Wessex Archaeology would like to thank Andrew Wright of Stratland Estates Ltd, for commissioning the archaeological evaluation, and to Jacob Goodenough of Nova Planning Ltd. Wessex Archaeology is also grateful for the advice of David Hopkins, County Archaeologist at Hampshire County Council, who monitored the project for Eastleigh Borough Council, and to BJH Plant Hire for their cooperation and help on site.

The fieldwork was directed by Stephen Legg, with the assistance of Julie Martingale, Michael Trubee and Hilde van der Heul. The artefacts were assessed by Grace Jones. The environmental sample was processed by Samantha Rogerson. The flot was sorted by Nicki Mulhall and assessed by Inés López-Dóriga. The environmental archaeology parts of this report was written by Inés López-Dóriga and Nicki Mulhall. This report was written by Dr Andrew Shaw and Stephen Legg and reviewed by Simon Woodiwiss. Lorraine Mephram and Phil Andrews kindly provided the benefit of their experience, for with regard to Anglo-Saxon pottery and the historic environs of Southampton. The project was managed by Simon Woodiwiss on behalf of Wessex Archaeology.



Grange Road, Netley Abbey, Hampshire

Archaeological Evaluation

1 INTRODUCTION

1.1 Project and planning background

1.1.1 Wessex Archaeology was commissioned by Stratland Estates Ltd (the Client), to undertake an archaeological evaluation of a 3.5 ha parcel of land located off Grange Road, Netley, Hampshire hereafter referred to as 'the Site'. The Site is centred on 445679 109193 (**Figure 1**).

1.1.2 The proposed development comprises residential development of up to 89 dwellings with all matters reserved except for access.

1.1.3 A planning application (O/16/78014) submitted to Eastleigh Borough Council (Local Planning Authority; LPA), was granted 8 January 2018, subject to the following conditions relating to archaeology:

- (21) No development shall take place until the applicant has secured the implementation of a programme of archaeological assessment in accordance with a Written Scheme of Investigation [WSI] that has been submitted to and approved in writing by the Local Planning Authority. The assessment should initially take the form of a geophysical survey of the site, followed by trial trenching targeted on potential archaeological features identified by the geophysics and also within any 'blank' areas in between. The potential for Palaeolithic and Mesolithic finds within the site should also be reflected in the archaeological strategy of the WSI.
- Reason: To assess the extent, nature and date of any archaeological deposits that might be present and the impact of the development upon these heritage assets.
- (22) That no development shall take place until the applicant has secured the implementation of a programme of archaeological mitigation of impact, based on the results of the trial trenching, in accordance with a Written Scheme of Investigation that has been submitted to and approved in writing by the Local Planning Authority.
- Reason: To mitigate the effect of the works associated with the development upon any heritage assets and to ensure that information regarding these heritage assets is preserved by record for future generations.
- (23) Following completion of archaeological fieldwork a report will be produced in accordance with an approved programme including where appropriate post-excavation assessment, specialist analysis and reports, publication and public engagement.
- Reason: To contribute to our knowledge and understanding of our past by ensuring that opportunities are taken to capture evidence from the historic environment and to make this publicly available.



- 1.1.4 The investigation forms part of a wider program of archaeological evaluation and follows other non-intrusive archaeological work, including a Desk-Based Assessment (DBA; Wessex Archaeology 2015), and geophysical survey (Wessex Archaeology 2019a; Appendix 1).
- 1.1.5 This investigation is part of a staged approach in determining the archaeological potential of the Site that aims, through its implementation, to fulfil Condition 21 of the planning permission.
- 1.1.6 All works were undertaken in accordance with a written scheme of investigation (WSI) which detailed the aims, methodologies and standards to be employed in order to undertake the evaluation (Wessex Archaeology 2019b). David Hopkins, Lead Archaeologist at Hampshire County Council, approved the WSI, on behalf of the Local Planning Authority (LPA), prior to fieldwork commencing.
- 1.1.7 The evaluation had two main components;
- Eight geoarchaeological test pits primarily aimed at testing the archaeological potential of earlier prehistoric archaeological deposits; and
 - Twenty-five sample trenches primarily aimed at attesting the archaeological potential of later archaeological deposits.
- 1.1.8 The fieldwork was undertaken between the 23rd April and 3rd May 2019.

1.2 Scope of the report

- 1.2.1 The purpose of this report is to provide a detailed description of the results of both components of the evaluation, to interpret the results within a local, regional or wider archaeological context and assess whether the aims of the evaluation have been met.
- 1.2.2 The presented results will provide further information on the archaeological resource that may be impacted by the proposed development and facilitate an informed decision with regard to the requirement for, and methods of, any further archaeological mitigation.

1.3 Location, topography and geology

- 1.3.1 The Site is situated in the Hampshire basin approximately 600 m south-west of Southampton Water. The surrounding area is dominated by suburban housing; either on the outskirts of Southampton, approximately 650 m to the north-west, or around the village of Netley which lies to the immediate south-east.
- 1.3.2 The Site comprises open pasture and is bounded on its south-east and east by mature hedgerows set upon low banks. On the north side the Site is bounded by woodland, a part of West Wood which extends to the north. On the west side garden hedgerows and trees associated with a farmhouse delimit the Site.
- 1.3.3 The Site is situated overlooking a small valley located to the north-west. The area slopes gently down to the north-west, from the highest point at the south-eastern corner at approximately 23 m above Ordnance Datum (aOD), to approximately 18 m aOD at the north-west corner.
- 1.3.4 The underlying geology is mapped by the British Geological Survey (BGS) as comprising sand, silt and clay of the Selsey Sand Formation of the Bracklesham Group (BGS online



viewer, 01/05/19). These were laid down in a shallow-marine environment during the Eocene (47.8–41.2 mya). The Selsey Sand Formation is overlain by Pleistocene fluvial sands and gravels ascribed to Terraces 4 and 3 of the River Test.

- 1.3.5 Borehole records from approximately 450m to the south-west of the Site record ~4.40m of flint gravel overlaying the Selsey Sand Formation (ibid).

2 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

2.1 Introduction

- 2.1.1 The archaeological and historical background was assessed in the DBA (Wessex Archaeology 2015), which considered the recorded historic environment resource within a 1 km study area of the proposed development. The DBA used information from the Hampshire HER and the National Heritage List for England (NHLE). The relevant information is summarized below, with additional information included as appropriate.

2.2 Previous investigations related to the proposed development

- 2.2.1 No previous archaeological investigations are known for the Site, though it lies within an Area of Archaeological Potential (as defined by Hampshire County Council) relating to buried remains of rural settlement within the parish of Hound.
- 2.2.2 There have been several investigations in the vicinity of the development area. Netley Abbey itself has been investigated at various times from the 19th century onwards. A number of watching briefs have also been undertaken, although most did not record any significant deposits. Of those that recorded deposits of interest, these include a section of the Abbey moat, Roman field boundaries, a 19th century floor surface, undated pits and a post-medieval ditch, as well as undated features.

2.3 Geological, archaeological and historical context

- 2.3.1 The Pleistocene deposits underlying the Site are associated with Pleistocene fluvial sands and gravels ascribed to Terraces 4 and 3 of the River Test.
- 2.3.2 The terraces of the Test are associated with the Solent River Formation (Allen and Gibbard 1993, Westaway *et al* 2006, Ashton and Hosfield 2010, Briant *et al* 2012). The modern Solent is a sea channel separating the Isle of Wight from southern England but for most of its history it was a major river system that drained the Hampshire basin and the surrounding chalklands. Its catchment area included large parts of Hampshire, Dorset, south Wiltshire and the Isle of Wight. Following extensive coastal erosion and eustatic Holocene sea level rise, all that is visible terrestrially today of Solent River system is the upper reaches of the Solent itself, now the River Frome, and its tributary rivers, including the Stour, Avon, Test, Itchen and Medina
- 2.3.3 The remnant fluvial deposits of the Solent River Formation, along with overlying 'Head-brickearth', have produced many thousands of Lower and Middle Palaeolithic artefacts that provide evidence for human occupation of the region during the Middle Pleistocene and Upper Pleistocene (Roe 1968, Wessex Archaeology 1993, Ashton and Hosfield 2010, Davis 2013).
- 2.3.4 Deposits described as 'Head-brickearth' can have been deposited through different processes and can include aeolian, colluvial, alluvial and soliflucted material. Such sequences can include material deposited during more than one period of the Pleistocene and can contain Palaeolithic archaeology of different ages.



- 2.3.5 Terraces 4 and 3 (also referred as the Upper and Lower Warsash terrace) of the Test are known to preserve significant Lower Palaeolithic and early Middle Palaeolithic archaeological material (Davis 2013; Davies *et al.* 2016). Optically Stimulated Luminescence (OSL) dating has suggested that Terrace 3 of the Test in this area aggraded during MIS 8/MIS 7 (300–191 kya; Hatch *et al.* 2017).
- 2.3.6 Recent investigations and reanalysis of historic artefact collections from these deposits at Warsash (Davies *et al.* 2016), located ~5km south-west of the current site, indicates that fluviially abraded Lower Palaeolithic artefacts originate from within the main body of the terrace whilst fresher minimally disturbed Middle Palaeolithic artefacts either originate from fine grained units in the top of the fluvial sequence, from the surface of the terrace and/or an overlying Head-brickearth deposits. Consequently, the terrace deposits in the current evaluation area have the broad potential to preserve significant Lower and/or Middle Palaeolithic geoarchaeological datasets.
- 2.3.7 This potential is strengthened by documented findspots, which include a possibly unfinished axe head found 500 m to the east of the development site, and various further findspots of Mesolithic material (Wessex Archaeology 2015).
- 2.3.8 Very little is known about the land use of the development area between the Mesolithic and medieval periods.
- 2.3.9 During the medieval period it seems most likely that the development area formed part of the abbey estate, being close to both the abbey and the grange (a farm associated with the abbey), just to the north-east of the development area. The DBA (Wessex Archaeology 2015) draws attention to a map of 1725 which indicates a lane (Abbey Lane), linking the grange and the abbey, which lies within the development area and along its south-eastern boundary. Though the existence of medieval buildings cannot be ruled out the DBA indicates that the land use of the medieval period was agricultural (except for the lane mentioned above) and attention is drawn to the indication of slight earthworks possibly relating to ridge and furrow.
- 2.3.10 There is evidence for post-medieval and later gravel extraction and land fill in the vicinity, together with WWII defences. A field visit for the DBA (Wessex Archaeology 2015) identified evidence for the location of an agricultural building on the development area's north-eastern boundary, showing on late 20th century aerial images. A small oval mound was also noted in the visit.

3 AIMS AND OBJECTIVES.

3.1 General aims

- 3.1.1 The general aims of the evaluation, as stated in the WSI (Wessex Archaeology 2019b), and in compliance with the ClfA's *Standard and guidance for archaeological field evaluation* (ClfA 2014a), were:
- To provide information about the archaeological potential of the Site; and
 - To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.



3.2 General objectives

3.2.1 In order to achieve the above aims, the general objectives of the evaluation were:

- To determine the presence or absence of archaeological features, deposits, structures, artefacts or ecofacts within the specified area;
- To establish, within the constraints of the evaluation, the extent, character, date, condition and quality of any surviving archaeological remains;
- To place any identified archaeological remains within a wider historical and archaeological context in order to assess their significance; and
- To make available information about the archaeological resource within the site by reporting on the results of the evaluation.

3.3 Site-specific objectives

3.3.1 Following consideration of the archaeological potential of the site, the site-specific objectives, as defined in the WSI (Wessex Archaeology 2019b), were to:

- Establish, beyond reasonable doubt, the presence or absence of significant archaeological deposits, which the context of the Site suggests may be of prehistoric and/or medieval date. This may then inform future decision making should significant deposits be located;
- Determine the extent of significant deposits, their depositional processes;
- To establish whether two chronostratigraphically separate terraces are present in the Site, and the presence of any overlying sediment bodies;
- To establish the potential of the above including dating.
- To make recommendations for further Palaeolithic geoarchaeological investigations as appropriate.
- Indicate the effects of earlier construction activity, especially with regard to cut and fill activity, on the levels at which significant archaeological deposits may occur.

4 METHODS

4.1 Introduction

4.1.1 All works were undertaken in accordance with the detailed methods set out within the WSI (Wessex Archaeology 2019b) and in general compliance with the standards outlined in ClfA guidance (ClfA 2014a). The methods employed are summarised below. The sample achieved (a few trenches could not practically be excavated) from the test pits and sample trenches was 3.6 % of the Site.

4.2 Geoarchaeological test pits

General

4.2.1 As specified in the WSI (Wessex Archaeology 2019b), eight test pit locations were set out within the ends of archaeological evaluation trenches (**Figure 1**). These were positioned to assess the geoarchaeological potential of deposits across the Site.



- 4.2.2 Test pits positions were located through real time kinematic (RTK) survey using a Leica GNSS connected to Leica's SmartNet service. All survey data was recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.
- 4.2.3 Prior to fieldwork commencing the client provided information regarding the presence of any below/above-ground services, and any ecological, environmental or other constraints.
- 4.2.4 Before excavation began, the evaluation area was walked over and visually inspected to identify, where possible, the location of any below/above-ground services. All test pit locations were scanned before and during excavation with a Cable Avoidance Tool (CAT) to verify the absence of any live underground services.
- 4.2.5 The test pits were excavated using a 13 tonne 360° mechanical excavator with a toothless bucket. Machine excavation was carried out under the constant supervision and instruction of a recognised Palaeolithic specialist with experience of recording and interpreting Pleistocene sediments, who recorded and numbered the sequence of sedimentary units as excavation progressed following standard descriptive practices. The textural characteristics (grain-size, consolidation, colour, material and sedimentary structures) of sedimentary units were recorded, and the shape and nature of their lithostratigraphic contacts (dip, conformity and overall geometry). Machine excavation proceeded in level spits of approximately 50–100 mm, respecting the interface between sedimentary units, until either the solid geology was exposed, or further excavation became impractical.
- 4.2.6 Test pits were entered whilst within safely accessible depths (maximum of 1.2 m) to record the upper stratigraphy. After excavation had progressed beyond this depth, recording took place from a safe distance from the edge of excavation without entering the test pit.
- 4.2.7 All test-pits were excavated, sampled, recorded and immediately backfilled using excavated materials in the order in which they were excavated, and left level on completion. No other reinstatement or surface treatment was undertaken.

Sampling

- 4.2.8 The deposits excavated from each spit were assessed for the presence of artefacts and ecofacts. Sampling strategies were in line with those detailed in the WSI (Wessex Archaeology 2019b).
- 4.2.9 To assess whether artefacts and/or ecofacts were present within clast dominated deposits (i.e. gravels) samples were taken at appropriate intervals (usually 100 l every 20–30 cm), in stratigraphic succession (**Table 1**). These were sieved on site through a 10 mm mesh.

Table 1 Number of litres of sampled by stratigraphic context

Stratigraphic unit	Litres
Phase I: river terrace deposits	2900

- 4.2.10 The potential for deposits to preserve paleoenvironmental evidence was assessed for each sediment unit by the monitoring Palaeolithic geoarchaeological specialist. No deposits likely to preserve significant palaeoenvironmental datasets were identified and no samples were taken.

- 4.2.11 Consideration was given to the suitability of any sediment units for OSL dating. Deposits suitable for OSL dating were identified (see below), however, these were not safely accessible and no samples were taken.

Recording

- 4.2.12 Where appropriate, representative sections from test pits were drawn at a scale of 1:20. Representative sections in all test pits were photographed in colour (digital) once excavation has reached its full depth, and at appropriate stages during excavation if features of interest were revealed.
- 4.2.13 Accompanying geoarchaeological descriptions and interpretations were recorded (see **Appendix 2**).
- 4.2.14 A full photographic record was made using a digital camera. This recorded both the detail and the general context of the principal lithological and stratigraphic features, and the evaluation area as a whole. Digital images have been subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set.

4.3 Sample trenches

General

- 4.3.1 The trench locations were set out using GPS, in the approximate positions as those proposed in the WSI (Wessex Archaeology 2019b), with the following adjustments: Trench 5 was moved from its original position because of on-site obstacles (heavy undergrowth) but was still located in the relevant area of the field, rotated 45° and shifted to the east. Trenches 6 and 7 were omitted due to access issues (these same issues affected the geophysical survey in this location – Wessex Archaeology 2019a; **Appendix 1**). The north-eastern end of Trench 11 was moved some 2.5 m north due to the location of the Site compound. Trench 15 was expanded on its southern side to ensure there were no further postholes at that location. Trench 17 was extended and expanded at the south-western end to clarify a possible linear termination within the trench. Trench 27 had to be shortened due to the presence of fly-tipping debris at its proposed northern end (**Figure 1**).
- 4.3.2 Nine trenches (1, 3, 4, 8, 10, 12, 19, 20 and 24) were located to test areas of potential significance identified during the geophysical survey. All other trenches were located to test 'blank' areas.
- 4.3.3 The client provided information regarding the presence of any below/above-ground services, and any ecological, environmental or other constraints prior to the commencement of the fieldwork. This included an assessment on the presence of Japanese Knotweed in the north-east area of the Site, east of Trench 26. The Japanese Knotweed was fenced off utilizing a Netlon-type barrier to create a 10 m exclusion zone from the visible plant, preventing foot and machine traffic from entering the designated area. All Site staff were briefed specifically on relevant procedures as this circumstance is not commonly encountered.
- 4.3.4 Before excavation began, the evaluation area was walked over and visually inspected to identify, where possible, the location of any below/above-ground services. All trial trench locations were scanned before and during excavation with a Cable Avoidance Tool (CAT) to verify the absence of any live underground services. In the interests of site security two additional ditch-and-bank systems were cut at potential points of access to the field. These locations were also scanned with a CAT.
-



- 4.3.5 Twenty-four sample trenches, each measuring 25 m in length and 2 m wide, and one trench measuring 7 m in length and 2 m wide, were excavated in level spits using a 13-tonne tracked 360° excavator equipped with a toothless bucket, under the constant supervision and instruction of the monitoring archaeologist. Machine excavation proceeded until either the archaeological horizon or the natural geology was exposed.
- 4.3.6 Where necessary, the base of the trench/surface of archaeological deposits were cleaned by hand. A sample of the archaeological features and deposits identified were hand-excavated, sufficient to address the aims of the evaluation.
- 4.3.7 Spoil derived from both machine stripping and hand-excavated archaeological deposits was visually scanned for the purposes of finds retrieval. Where found, artefacts were collected and bagged by context. All artefacts from excavated contexts were retained, although those from features of modern date (19th century or later) were recorded on site and not retained.
- 4.3.8 Trenches were backfilled using excavated materials in the order in which they were excavated, and left level on completion. No other reinstatement or surface treatment was undertaken. Any gaps (2) in the site perimeter were protected with Heras-type fencing and ditches excavated across them. Site security is not now monitored by Wessex Archaeology.

Recording

- 4.3.9 All exposed archaeological deposits and features were recorded using Wessex Archaeology's pro forma recording system. A complete drawn record of excavated features and deposits was made including both plans and sections drawn to appropriate scales (generally 1:20 for plans and 1:10 for sections) and tied to the Ordnance Survey (OS) National Grid. The Ordnance Datum (OD: Newlyn) heights of all principal features were calculated, and levels added to plans and section drawings.
- 4.3.10 A Leica GNSS connected to Leica's SmartNet service surveyed the location of archaeological features. All survey data is recorded in OS National Grid coordinates and heights above OD (Newlyn), as defined by OSGM15 and OSTN15, with a three-dimensional accuracy of at least 50 mm.
- 4.3.11 A full photographic record was made using digital cameras equipped with an image sensor of not less than 10 megapixels. Digital images have been subject to managed quality control and curation processes, which has embedded appropriate metadata within the image and will ensure long term accessibility of the image set.

4.4 Artefactual and environmental strategies

- 4.4.1 Appropriate strategies for the recovery, processing and assessment of artefacts and environmental samples were in line with those detailed in the WSI (Wessex Archaeology 2019b). The treatment of artefacts and environmental remains was in general accordance with: *Guidance for the collection, documentation, conservation and research of archaeological materials* (ClfA 2014b) and *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation* (English Heritage 2011).

4.5 Monitoring

- 4.5.1 The County Archaeologist at Hampshire County Council, on behalf of the LPA, was invited to attend the Site.



5 ARCHAEOLOGICAL RESULTS

5.1 Geoarchaeological test pits

Stratigraphic evidence

Introduction

5.1.1 The specific lithologies and stratigraphic succession encountered in each test pit are outlined in **Appendix 2**.

5.1.2 The Quaternary deposits present form a consistent sequence of Pleistocene fluvial sands and gravels Phase I river terrace deposits, overlain by Pleistocene colluvial material and solifluction gravels (Phase II: 'Head-brickearth' deposits). The Pleistocene deposits were overlain by a gravelly sub-soil and top-soil.

5.1.3 The generalised stratigraphic sequence encountered is listed, and the deposits described below:

- *Phase SS: Selsey Sand Formation*
- *Phase I: river terrace deposits*
- *Phase II: 'Head-brickearth' deposit*
- *Phase TS: top-soil/ sub-soil*

Phase SS: Selsey Sand Formation

5.1.4 These Palaeogene deposits form the local solid geology and were found to unconformably underlie Quaternary deposits in **TP 30, TP 31, TP 32, TP 35, TP 36** and **TP 37**. They consist of light reddish yellow and dark brownish red mottled very fine to fine sand and dark reddish brown to light bluish grey mottled slightly sandy clay (**Plate 1**). Clay units are laminated and fissured. The deposit is clast free.

Phase I: river terrace deposits

5.1.5 Identified in **TP 30, TP 31, TP 32, TP 33, TP 34, TP 35** and **TP 36**, these deposits consist of fine to very coarse sub-angular to angular flint gravel in a fine to coarse sand matrix. They exhibit clear fluvial structures, including sub-horizontal and cross bedding (**Plates 2–6**). These are Pleistocene river terrace deposits. Where excavated to their full depth, these deposits were shown to overlie the Selsey Sand Formation.

5.1.6 The terrace deposits are most extensive in **TP 33** and **TP 34**, located in the central and central-southern part of the Site. Here, two distinct fluvial horizons are present (**Plates 3–6**). The uppermost consists of fine to coarse angular and sub-angular flint gravel in a light greyish yellow to reddish yellow fine to medium sand matrix. It is sub-horizontally bedded, moderately sorted and generally clast supported, although matrix supported horizons and sand lenses were observed. In **TP 33** and **TP 34** these upper units overlie fine to very coarse sub-angular to angular, clast supported flint gravel in a medium-coarse, dark reddish-brown sand matrix. It exhibits beds of coarser and finer material. This lower fluvial gravel and its matrix is generally coarser, more iron enriched and contains more sub-angular clasts; these lower sands and gravels become increasingly coarser and more iron enriched with depth.

Phase II: 'Head-brickearth'

- 5.1.7 The Phase I deposits are overlain by sands, clays and gravel units. These are a complex and may include units lain down by several processes. They are grouped together here under the term 'Head-brickearth' (see section 2.3).
- 5.1.8 Within **TP 30, TP 31, TP 32, TP 33** and **TP 34** a basal unit was observed consisting of light bluish grey to medium reddish brown mottled slightly sandy clay and fine–medium sand with gravel partings, which are generally dominated by fine to medium angular flint clast (**Plate 2, 3 and 5**). In places this exhibits coarse bedding. The lithological characteristics of these deposits indicate colluvial deposition.
- 5.1.9 A fine to very coarse angular flint gravel in a sand and sandy clay matrix forms the uppermost Pleistocene deposit encountered (**Plate 2, 3 and 5**). It is structureless and varies between matrix and clast supported. It reflects material deposited downslope through solifluction (freeze-thaw) processes under cold conditions.

Deposit modelling

- 5.1.10 In order to consider the distribution of Pleistocene deposits across the Site, the stratigraphic data obtained from the eight test pits was entered into Rockworks 17 to create projected cross sections through the deposits. Two cross-sections (see **Figure 1** for location) have been produced, orientated from west to east and north to south (**Figure 2**). These demonstrate that significant Pleistocene sedimentary sequences are found in the central, eastern and southern part of the Site. There is a notable drop-off in these deposits to the north-west and west, where Palaeogene deposits outcrop near the surface. It is possible that the lack of deposits in these areas may, at least partially, be accounted for by later erosion associated the small valley located to the north-west of the Site.
- 5.1.11 The Pleistocene deposits underlying the Site are mapped by the BGS as Pleistocene fluvial sands and gravels ascribed to Terraces 4 and 3 of the River Test (BGS online viewer). Based on limited number of data points, it is not possible to definitively state whether two terraces are present within the Site, nevertheless, the fact that deposits thin out to the west in the area where Terrace 3 is mapped, may indicate that only a single terrace is present. The situation could be more complex, however. The modelling indicates that relatively deep fluvial sequences within the central and southern part of the site are bounded by high points in the Palaeogene deposits to the north, south, east and west, which may possibly indicate that a channel is present here that is infilled with fluvial sediments.

Artefactual evidence

- 5.1.12 Eight potential and six definite lithic artefacts were recovered during the test pitting evaluation (see **Appendix 3**). These were all recovered from Phase I: river terrace deposits. Two are diminutive flakes which, although exhibiting features indicative of conchoidal fracture and complex scar patterns, could, given their size and association with generally high energy fluvial sands and gravels, be natural.
- 5.1.13 Six definite Palaeolithic artefacts were recovered from the Phase I deposits. Amongst these two conditions states are apparent; three are in fresh condition, whilst three exhibit extensive evidence of fluvial abrasion. The artefacts were recovered from **TP 32, TP 33** and **TP 34**, which are in the area where the most extensive fluvial sequence was identified.
- 5.1.14 The three fresh artefacts consist of three flakes (**Plate 7, 8 and 9**). Their condition indicates that, although they may have been displaced over a short distance, any post-depositional transport will have been very limited. Notably, all three were recovered from near the contact

between the two gravel bodies identified in **TP 33** and **TP 34** (see above; ~1.8–2.4 m bgl) indicating that they may form a semi-stable horizon.

- 5.1.15 One is a definite Levallois flake (**Plate 7**). It exhibits evidence of centripetal preparation and centripetal recurrent exploitation. It has a faceted butt and cortex is limited to a small patch on the distal end. This flake is typo-technologically Middle Palaeolithic in date. The configuration of a second flake indicates that it is possibly a *debordant* Levallois flake (**Plate 8**). This has recent damage at the proximal and an ancient proximal break, with cortex across one lateral margin. The third flake is a silex fractured, hard hammer flake (**Plate 9**); it exhibits a complex dorsal scar pattern, lacks cortex and is in very fresh condition. The cortex on the flakes is rolled, indicating the nodules used to produce them were river cobbles and that their raw material source is potentially the fluvial gravels with which they are associated.
- 5.1.16 The three fresh artefacts were all recovered from the upper part of the sequence of fluvial sands and gravels in **TP 33** and **TP 34** at, or near the contact between the two gravel bodies (see above); two were recovered from sieved samples and one from spoil from a spit removed during machine excavation. The fact that they are from within fluvial sands and gravels but are in fresh condition indicates that they are contemporary with these deposits and that they are likely to reflect activity on banks and bars at, or very near, the points from which they were recovered.
- 5.1.17 The three extensively fluvially modified artefacts consist of two hard hammer flakes and a handaxe. The handaxe (**Plate 10**) is pointed, worked around the entire circumference and has been thinned with a soft hammer. Cortex is limited to a small patch on the butt on one face. The two flakes were recovered from sieved samples obtained from the lower part of the fluvial sequence. Although recovered from spoil from a spit removed during machine excavation, the handaxe is similarly provenanced to this lower part of the fluvial sequence.

Scientific dating potential

- 5.1.18 Consideration was given to the suitability of sediment units for OSL. Sand lenses within the Phase I: Fluvial sands and gravels would be suitable for OSL dating, similar to the basal sands within the Phase II: 'Head-brickearth' sequence have OSL dating potential. These deposits were not safely accessible during these investigations and no OSL samples were taken.

5.2 Sample trenches

Introduction

- 5.2.1 Seventeen of the 25 excavated sample trenches contained archaeological features and deposits, indicating archaeological remains are present across the site (**Figure 4**).
- 5.2.2 The uncovered features comprised ditches, pits and postholes representing three main periods of activity: Iron Age, Anglo-Saxon and post-medieval. Several features remain of uncertain date, although typologically they appear to be of post-medieval date.
- 5.2.3 The following section presents the results of the evaluation with archaeological features and deposits discussed by period.
- 5.2.4 Detailed descriptions of individual contexts are provided in the trench summary tables (**Appendix 3**). **Figure 4** shows all archaeological features recorded within the trenches, together with the preceding geophysical survey results.

Soil sequence and natural deposits

- 5.2.5 Topsoil across the Site was a mid to dark greyish brown fine sandy loam plough soil under pasture. The plough soil varied unpredictably in thickness (0.25–0.48 m) across the Site. This may be in part due to difficulties in distinguishing relict plough soils and colluvial elements from the general plough soil layer.
- 5.2.6 Subsoil was present in seven of the trial trenches (2, 8, 9, 10, 12, 16 and 17). Except for Trench 2 the other trenches lay to the south-east side of the main ridge of gravels passing east–west across the centre of the Site. Given that this subsoil is similar in nature to the underlying geology there may have been a slight hollow in the landscape which has become infilled with a colluvial/solifluction substrate in the lee of the gravel bank. At least some of the colluvial build-up is likely to be the result of agricultural activities.
- 5.2.7 The Site natural geology was a reworked flint gravel, often root disturbed and of relatively loose appearance, with small, sporadic occurrences of brickearth. These overlay fluvial sands and gravels equated with Terrace 4 and/or 3 of the River Test. All archaeological features were cut into the upper zone of these elements.

Iron Age (800 BC–AD 43)

- 5.2.8 Trench 12 was specifically located to test a geophysical anomaly suggestive of an enclosure. Ditch 1204 closely correlated with that anomaly. The ditch was oriented north-west to south east with a width of 2.55 m and a depth of 0.90 m and was cut from below subsoil 1202 (**Figure 4**). It contained three fills; primary fill 1207 contained a small amount of burnt flint, secondary fill 1206 contained a larger amount of burnt flint spread throughout the fill, and some diagnostic sherds of Iron Age pottery located on the eastern side of the feature and resting on the boundary with 1207. Tertiary fill 1205 had a higher incidence of flint gravel inclusions than 1206 below and was interpreted as the ploughed-in remains of bank material – it was not possible to identify the side of the feature upon which the bank originally stood.
- 5.2.9 Trench 15 contained two shallow postholes and was extended on the south-east side to investigate the potential for continuation in that direction. Posthole 1504 was fully sampled as 1501 and contained seed elements conversant with a late Iron Age or Romano-British date (though three sherds of possible Anglo-Saxon pottery were also retrieved). It was recognised that both the pottery and the environmental sample evidences were small and poorly preserved. This posthole was not associated with any other feature within the trench.
- 5.2.10 Six features within Trench 17 may also be prehistoric, although dating evidence was only recovered from upper fill 1717 in ditch 1715. The single sherd of pottery was given an Iron Age or Romano-British date. Typologically the features in Trench 17 are closer in form to prehistoric rather than post-medieval date, although an Anglo-Saxon date cannot be ruled out given the presence of other Anglo-Saxon features to the west. Being basically undated they are discussed briefly below.

Anglo-Saxon (AD 410–1066)

- 5.2.11 Ditch 1010, in Trench 10, which was not identified on the geophysical survey, was oriented north to south and cut by two features; undated ditch 1005 (**Figure 4**) to the south, and a modern square feature to the north. The ditch measured greater than 1.9 m in width and had a depth of 0.97 m, being cut from below plough soil 1001. Four fills were identified within the feature, with 1007 and 1009 both being present on its northern edge and representing probable bank material which has been deliberately “pushed” into the feature, perhaps as part of a later landscaping event. It occurred whilst primary/secondary fills 1008

and especially 1006 were still soft. It was dated through the presence of Anglo-Saxon pottery in upper fill 1006 (the fabric of the pottery was such that, whilst it could have been alternatively interpreted as Iron Age, an Anglo-Saxon date seemed the more likely).

5.2.12 The Anglo-Saxon pottery from Trench 15 (see above) should also be noted.

Uncertain date

5.2.13 Twelve trenches (1, 3, 8, 10, 15, 17, 19, 20, 22, 23 and 26) produced 21 undated features identified as being ditches, pits or postholes. Many of these features are likely to be late- or post-medieval in date, with the exception of the features within Trench 17 which have characteristics suggestive of a prehistoric date.

5.2.14 Trench 1 was located to investigate two north-west to south-east oriented geophysical linear anomalies. The western anomaly was excavated as ditch 103. Measuring 0.52 m in width and 0.18 m in depth it was narrow, shallow and thought to be part of a post-medieval field drainage system. The eastern anomaly 105 was part of a tree throw hole, although rooting associated with a hedge-line cannot be ruled out.

5.2.15 Trenches 8 and 10 were specifically located to investigate a north-east to south-west oriented linear feature identified as archaeological by the geophysical survey. It was thought that it might relate to the lane shown on the 1725 map (Wessex Archaeology 2015).

5.2.16 This linear feature was excavated in Trench 10 as ditch 1005 where it was observed to cut the south side of Anglo-Saxon ditch 1010, from below the plough soil. In Trench 8 it was recorded as ditch 806. The feature was aligned with a 'trend' identified by geophysics at the south-eastern end of Trench 3, where it was investigated as ditch 304.

5.2.17 Ditch 1005 was 1.8 m in width and 0.63 m in depth whereas ditch 304 was 1.77 m in width and 0.64 m in depth; both had moderate to steep concave sides and base containing a single homogenous fill. Typologically therefore ditch 304 was very similar to 1005, and by extension to 806 (which was the narrowest element on the linear at 0.75m in width – although it is quite possible that over-machining of the trench accounts for some of this discrepancy). No dating evidence was recovered from either excavated section.

5.2.18 Trench 11 had a linear brick-lined drain (**Plate 12**) running through it immediately below the plough soil. Bricks, not frogged, lined the sides and base of the channel; it was infilled with stone rubble. It had a similar alignment to the linear in Trenches 3, 8 and 10.

5.2.19 Trench 17 had the largest concentration of archaeological features within a single trench. Four of these features were ditches, one was a small pit, one was a posthole.

5.2.20 Ditch 1704 was a shallow curvilinear feature with a concave profile terminating within the trench at the south-west end in a rounded terminal. It had a width of 0.87 m and a depth of 0.14 m. It was undated.

5.2.21 Posthole 1706 had a diameter of 0.23 m and a depth of 0.06 m. It was undated and there were no other apparent associations.

5.2.22 Ditch 1708 was aligned east–west terminating at the eastern end in a rounded terminal. It had a shallow U-shaped profile, being 0.52 m in width and 0.31 m in depth. It was undated.

5.2.23 Pit 1710 was only partially visible extending east by 0.60 m from the western edge of the trench. It had a width of 0.72 m and a depth of 0.36 m; it was undated but cut subsoil 1702.

- 5.2.24 Ditch 1712 was a straight linear feature located at the north-east end of Trench 17 and was oriented north-west to south east. It had a width of 0.63 m and a depth of 0.30 m and was cut from below subsoil 1702, which makes it earlier in date than pit 1710 (**Figure 4**).
- 5.2.25 Ditch 1715 (**Plate 11**) lay to the south-west of 1712 and had a curvilinear appearance roughly oriented north-west to south-east. It had a width of 1.13 m and a depth of 0.43 m. One sherd of possible Iron Age or Romano-British pottery was recovered from upper fill 1717.
- 5.2.26 Trench 19 targeted a possible enclosure but only a single undated shallow pit-like feature was identified.
- 5.2.27 Trench 20 also targeted a possible enclosure. Two shallow and narrow linear features were identified at either end of the trench. The south-eastern feature 2004 was oriented WSW-ENE, terminating to the ENE. The north-western feature 2007 was oriented north-east to south-west. Both gave the impression of being slightly curvilinear and were undated, although the flint 'ball' came from 2006 within ditch 2007.
- 5.2.28 Trench 22 had a small undated shallow pit-like feature.
- 5.2.29 Trench 23 had an undated shallow, irregular linear which was interpreted as a possible hedge-line.
- 5.2.30 Trench 26 contained two features. A small, shallow pit was present towards the south-east end of the trench. In the north-west was an irregular north-south linear feature thought to be part of a hedge-line and approximately identified with the 'trend' highlighted in the geophysical survey.

Modern

- 5.2.31 Eight trenches (2, 3, 4, 10, 15, 16, 17 and 18) contained 10 modern features (eg see **Plate 13**).
- 5.2.32 Six of these (in Trenches 2, 3, 10, 16 and 17) were square in plan, with Trench 3 having two features of this sort about 10 m apart. They ranged in size from 1 m by 1 m to 1.5 m by 1.5 m and were generally of test pit dimensions. These probably relate to ground investigation test pits associated with the present or previous schemes. The square feature in Trench 17 demonstrably cut plough soil 1701 and was covered only by the turf line; the others appeared to be cut from below the plough soil. They contained a dark to very dark grey sandy silt loam with modern ceramic building material (CBM), glass and slate fragments evident throughout.
- 5.2.33 Trench 4 had two modern postholes where the wooden remains of the post were still present, and one of them was set in concrete. They were only evident below the plough soil.
- 5.2.34 Posthole 1506 within Trench 15 was observed to be cut from near the turf line. Being demonstrably shown to cut the plough soil it must be modern in date.
- 5.2.35 Trench 18 contained an unexcavated oval feature measuring 1.18 m in length by 0.9 m in width, with soil and finds similar to those in the square features.



Natural Features

5.2.36 Most trenches evidenced tree throw holes and rooting activities related to small trees, brambles and other plants.

6 ARTEFACTUAL EVIDENCE

6.1 Introduction

6.1.1 See section 5.3 for artefacts relating to the geoarchaeological test pits.

6.1.2 A small quantity of finds was recovered from 15 trenches. The assemblage is of prehistoric to modern date. All finds have been cleaned and quantified by material type in each context; this information is summarised in Table 2. The assemblage derives mainly from topsoil contexts and relatively modern features.

Table 2 Finds by material type (number of pieces/weight in grammes)

Context	Pottery		CBM		Flint		Burnt flint		Other finds
	No.	Wg (g)	No.	Wg (g)	No.	Wg (g)	No.	Wg (g)	
0301			8	236			1	62	1 x slate (4g)
1006	15	73							
1104			3	831					
1206	4	81					34	851	
1207							4	139	
1301			6	386			1	53	
1401			5	181			3	79	2 x slate (10g)
1501	3	42	2	17			1	21	1 x glass (25g)
1503	5	4							
1505			7	30			1	24	
1608									2 x slate (37g)
1711							7	47	
1713							14	240	
1716							4	150	
1717	1	3					1	30	
1804			1	25					
1901			3	840					2 x slate (3g)
2001	1	16	1	94	1	7	1	102	
2006					1	58			
2201	1	12	1	100			2	31	
2401	1	1	4	160			5	113	4 x slate (31g)
2404							3	89	
2501	1	1	1	101			1	29	
Total	32	233	42	3001	2	65	44	1008	

6.2 Pottery

- 6.2.1 A Basic Record has been made of the pottery, in accordance with national guidelines (PCRG, SGRP, MPRG 2016). The assemblage has been quantified by broad fabric group in each context, with details of form recorded where possible.
- 6.2.2 Four sherds (81 g) in a sandy fabric with common inclusions of calcined flint were recovered from context 1206. They include a necked jar with out-turned rim, of probable Middle to Late Iron Age date. Three body sherds (42 g) from a relatively thick-walled vessel (15 mm) came from the topsoil of Trench 15. They are in a fine sandy fabric, but friable and fully oxidised, and of later prehistoric date, possibly within the Iron Age period. One sherd in a fine and slightly micaceous fabric, of Iron Age or Romano-British date, was recovered from context 1717.
- 6.2.3 The largest group of pottery (15 sherds, 73 g) was recovered from ditch 1010. All are in a relatively soft-fired, fine, slightly micaceous, sandy matrix with a sparse to moderate quantity of voids from the burning out of organic inclusions. The sherds derive from the body of a vessel and are entirely featureless. The use of organic temper within the fabric could point to either an Iron Age or Anglo-Saxon date and, in the absence of any clearly diagnostic feature, these sherds cannot therefore be dated with any certainty one way or the other. However, the soft-fired nature of these sherds (which can be scratched with a fingernail) is perhaps more suggestive of an Iron Age date. Five small sherds (3 g) in a similar fabric were also recovered from context 1503 but, could not be closely dated due to their small size and abraded condition.

6.3 Worked flint

- 6.3.1 A single heavily patinated hard hammer flint flake was recovered from the Trench 20 topsoil 2001. It is likely to be of prehistoric date but is sufficiently non-diagnostic other than to say it did not appear to be Palaeolithic.
- 6.3.2 A small relatively spheroidal flint ball with cortex, was recovered from the surface of fill 2006 in ditch 2007, Trench 20. A groove on its side matches a fracture line extending along the entire circumference of the piece. It is likely to be of natural origin, but it is known that such flint 'balls' were sometimes deliberately collected in prehistory.
- 6.3.3 Both flints were from the same trench (20) and, given the patination of the flake and the presence of the flint 'ball', it could be a possible indicator of earlier prehistoric activity on the Site.
- 6.3.4 Burnt flint was recovered from the topsoil in Trenches 3, 13, 14, 15, 20, 22, 34 and 25, layer 2404, ditches 1204, 1712 and 1715, posthole 1506 and pit 1710. This material type is intrinsically undatable but is frequently associated with prehistoric activity.

6.4 Building materials

- 6.4.1 Ceramic building material (CBM) was encountered in 11 trenches. The assemblage includes plain, flat roofing tile fragments from the topsoil in Trenches 13, 14, 15 and 25, and a curved roofing tile fragment from the topsoil of Trench 22. None can be closely dated but are of medieval or post-medieval date. Brick fragments are also present, but many do not retain their surfaces. They came from the topsoil of Trenches 3, 13, 14, 15, 19 and 24, and drain 1103, pit 1803 and posthole 1506. All are of post-medieval or modern date.
- 6.4.2 Flakes of slate, probably deriving from roofing tiles of post-medieval or modern date, were found in feature 1609 and the topsoil of Trenches 3, 14, 19 and 24.

6.5 Glass

- 6.5.1 Part of a blue opaque glass vessel base of modern date came from the topsoil of Trench 15.

7 ENVIRONMENTAL EVIDENCE

7.1 Introduction

- 7.1.1 A bulk sediment sample was taken from a posthole of Late Prehistoric date and was processed for the recovery and assessment of the environmental evidence.

7.2 Aims and Methods

- 7.2.1 The purpose of this assessment is to determine the potential of the environmental remains preserved at the site to address project aims and to provide archaeobotanical data valuable for wider research frameworks. The nature of this assessment follows recommendations set up by Historic England (Campbell *et al.* 2011).

- 7.2.2 The size of the bulk sediment sample was 6 litres. The sample was processed by standard flotation methods on a Siraf-type flotation tank; the flot retained on a 0.25 mm mesh, residues fractionated into 5.6 mm and 1 mm fractions. The coarse fraction (>5.6 mm) was sorted by eye and discarded. The environmental material extracted from the residue was added to the flot. The flot was scanned using a stereo incident light microscopy (Leica MS5 microscope) at magnifications of up to x40 for the identification of environmental remains. Different bioturbation indicators were considered, including the percentage of roots, the abundance of modern seeds and the presence of mycorrhizal fungi sclerotia (e.g. *Cenococcum geophilum*) and animal remains, such as burrowing snails (*Cecilioides acicula*), or earthworm eggs and insects, which would not be preserved unless anoxic conditions prevailed on site. The preservation and nature of the charred plant and wood charcoal remains, as well as the presence of other environmental remains such as terrestrial and aquatic molluscs and animal bone was recorded. Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals. Abundance of remains is qualitatively quantified (A*** = exceptional, A** = 100+, A* = 30–99, A = >10, B = 9–5, C = <5) as an estimation of the minimum number of individuals and not the number of remains per taxa. Mollusc nomenclature follows Anderson (2005).

7.3 Results

- 7.3.1 The flot from the bulk sediment sample was small (**Appendix 5**). There were high numbers of roots and modern seeds that may be indicative of some stratigraphic movement and the high possibility of contamination by later intrusive elements.
- 7.3.2 Charred material was poorly preserved, comprising the remains of cereals, including *Triticum* sp. (wheat) and a grain of *Triticum* cf. *dicoccum/spelta* (emmer/spelt wheat, tentatively identified). Triticeae (cereal) grain fragments were also present, further identification not possible due to poor preservation. Wood charcoal was noted in small quantities and was from mature wood. No other environmental evidence was preserved in the bulk sediment sample.

7.4 Discussion

- 7.4.1 The environmental evidence retrieved from this sample is very small and poorly preserved. The charred cereal remains could indicate the existence of crop processing activities on

site. Emmer and spelt wheat are both hulled wheat types and are typical of late prehistoric to early Romano-British assemblages.

- 7.4.2 Further potential for analysis of the sample will be considered when further sampling has taken place. Extracted material from the flot should be considered for deposition in the archive, the unsorted residue and flot may be discarded.

8 CONCLUSIONS

8.1 Summary

Early prehistoric

- 8.1.1 This evaluation has demonstrated the presence of Palaeolithic artefacts, reflecting human activity on the banks and bars of the river at, or in the immediate vicinity of, where the material was recovered.
- 8.1.2 The evaluation has also demonstrated the extent, broad age and geoarchaeological potential of Quaternary deposits within the Site.
- 8.1.3 The sediments present reflect Pleistocene fluvial terrace deposits (Phase I), which are equated with Terrace 4 and/or 3 of the River Test. These fluvial gravels may be broadly equivalent of others within the region dated by OSL to MIS 8/MIS 7 (300–191 kya; Hatch *et al.* 2017). The river terrace deposits are overlain by Pleistocene colluvial and solifluction deposits (Phase II).
- 8.1.4 The potential for the deposits to preserve artefacts, ecofacts and to provide dating samples was assessed. Palaeolithic lithic artefacts were recovered from the Phase I: fluvial sands and gravels. These include material in fresh condition reflecting hominin activity where, or within the immediate vicinity of, the artefacts were recovered. Other fluviually abraded and reworked Palaeolithic artefacts (including a handaxe) were also recovered.
- 8.1.5 The fresh pieces include a techno-typologically diagnostic Middle Palaeolithic Levallois flake. Based on current understanding of age of the associated terrace deposits, this material is likely to be early Middle Palaeolithic in date (MIS 9–MIS 6; 337–191 kya).
- 8.1.6 The results of this evaluation demonstrate that the Palaeolithic potential of the Phase I: fluvial sands and gravels is high. Consideration of the significance of the archaeology associated these deposits demonstrates that the minimally disturbed early Middle Palaeolithic archaeology is high with the potential to contribute to regional and national research questions and priorities, whilst the fluviually abraded material is of medium significance.
- 8.1.7 The early Middle Palaeolithic material in fresh conditions is associated with uppermost Phase I deposits, with which they are contemporary. These deposits, and the basal part of the Phase II which overlie them, have potential for OSL dating. Dating these deposits would date the Middle Palaeolithic activity.

Later periods

- 8.1.8 Iron Age, and or Romano British, and Anglo-Saxon artefacts (though there is some doubt about the latter) were associated with several features (ditches and postholes). Whereas for the latter period especially artefacts tend not to be prolific on archaeological sites, the presence of postholes does suggest that structures could be present (though the trench around these postholes was extended to test if they were part of a more substantial structure

and no further postholes were identified) and there was a substantial ditch (**Figure 4**). Overall the density of the archaeological features and artefacts, even allowing that this is a sample of the development area, indicates a low intensity of occupation.

8.2 Discussion

Early prehistoric

8.2.1 The results of the Palaeolithic test pitting evaluation can be summarized as follows:

- A Pleistocene sequence of fluvial sands and gravels overlain by colluvial and solifluction deposits was identified within the Site. Extensive sequences of such deposits were spatially defined as present within the central, eastern and southern part of the Site; the sequence thins out in other areas.
- Palaeolithic artefacts were recovered from the Phase I: Fluvial sands and gravels. These include material in two condition states, artefacts in fresh condition and pieces which exhibit extensive fluvial modification.
- The artefacts in fresh condition were recovered from the upper part of the Phase I fluvial sequence in **TP 33** and **TP 34** (from a depth of c 1.2 m), at or the near the contact between two distinct gravel units. This material includes typo-technologically diagnostic Middle Palaeolithic material and is contemporary with the deposits with which they are associated. It reflects hominin activity on banks and bars of the river at, or very near, the points from which they were recovered.
- The abraded material has been subject to fluvial modification and transport; it includes a handaxe. This reflects material which may be broadly contemporary with or earlier than the associated deposits. It reflects broad patterns of Palaeolithic behavioural practices and settlement history in the Test Valley and Solent region.
- No deposits likely to preserve palaeoenvironmental datasets were identified during this evaluation.
- Deposits associated with Phase I: Fluvial sands and gravels and Phase II: 'Head-brickearth' sequences contain sand horizons with potential for OSL dating. Such units were not safely accessible during these investigations, however, and no samples were taken.

8.2.2 Previous investigations of historic Lower and Middle Palaeolithic artefact collections from Terraces 4 and 3 of the Test (most notably ~5km south-west of the current Site at Warsash) have suggested that fluvially abraded Lower Palaeolithic artefacts, including handaxes, originate from within the terrace gravel, alongside fresher minimally disturbed Middle Palaeolithic artefacts that either originate from fine grained units in the top of the fluvial sequence, from the surface of the terrace and/or an overlying Head-brickearth deposits (Davies *et al.* 2016). The current investigations support and significantly enhance these conclusions; they demonstrate that minimally disturbed Middle Palaeolithic material is present within the upper part of the fluvial terrace sequence. Additionally, OSL dating has suggested that Terrace 3 of the Test in this area aggraded during MIS 8/MIS 7 (300–191 kya; Hatch *et al.* 2017), indicating that the minimally disturbed Middle Palaeolithic artefacts recovered from the current Site date to the early Middle Palaeolithic (MIS 9–MIS 6; 337–191 kya).

- 8.2.3 The presence of minimally disturbed early Middle Palaeolithic archaeology within the Phase I: Fluvial sands and gravels is highly significant. Such material is rare nationally and has been shown to be highly significant for investigating early Neanderthal behavioural practices and the earlier Palaeolithic settlement history of Britain (Scott 2011).
- 8.2.4 Limited early Middle Palaeolithic material is known from the Solent region, notably at Warsash (see above). However, the context, age and implications of the historic material for understating early human behaviour and Palaeolithic regional settlement history is poorly understood. In particular, there is much debate concerning the context of fresh condition Levallois material from terrace deposits and whether it is contemporary with the fluvial deposits (see Davies 2013 and Davies et al. 2016). This question has important implications for the both the Middle Palaeolithic – particularly early Middle Palaeolithic – settlement history of the Solent region. Additionally, fresh material such as this can give important and rare insights into early Neanderthal behavioural practices and landscape-use. Thus, the presence of contextually constrained, minimally disturbed early Middle Palaeolithic archaeology from the current evaluation area is highly significant.
- 8.2.5 Specifically, the deposits identified during these investigations is associated with archaeology that can address the national and regional research questions and priorities.
- 8.2.6 At the national level (English Heritage 2008) these are:
- to improve in our understanding of the formation and chronology of the British Pleistocene record [Primary theme];
 - how did hominin subsistence, technical and social strategies respond to climate change over the long-term? [Primary theme];
 - to further our understanding of the Middle and Upper Pleistocene human settlement of Britain in climatic and palaeoenvironmental context [Primary theme];
 - to consider how much of Pleistocene time saw the presence of hominins in Britain; did a significant population crash occur over Lower/ Middle Palaeolithic time? [Primary theme];
 - what technical innovations can be observed within the British Middle Palaeolithic? [Primary theme], and
 - why were Neanderthals so successful for so long in British latitudes? [Primary theme].
- 8.2.7 At the regional level (Hey & Hind 2014) these are:
- to provide an improved chrono-stratigraphic frameworks, both for sets of deposits within clearly defined zones such as specific river valleys, and between sets of deposits in, for instance different valley systems [Lower and Middle Palaeolithic research themes, 4.1.1];
 - to provide an improved understanding of the taphonomic history of artefact accumulations in all types of deposit [Lower and Middle Palaeolithic research themes, 4.1.2];
 - to provide clarification of whether associated artefact finds are intrusive finds from the surface of the deposits, or whether any of these deposits contain artefacts incorporated within them contemporary with, or earlier than their deposition [Lower and Middle Palaeolithic research themes, 4.1.4];

- to put hominin presence and activity in its climatic, environmental and landscape context, as well as within a chrono-stratigraphic framework deposit [Lower and Middle Palaeolithic research themes, 4.1.6];
- to develop, compare and contrast regional and sub-regional sequences and distributions of settlement and cultural development [Lower and Middle Palaeolithic research themes, 4.1.9];
- to identify buried and sealed deposits/sites [Lower and Middle Palaeolithic research themes, 4.1.11], and
- to provide an assessment of site age that is independent of artefact typology [Lower and Middle Palaeolithic research aims, Hampshire 4.8.1].

Later periods

- 8.2.8 For the later periods archaeological deposits appear to be confined to the eastern most quadrant of the Site. It is notable that no evidence for medieval deposits was found, though some of the undated deposits could be of this period. This was considered to be the most likely period to be represented on the Site, given its context, lying between the abbey and its grange. Remains of ridge and furrow tentatively identified during the site visit for the DBA also failed to be confirmed in the sample trenches. It seems not unreasonable to suggest that Iron Age and or Anglo-Saxon period activity will exist within the Site but will not be intensive.
- 8.2.9 There is nothing at a national level that can be identified as being of obvious importance, despite the close proximity of the scheduled remains of the abbey. It may be fair to say that the value of the Iron Age and or Anglo-Saxon deposits within the Site are more likely to contribute to a growing body of information from future investigation in the vicinity, rather than make a significant research contribution in their own right. The most obvious research themes that potentially relate to the Site are; the factors that led to the common shift of settlement location in the late Iron Age [Later Bronze Age and Iron Age research aims; 10.5.3]. The evaluation has also demonstrated that environmental evidence sufficient to identify crop production is present and as well as the contribution this can make to investigating economy it may also provide good quality material for radiocarbon dating in relation to the research theme for palaeo-environmental evidence to be used to develop spatial chronologies for settlement change and to identify functions of specific sites [Later Bronze Age and Iron Age research aims; 10.5.11]. There are very similar research themes for the Anglo-Saxon period [early medieval period; 14.5.3 and 14.5.6].
- 8.2.10 Given the Site's proximity to two well established medieval sites relating to Netley Abbey and a grange, it is perhaps surprising that no deposits of this date could be positively identified. There were a number of undated deposits, some of which could be of this date but nothing that indicated a significant medieval heritage asset existed in this Site. The most obvious feature to be identified in the geophysical survey was tested, though neither excavated samples of the ditch (806 in Trench 8 and 1005 in Trench 10) produced any dateable material. It seems most likely that the interpretation indicated in the WSI, as a ditch marking one side of a lane showing on a map of 1725, remains the most likely one.

8.3 Assessment of significance

Early prehistoric

- 8.3.1 Based on the results of this evaluation, the Palaeolithic potential of the Site can be divided between areas where extensive Pleistocene sequences are preserved containing deposits with high Palaeolithic potential, and areas where such sequences are largely absent, and potential is low (**Figure 3**).

8.3.2 Within the area where extensive Pleistocene deposits are preserved, this evaluation has demonstrated that the specific potential of different deposits and the significance of any associated archaeology is as follows:

- *Phase I: Upper fluvial sands and gravels* (including contact with lower fluvial sands and gravels); these have **high potential** to contain minimally disturbed early Middle Palaeolithic archaeology, which is of **high significance**.
- *Phase I: Lower fluvial sands and gravels*; these have **high potential** to contain fluvially reworked Palaeolithic artefacts, which can be regarded as of **medium significance**.
- *Phase II: 'Head-brickearth'*: No artefacts or ecofacts were recovered from these deposits during evaluation indicating that they have **low potential**. The age of these deposits is currently unknown, consequently the significance of any associated archaeology that may potentially be present cannot be assessed.

Later periods

8.3.3 The main potential significance for Anglo-Saxon deposits relates to the Site's context within the hinterland of Southampton, a major trading settlement which is well documented, though perhaps less so its hinterland settlement pattern. There is also the potential for Iron Age occupation here, which has not been identified elsewhere in the vicinity. This potential has to be tempered by the apparently sparse intensity of occupation in these periods, a level of uncertainty of identification to the Anglo-Saxon period and the absence of sufficient evidence to readily interpret the Site to any level of detail. Features, often indicative of structures (postholes) have been tested and, in this instance do not appear to form a structure. One sample did demonstrate poorly preserved evidence of crop production. A **medium significance** level has therefore been attributed.

8.4 Impacts

Anticipated extent of groundworks for construction

8.4.1 Generally residential construction is likely to entail significant excavation from current ground levels for the following tasks, landscaping, surface water drainage, foul water drainage, building foundations.

Landscaping

8.4.2 Comparison of the existing topography with the proposed levels strategy (Odyssey drawing 18-242-010 A) indicates that the completed development generally follows the existing topography with final ground levels to be a little above those presently existing. There appears to be no significant "cut and fill" involved.

Surface water drainage

8.4.3 The design (Odyssey 2019) here is based on roads and car parking areas to be lined with permeable paving with a granular sub-base layer to conduct surface water, discharging into an attenuation pond. The depth of the roads and car parking areas is anticipated to extend to between 0.5 m and 0.7 m. and will not impact on the significant early prehistoric deposits, though it is more likely to impact on later period deposits.

8.4.4 The attenuation pond with approximate maximum dimensions of 60 x 20 m and depths below present ground level of between 1.2 m (downslope) and 1.8 m (upslope), will only just extend into the area of significant early prehistoric deposits if at all (Figure 3), at its

north-eastern end. It is also outside of the easternmost quadrant of the site where the later period deposits exist.

Foul water drainage

- 8.4.5 The design (Odyssey 2019) is to provide cover for the pipes of 1.2 m under roads and drives, and less elsewhere. Discharge will be via a pumping station the eastern most part of the Site and it is here that the service trenches are anticipated to be at their deepest.

Building foundations

- 8.4.6 The following assumptions are made. Strip foundations approximately 0.6 m wide and 1–1.2 m deep.

8.5 Extent

Early prehistoric

- 8.5.1 The extent of significant deposits containing the Palaeolithic artefacts is indicated on **Figure 3** and extend for an uncertain depth beneath their upper most level at approximately 1.2 m below present ground level. In addition to groundworks that extend deeper than 1.2 m the impact on these significant deposits includes making them less accessible for future investigation, through their being covered by a residential development. The latter point is an important factor in the significance of Quaternary deposits given the relative rarity of sites containing well-provenanced artefacts, of which this is one. It is especially important to make this point, as for sites with later significant archaeological deposits, whereas the continued preservation of significant deposits is a factor in common with the Quaternary, the availability of sites for investigation is rarely a factor of significance for later periods.

Later periods

- 8.5.2 It is difficult to identify an extent for Iron Age, Iron Age/Romano British and Anglo-Saxon features as they are few in number but they are located within the easternmost quadrant of the Site. Beyond this attempting to define a line marking their extent has not been undertaken.

- 8.5.3 Impacts may be summarised as follows:

- Deposits in the vicinity of Trench 10 identified at 0.58 m — impacted by groundworks relating to surface water drainage to 0.50 m.
- Deposits in the vicinity of Trench 12 identified at 0.48 m — impacted by groundworks relating to surface water drainage to 0.5 m and building foundations to 1.2 m.
- Deposits in the vicinity of Trench 15 identified at 0.40 m — impacted by groundworks relating to surface water drainage to 0.50 m and building foundations to 1.2 m.
- Deposits in the vicinity of Trench 17 identified at 0.48 m — impacted by groundworks relating to surface water drainage to 0.70 m, building foundations to 1.2 m and, foul water drain trenches (especially for the rising main).



8.6 Recommendations

8.6.1 The following recommendations are intended to represent the view of Wessex Archaeology only and are not intended to prejudice the view or advice given by the planning authority's archaeological advisor.

Early prehistoric

8.6.2 This evaluation has established beyond reasonable doubt that significant archaeological deposits exist within the Site. The evaluation works, however, are based on a sample aimed at achieving the limited aims of the evaluation. The change of use effectively removes the heritage asset from further investigation as the main impact, with any adverse direct physical impact having been minimised. A limited programme of further works is recommended to fulfil Conditions 21 and 22 of planning permission. The aim being to ensure that sufficient information is made available to facilitate the future management of the site, and therefore maintain its significance. The limited further works will also mitigate the reduction of the availability of these deposits for future investigation, though providing a more comprehensive understanding of the deposits than would be available through the evaluation. These investigations should be focussed on areas where deposits are present demonstrated to have high potential to preserve highly significant, minimally disturbed early Middle Palaeolithic archaeology.

8.6.3 The objectives of this work should be:

- to establish the specific stratigraphic horizon(s) within the upper fluvial gravels from which this archaeology originates and to consider the specific depositional processes associated with the artefacts and deposits — to enable a definitive statement on the character of the significant deposits to be made (beyond the limited understanding that was available through the evaluation);
- to investigate the lateral extent of the artefact bearing deposits;
- to recover a representative sample of the archaeological material, and
- to obtain OSL samples to age bracket the artefact bearing horizon(s).

8.6.4 The most effective method for achieving these objectives would be a program of further test pitting focussed on the area from which artefacts were recovered during evaluation. This would encompass the areas surrounding and between **TP 33** and **TP 34**. Test pits should be excavated to and beyond the contact between the upper and lower sequence of sands and gravels (up to approximately 1.8–2.5 m bgl). Artefact sieving should be carried out at regular intervals throughout the fluvial sequence. The work should include capacity for one stepped test pit to allow the sequence to be recorded in detail and to enable OSL dating samples to be taken.

Later periods

8.6.5 Iron Age, Iron Age/Romano British and/or Anglo-Saxon deposits are likely to be partially adversely affected by construction. There are, however, a number of other factors that limit the significance of the deposits (see above). These deposits are partially within the adverse impact zone of the development (deeper deposits may be expected to be preserved), primarily through groundworks for surface water drainage and building foundations. It would appear that, mitigation (excavation) would not be likely to add materially to the understanding of this site. In these circumstances a watching brief that specifies a finite period (10 person days) during which unhindered archaeological works may be undertaken,



within the construction programme may be considered appropriate. This would aim to allow for excavation of selected deposits where necessary.

9 ARCHIVE STORAGE AND CURATION

9.1 Museum

9.1.1 The archive resulting from the evaluation is currently held at the offices of Wessex Archaeology in Salisbury. Hampshire Cultural Trust (accession no A2019.15) has agreed in principle to accept the archive on completion of the project, under the Wessex Archaeology project reference (111682). Deposition of any finds with the museum will only be carried out with the full written agreement of the landowner to transfer title of all finds to the museum.

9.2 Preparation of the archive

9.2.1 The archive, which includes paper records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Hampshire Cultural Trust, and in general following nationally recommended guidelines (SMA 1995; ClfA 2014c; Brown 2011; ADS 2013).

9.2.2 All archive elements are marked with the project reference, and a full index will be prepared. The physical archive currently comprises the following:

- 1 cardboard box of artefacts and ecofacts, ordered by material type;
- 1 files/document cases of paper records and A3/A4 graphics;

9.3 Selection policy

9.3.1 Wessex Archaeology follows national guidelines on selection and retention (SMA 1993; Brown 2011, section 4). In accordance with these, and any specific guidance prepared by the museum, a process of selection and retention will be followed so that only those artefacts or ecofacts that are considered to have potential for future study will be retained. The selection policy will be agreed with the museum, and is fully documented in the project archive.

9.4 Security copy

9.4.1 In line with current best practice (eg, Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

9.5 OASIS

9.5.1 An OASIS online record (<http://oasis.ac.uk/pages/wiki/Main>) has been initiated, with key fields and a .pdf version of the final report submitted. Subject to any contractual requirements on confidentiality, copies of the OASIS record will be integrated into the relevant local and national records and published through the Archaeology Data Service ArchSearch catalogue.



10 COPYRIGHT

10.1 Archive and report copyright

- 10.1.1 The full copyright of the written/illustrative/digital archive relating to the project will be retained by Wessex Archaeology under the *Copyright, Designs and Patents Act 1988* with all rights reserved. The client will be licenced to use each report for the purposes that it was produced in relation to the project as described in the specification. The museum, however, will be granted an exclusive licence for the use of the archive for educational purposes, including academic research, providing that such use conforms to the *Copyright and Related Rights Regulations 2003*. In some instances, certain regional museums may require absolute transfer of copyright, rather than a licence; this should be dealt with on a case-by-case basis.
- 10.1.2 Information relating to the project will be deposited with the Historic Environment Record (HER) where it can be freely copied without reference to Wessex Archaeology for the purposes of archaeological research or development control within the planning process.

10.2 Third party data copyright

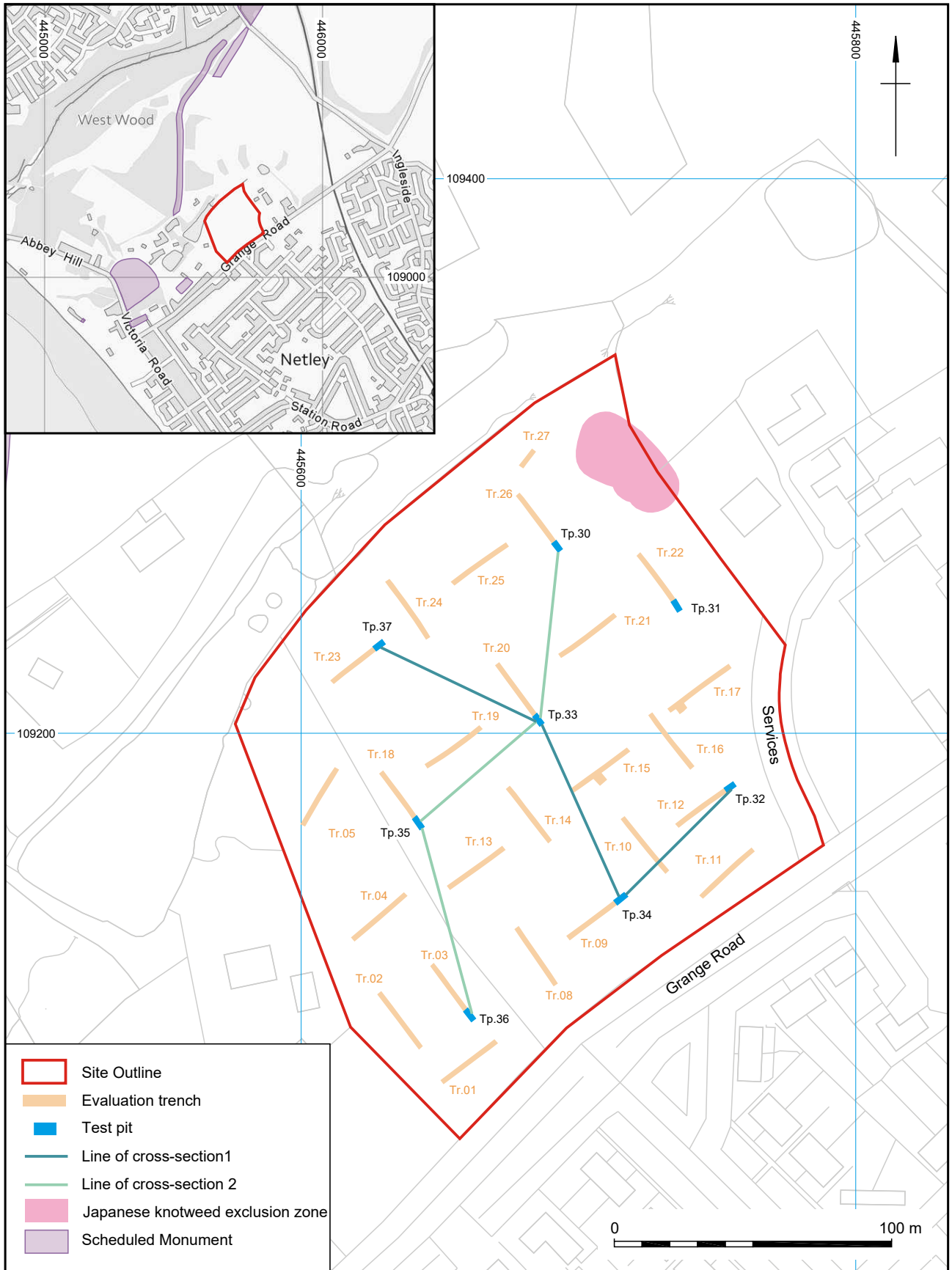
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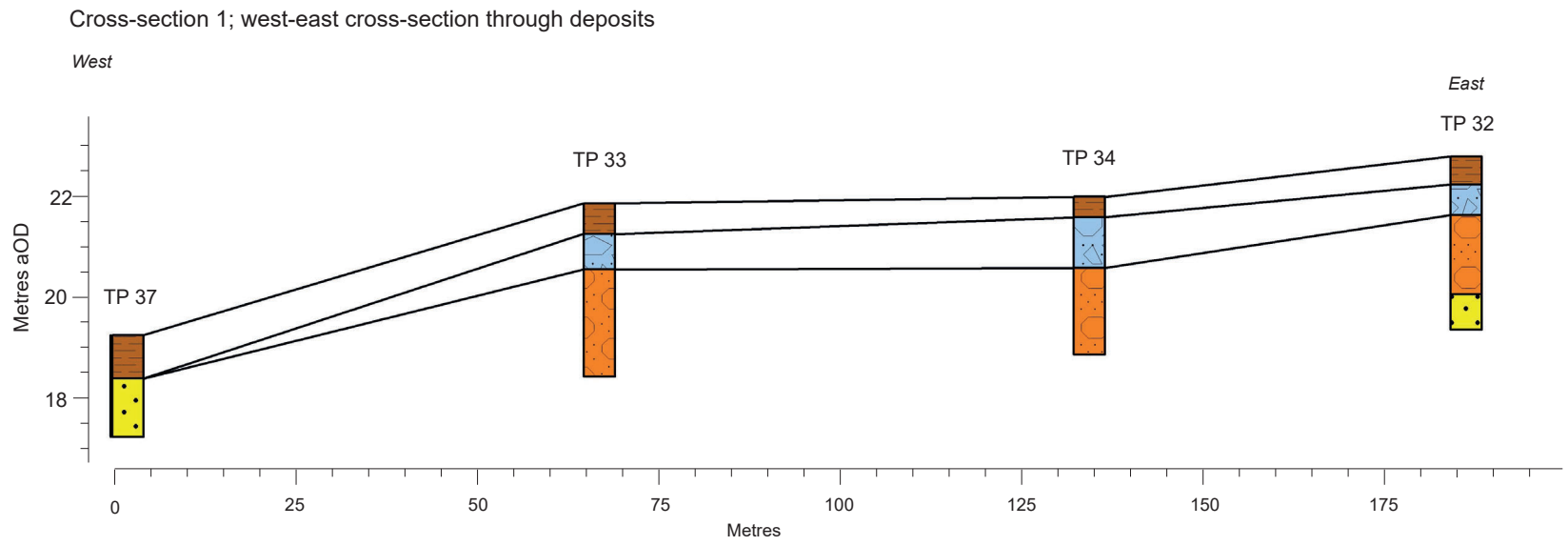
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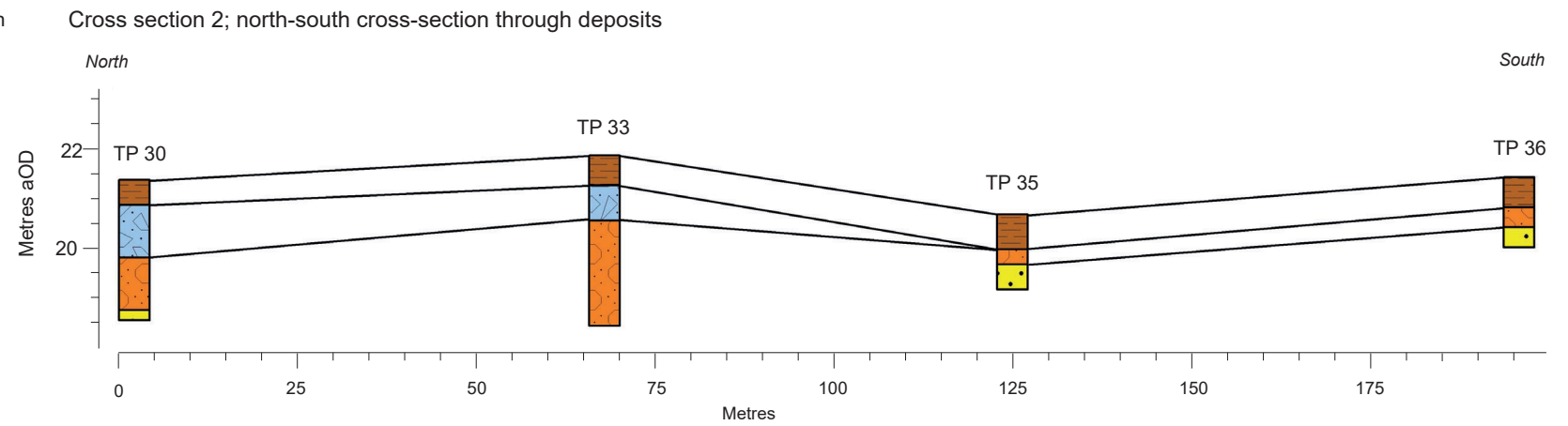
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Site and test pit locations

Figure 1



- Topsoil/Subsoil
- Head-brickearth
- River terrace deposits
- Selsey Sand Formation

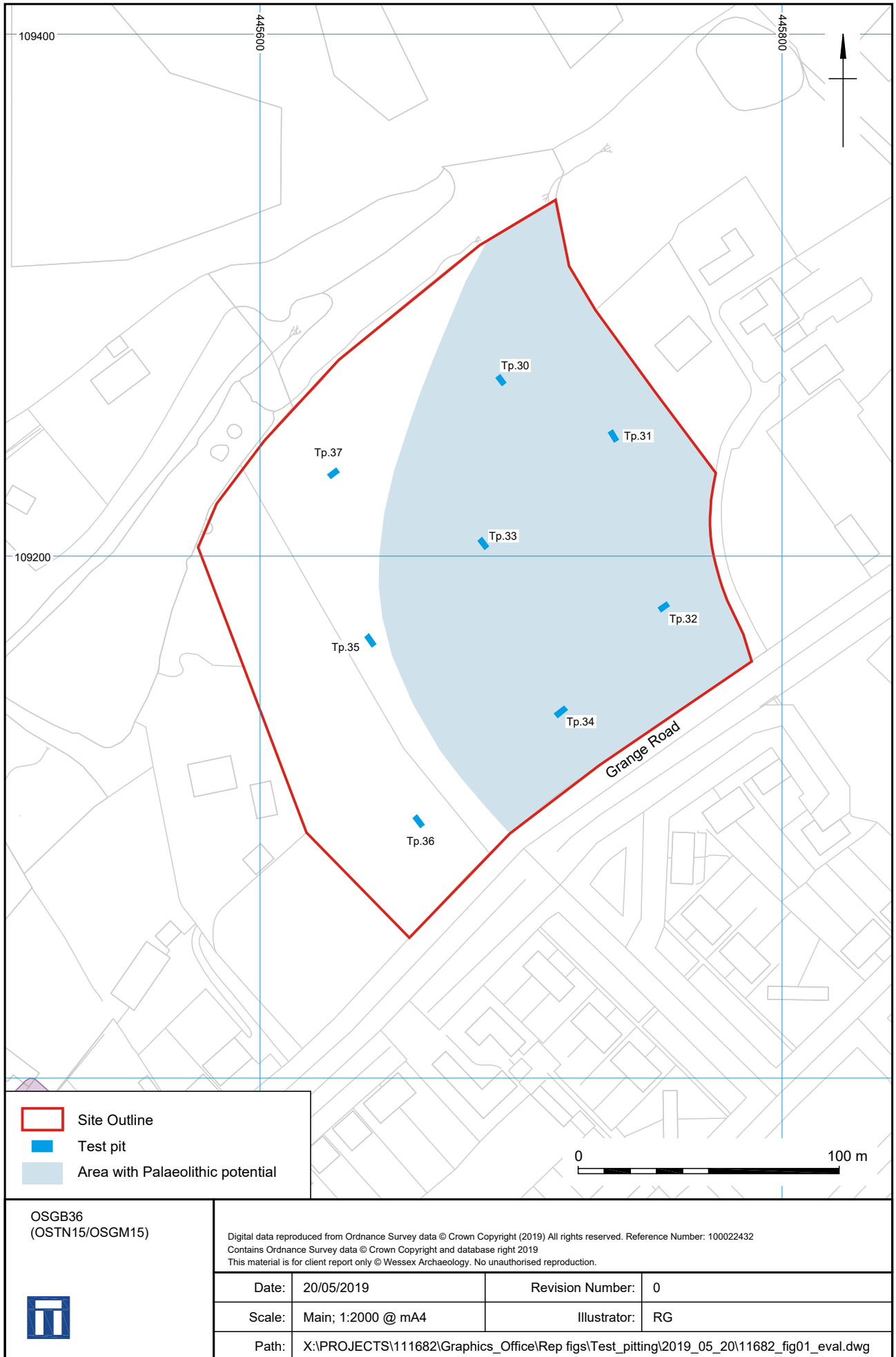


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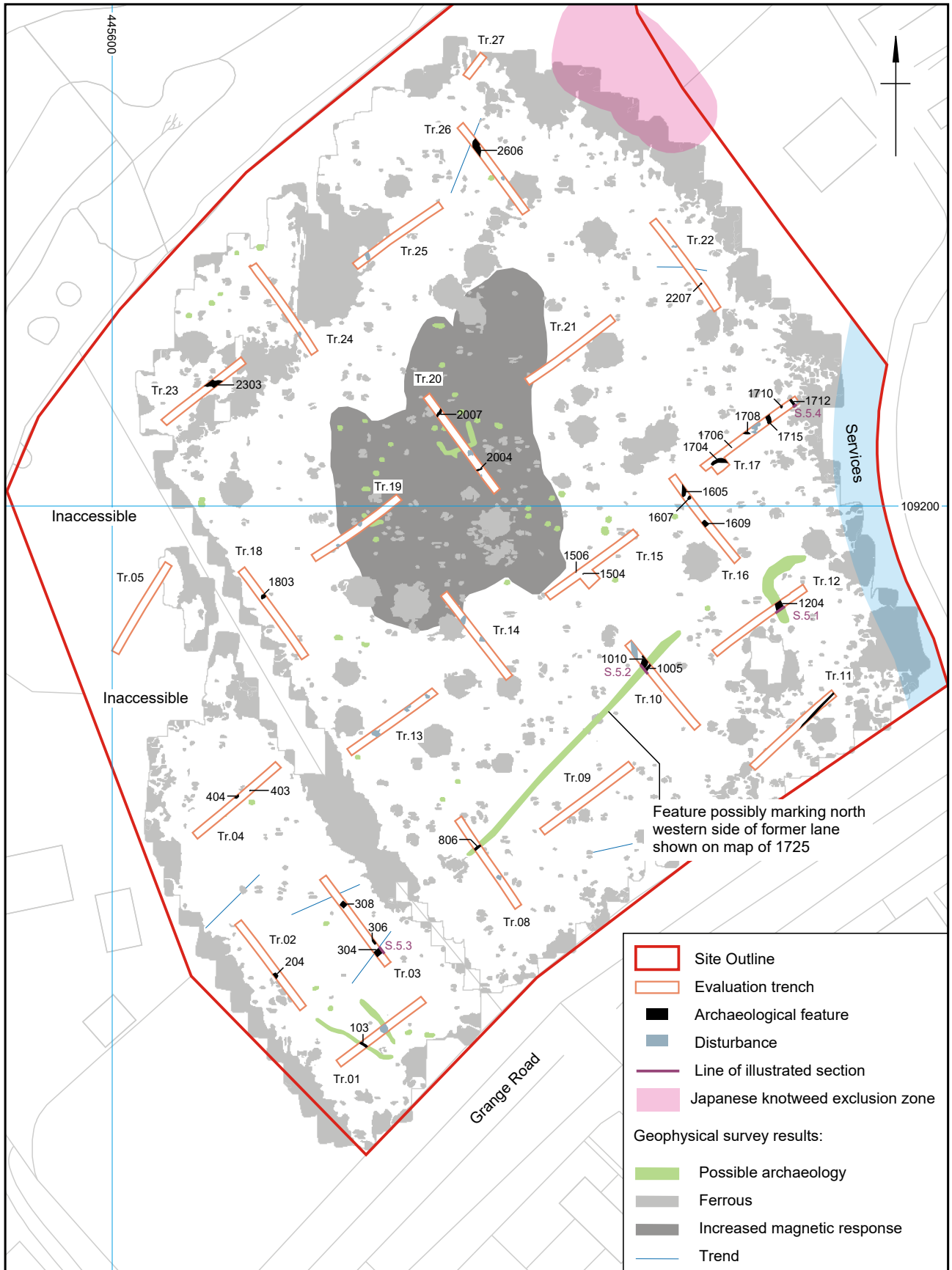
Cross-sections 1 and 2


Figure 2



Plan of Site highlighting area with Palaeolithic potential

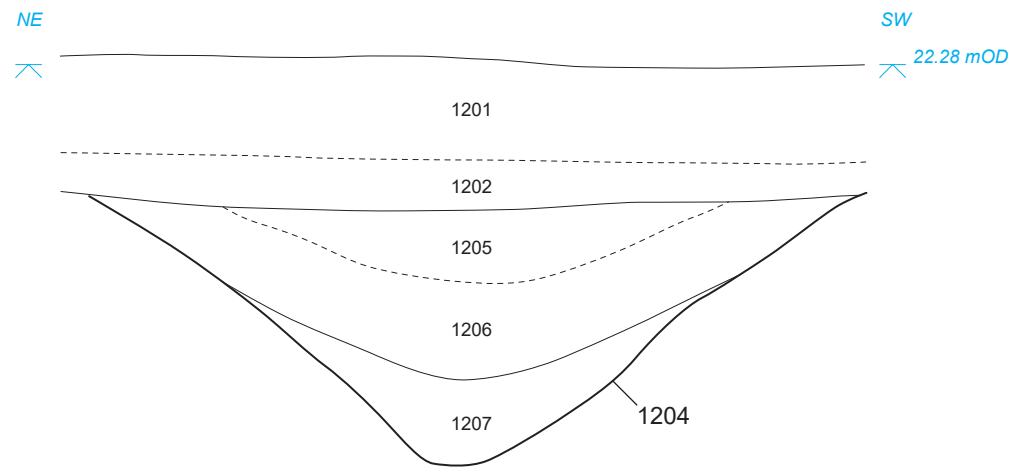
Figure 3



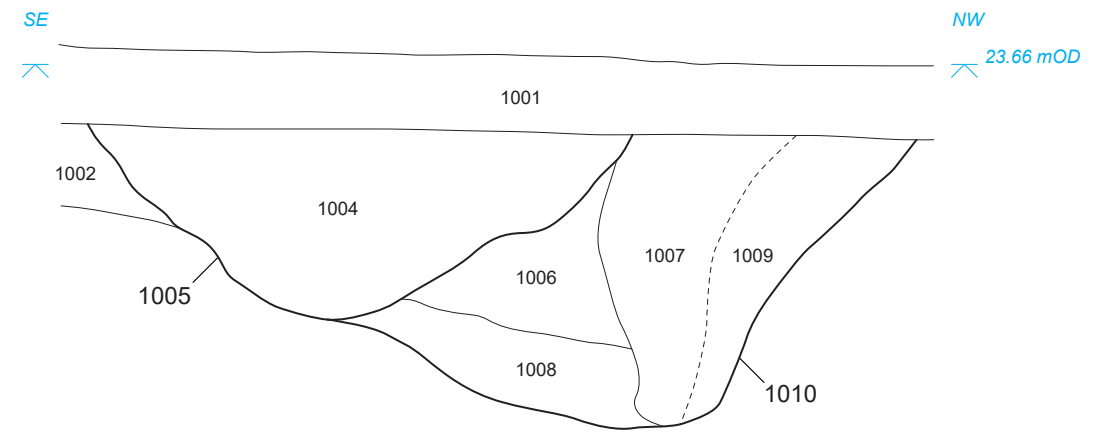
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Evaluation trench results

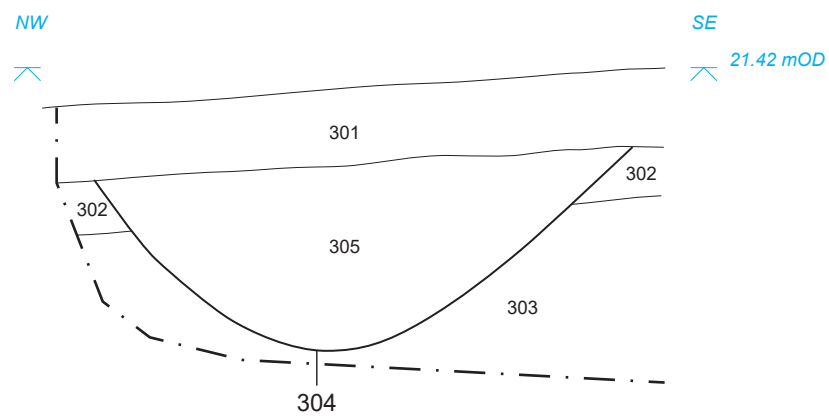
Figure 4



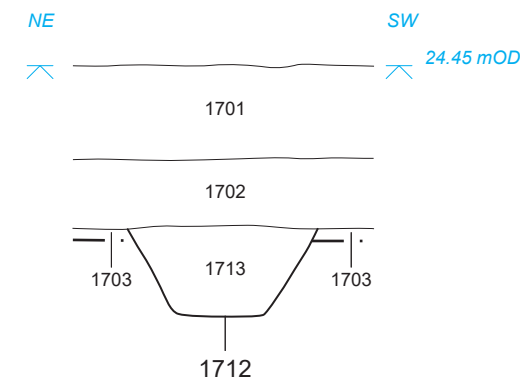
1. North west facing section through ditch 1204



2. North east facing section through ditches 1005 and 1010



3. South west facing section through ditch 304



4. North west facing section through ditch 1712



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Plate 1: TP 37 north-north-west facing section illustrating solifluction gravels overlying Selsey Sand Formation.



Plate 2 : TP 32 north-north-east facing section illustrating Selsey Sand Formation overlain by Phase I: river terrace and Phase II: 'Head brickearth' deposits


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Plate 3: TP 33 north-east facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits.



Plate 4: TP 33 detail of lower part of north-east facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits.



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Plate 5: TP 34 north facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits.



Plate 6: TP 33 north facing section illustrating Phase I: river terrace deposits, overlain by Phase II: 'Head brickearth' deposits.

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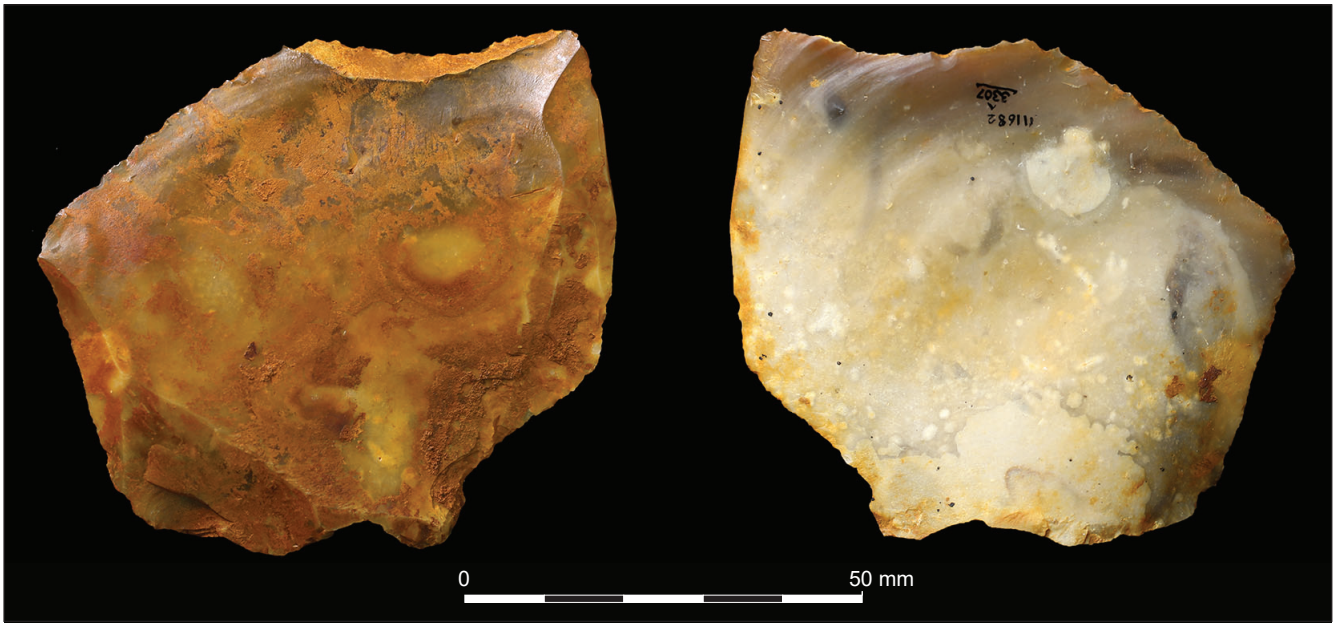


Plate 7: Dorsal and ventral view of definite Levallois flake (artefact number: 3307)



Plate 8: : Dorsal and ventral view of possible Levallois flake (artefact number: 3406)


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Plate 9: : Dorsal and ventral view of possible hard hammer flake (artefact number: 3405)

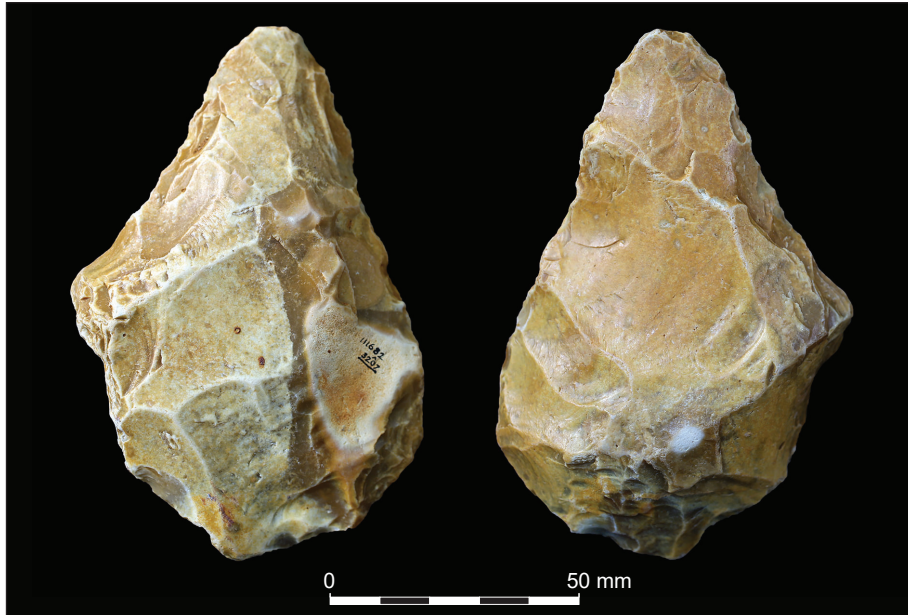


Plate 10: Two faces of handaxe (artefact number: 3207)


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Plate 11: South east facing of ditch 1715, viewed from the south west. 1 m scale.



Plate 12: Brick lined drain 1103 within trench 11, viewed from the north east. 1 & 2 m scales.



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Plate 13: Modern square-cut features 1609, viewed from the north east. 1 m scale.

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APPENDICES

Appendix 1 Geophysical survey report



Grange Road Netley Abbey, Southampton

Detailed Gradiometer Survey Report

Ref: 111681.03
March 2019



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Contents

Summary	ii
Acknowledgements.....	ii
1 INTRODUCTION	1
1.1 Project background.....	1
1.2 Scope of document.....	1
1.3 The site.....	1
2 ARCHAEOLOGICAL BACKGROUND.....	1
2.3 Archaeological investigations in the area	3
3 METHODOLOGY	3
3.1 Introduction.....	3
3.2 Aims and objectives.....	3
3.3 Fieldwork methodology.....	4
3.4 Data processing.....	4
3.5 Gradiometer survey results and interpretation	4
4 DISCUSSION	5
REFERENCES	6
Bibliography.....	6
Cartographic and documentary sources.....	6
Online resources.....	6
APPENDICES	I
Appendix 1: Survey Equipment and Data Processing.....	i
Appendix 2: Geophysical Interpretation	iii
Appendix 3: OASIS form	iv

List of Figures

- Figure 1** Site location
Figure 2 Detailed gradiometer survey results: Greyscale plot
Figure 3 Detailed gradiometer survey results: Interpretation



Summary

A detailed gradiometer survey was conducted over land at Grange Road, Netley (centred on NGR 445679 109193). The project was commissioned by Stratland Estates Ltd with the aim of establishing the presence, or otherwise, and nature of detectable archaeological features in support of a planning application for the residential development of the site.

The site comprises two arable fields located north-east of Netley Abbey, covering an area of 3.5 ha. The geophysical survey was undertaken on 13 and 19 March 2019 has demonstrated the presence of a number of anomalies across the site.

The detailed gradiometer survey has not identified any anomalies that can confidently interpreted as archaeology. However, several possible archaeological anomalies have been identified. These are evident as rectilinear and linear anomalies in the dataset that could indicate former ditched enclosures and undocumented field boundaries. While an exact date cannot be ascribed, it is likely such features would pertain to the medieval period and be further evidence of the agricultural activity noted in the surrounding medieval landscape during this period.

Acknowledgements

Wessex Archaeology would like to thank Stratland Estates Ltd for commissioning the geophysical survey. The assistance of Andy Wright is gratefully acknowledged in this regard.

The fieldwork was undertaken by Patricia Voke, Jenna Jackson and Thom King. Alexander Schmidt processed and interpreted the geophysical data and prepared the report and illustrations. The geophysical work was quality controlled by Tom Richardson and Ben Urmston. The project was managed on behalf of Wessex Archaeology by Simon Woodiwiss.



Grange Road, Netley, Hampshire

Detailed Gradiometer Survey Report

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Stratland Estates Limited to carry out a geophysical survey at Grange Road, Netley, Hampshire (centred on NGR 445679 109193) (**Figure 1**). The survey forms part of an ongoing programme of archaeological works being undertaken in support of a planning application for a residential development at the site.

1.2 Scope of document

1.2.1 This report presents a brief description of the methodology followed by the detailed survey results and the archaeological interpretation of the geophysical data.

1.3 The site

1.3.1 The site is located north of Grange Road, at the northern edge of Netley and 4.9 km south-east of Southampton in the county of Hampshire.

1.3.2 The survey comprises 3.5 ha of agricultural land, currently under rough pasture. The site is bounded by mature hedgerows to the south-east and east. On the northern side the site is bounded by woodland, a part of West Wood which extends to the north. On the west side the site is bounded by garden hedgerows and trees associated with a farmhouse.

1.3.1 The local topography is relatively level with a low combe situated to the north-west of the site, extending towards Netley Abbey to the south-west. The area slopes gently downwards to the north-west, from the highest point at the south-eastern corner at 23 m above Ordnance Datum (aOD), to 18 m aOD at the north-west corner.

1.3.2 The site is situated on bedrock comprising sand, silt, and clay of the Selsey Sand Formation. This is overlain by a River Terrance Deposit of sand and gravel. Borehole records from 450m to the south-west of the site recorded approximately 4.4 m of flint gravel overlaying the sand below. (BGS 2018).

1.3.3 The soils underlying the site are likely to consist of typical argillic brown earths of the 571z (Hamble 2) association (SSEW 1983). Soils derived from such geological parent material have been shown to produce magnetic contrasts acceptable for the detection of archaeological remains through magnetometer survey.

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 The archaeological and historical background was assessed in a desk-based assessment (DBA) (Wessex Archaeology 2015), which considered the recorded historic environment resource within a 1 km study area of the proposed development. The DBA used information from the Hampshire Historic Environment Record (HHER) and the National Heritage List for England (NHLE). Additional sources of information are referenced, as appropriate. The



following background is not exhaustive but is summarised from aspects of the DBA that are considered relevant to the interpretation of the geophysical survey data.

2.2 Summary of the archaeological resource

- 2.2.1 There are five scheduled monuments noted in the study area of the DBA, including Netley Abbey (NHLE 1001960), founded in 1239. Surrounding Netley Abbey are the precinct wall and moat (NHLE 1005536), and the western (NHLE 1008703) and eastern (NHLE 1008704) aqueducts. Furthermore, Netley Castle (NHLE 1336957/1001884) is a scheduled monument and Grade II* listed building described as a Tudor coastal fort dating to 1542. The Netley Abbey Conservation Area encompasses the abbey, its associated surroundings, part of the Victorian seafront, and buildings within Netley itself.
- 2.2.2 Eight Grade II listed buildings are recorded in the study area. These mostly comprise houses, cottages, and farm houses dating to the 16th to 19th century, located in and around the settlement of Netley.
- 2.2.3 Very little is recorded in the surrounding area dating to the Palaeolithic and Mesolithic periods, although a high level of early prehistoric activity is noted in southern Hampshire. A single Palaeolithic find spot lies in the study area, comprising a possibly unfinished axe head found in a garden in Netley 585 m east of the site. Mesolithic activity is represented by collections of tools with the study area of the DBA, both on the Netley foreshore 800 m west of the site and inland 600 m south of the site.
- 2.2.4 There is no evidence dating to the Neolithic to Bronze Age period in the study area. The closest recorded assets dating to this period comprise several extant barrows noted some 3 km north-east of the site at Netley Common, which are rare across southern Hampshire. Similarly, there is no evidence for Iron Age activity within the study area.
- 2.2.5 A single record pertaining to the Romano-British period is noted in the study area. This consists of a ditch recorded during a watching brief containing Roman pottery and a *crota* bell possibly dating to the Romano-British period. This is noted some 885 m north-west of the site.
- 2.2.6 The site is located within the parish of Hound, originally named 'Hound with Netley' recorded in the Domesday book. Hound is located 1.8 km east-south-east of the site and consists of several farmsteads dating to the 13th century. It is likely that the settlement had its origins as a small Saxon farmstead, although no archaeological sites or finds are recorded within the site or study area dating definitely from the early medieval period.
- 2.2.7 Netley is named in the Domesday Book as '*Latelie*', although this is likely to be the medieval settlement situated at the modern village of Old Netley, approximately 1.8 km to the north-east of the site. The medieval village is distinct from the settlement to the east of Netley Abbey, which largely developed in the Victorian period. The Cistercian abbey was founded in 1239, and included an extended precinct, fishponds, and a water management system based around a number of aqueducts extending to the north-east. The DBA notes that the site lies in what was probably the agricultural hinterland of the abbey, with the Cistercian order being known for sheep rearing and wool production.
- 2.2.8 The post-medieval period saw the dissolution of the abbey and the construction of a number of buildings in the 16th and 17th centuries, most notably Netley Castle. More intensive development occurred during the 19th century with the creation of the new settlement at Netley, and subsequent gravel extraction and landfill in the 19th and 20th centuries is likely to have resulted in the total loss of archaeological remains in those areas of Netley.



2.3 Archaeological investigations in the area

- 2.3.1 No previous archaeological investigations are known for the development area, though it lies within an Area of Archaeological Potential (as defined by Hampshire County Council) relating to buried remains of rural settlement within the parish of Hound.
- 2.3.2 There have been a number of investigations in the vicinity of the development area. Netley Abbey itself has been investigated at various times from the 19th century onwards. A number of watching briefs have also been undertaken, though most did not record any significant deposits. Of those that recorded deposits of interest, these included a section of the Abbey moat, Roman field boundaries, a 19th century floor surface, undated pits and a post-medieval ditch, as well as undated features.
- 2.3.3 Various archaeological watching briefs have been carried out within the study area. Of these most recorded no archaeological remains.
- 2.3.4 In 1999 a watching brief undertaken during the rebuilding of a house called 'The Hermitage', located to the immediate west of the site recorded a section of the abbey's medieval moat (Southern Archaeological Services).
- 2.3.5 In 1992 a watching brief at Tickleford Drive recorded several field boundaries, one of which contained Romano-British artefacts (Southampton City Council Archaeology Unit).
- 2.3.6 In 1995 a watching brief at Netley Grange, prior to the construction of housing, recorded a ditch containing artefacts suggesting a post-medieval date (Hampshire Archaeology).

3 METHODOLOGY

3.1 Introduction

- 3.1.1 The geophysical survey was undertaken by Wessex Archaeology's in-house geophysics team on 13 and 19 March 2019. Field conditions on 13th March were very poor, and survey was postponed due to persistent heavy rain. Conditions on 19th March were improved sufficiently to resume fieldwork. An overall coverage of 2.8 ha was achieved, although the northern corner and western edge of the survey area could not be surveyed due to overgrown vegetation, and was limited around the peripheries by encroaching hedgerows.
- 3.1.2 The methods and standards employed throughout the geophysical survey conform to that set out in the Written Scheme of Investigation (WSI) (Wessex archaeology 2019), as well as to current best practice and guidance outlined by the Chartered Institute for Archaeologists (CIfA 2014) and European Archaeologiae Consilium (EAC; Schmidt *et al.* 2015).

3.2 Aims and objectives

- 3.2.1 The aims (or purpose) of the geophysical survey, in compliance with the CIfA's *Standards and guidance for archaeological geophysical survey* (2014), are:
- To determine, as far as is reasonably possible, the nature of the detectable archaeological resource within a specified area using appropriate methods and practices; and



- To inform either the scope and nature of any further archaeological work that may be required; or the formation of a mitigation strategy (to offset the impact of the development on the archaeological resource); or a management strategy.

3.2.2 In order to achieve the above aims, the objectives of the geophysical survey are:

- To conduct a geophysical survey covering as much of the specified area as possible, allowing for on-site obstructions;
- To clarify the presence/absence of anomalies of archaeological potential; and
- Where possible, to determine the general nature of any anomalies of archaeological potential.

3.3 Fieldwork methodology

3.3.1 The cart-based gradiometer system used a Leica Captivate RTK GNSS instrument, which receives corrections from a network of reference stations operated by the Ordnance Survey (OS) and Leica Geosystems. Such instruments allow positions to be determined with a precision of 0.02 m and therefore exceed EAC recommendations (Schmidt *et al.* 2015).

3.3.2 The detailed gradiometer survey was undertaken using four Bartington Grad-01-1000L gradiometers mounted on a non-magnetic cart at 1 m intervals. Data were collected at a rate of 10 Hz with an effective sensitivity of 0.03 nT, producing intervals of 0.15 m along transects spaced 4 m apart.

3.4 Data processing

3.4.1 Data from the survey was subject to minimal data correction processes. These comprise a 'Destripe' function (± 5 nT thresholds), applied to correct for any variation between the sensors, and an interpolation used to grid the data and discard overlaps where transects have been collected too close together.

3.4.2 Further details of the geophysical and survey equipment, methods and processing are described in **Appendix 1**.

3.5 Gradiometer survey results and interpretation

3.5.1 A small, positive rectilinear anomaly has been identified in the centre of the dataset at **4000**. The anomaly extends 7 m west – east, with northerly projections to the west (3 m) and east (5 m). The anomaly is 0.7 – 1.3 m wide and there is no apparent northern side to the anomaly, making a confident interpretation difficult. It is possible this anomaly indicates an early ditched enclosure. However, it could equally be the result of modern agricultural activity or associated with localised geological variation. A smaller rectilinear anomaly is noted 21 m to the south-west. This is on broadly the same alignment, measuring 3 m north – south and 3.1 m east – west. This anomaly could also indicate the corner of a small enclosure, though could equally be agricultural or natural in origin.

3.5.2 A weakly positive, broadly rectilinear anomaly has been identified towards the south-east of the dataset at **4001**. The anomaly measures 10.6 m north-west to south-east and 9.7 m north-east to south-west. This anomaly could indicate a shallow cut feature such as a ditch and due to its rectilinear form, and might be evidence of an enclosure. However, due to the weak contrast with the magnetic background, a more confident interpretation is not possible. The anomaly could equally be evidence of localised variation in the underlying geological deposits.



- 3.5.3 Several weak linear anomalies of possible archaeological origin have been identified. In the south of the survey area, a weak positive linear anomaly on a north-east to south-west alignment can be seen at **4002**. This anomaly is 69 m long, 1.3 m wide, and is oriented south-west to north-east, extending towards **4001**. This is likely to indicate a ditch feature and does not correspond to any documented former field boundaries; therefore this could indicate a former boundary or field system. However, the anomaly could equally relate to more recent agricultural activity.
- 3.5.4 In the south-west of the survey area, two weakly positive short linear anomalies have been identified. The first (**4003**) measures 18.8 m in length and is 0.7 m wide on a west-north-west to east-south-east alignment. The second (**4004**) is 6.3 m north-east of **4003** measuring 12.4 m long and 0.9 – 1.3 m wide on a north-west to south-east alignment. The anomalies could indicate cut features in the underlying deposits such as ditches. However, these anomalies could equally be modern in provenance and associated with agricultural activity.
- 3.5.5 Numerous discrete positive anomalies approximately 1 m in diameter have been identified throughout the survey area. These anomalies are likely to indicate small pit-like features, and have been interpreted as possible archaeology, as such features can be evidence of settlement activity such as refuse pits or extraction activity. However, these anomalies might be natural in origin, pertaining to natural variations in the underlying deposits.
- 3.5.6 A large area of increased magnetic response has been identified in the central portion of the survey data at **4005**. This type of response indicates localised variations in the background magnetic field, although its exact origin is not clear. It is possible that it indicates an area of archaeological activity, however it is most likely associated with natural variation or modern agricultural activity.
- 3.5.7 Several weak trends have also been identified by the survey. These cannot be confidently interpreted; however, an archaeological origin cannot be entirely excluded. Due to their weak magnitude, it is considered likely these anomalies are associated with agricultural activity and are likely to be modern in origin.
- 3.5.8 The remaining anomalies are thought to be modern in provenance. Numerous highly magnetic responses have been identified throughout the survey results, which can largely be attributed to modern debris noted on site during the survey. In addition, a strongly magnetic response is noted at the periphery of the survey area. This is attributed to ferrous fencing and external objects.

4 DISCUSSION

- 4.1.1 The detailed gradiometer survey has not identified any anomalies that can be confidently interpreted as archaeology. However, several possible archaeological anomalies have been identified. These are evident as rectilinear and linear anomalies in the dataset that could indicate former ditched enclosures and undocumented field boundaries. While an exact date cannot be ascribed, it is likely such features would pertain to the medieval period and be further evidence of the agricultural activity noted in the surrounding medieval landscape during this period. However, further investigation may be required to determine an exact origin of such features.
- 4.1.2 The remaining anomalies can be attributed to natural geological variation, agricultural activity, or modern debris across the site.



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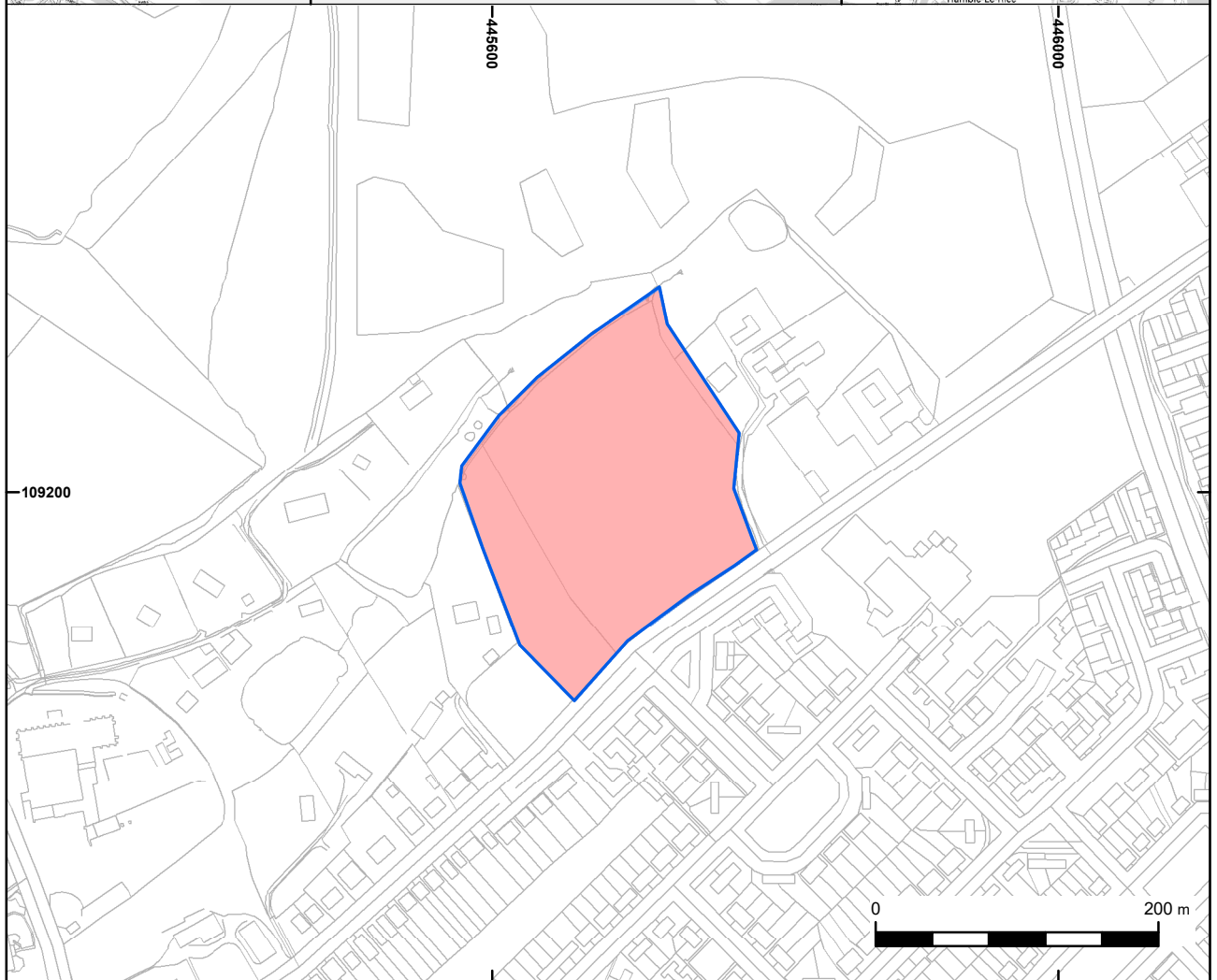
Cartographic and documentary sources



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Online resources

British Geological Survey Geology of Britain Viewer (accessed March 2019) <http://mapapps.bgs.ac.uk/geologyofbritain/home.html>

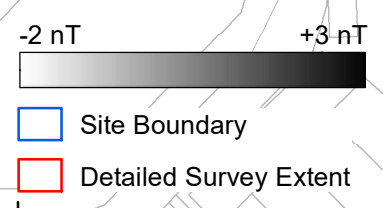
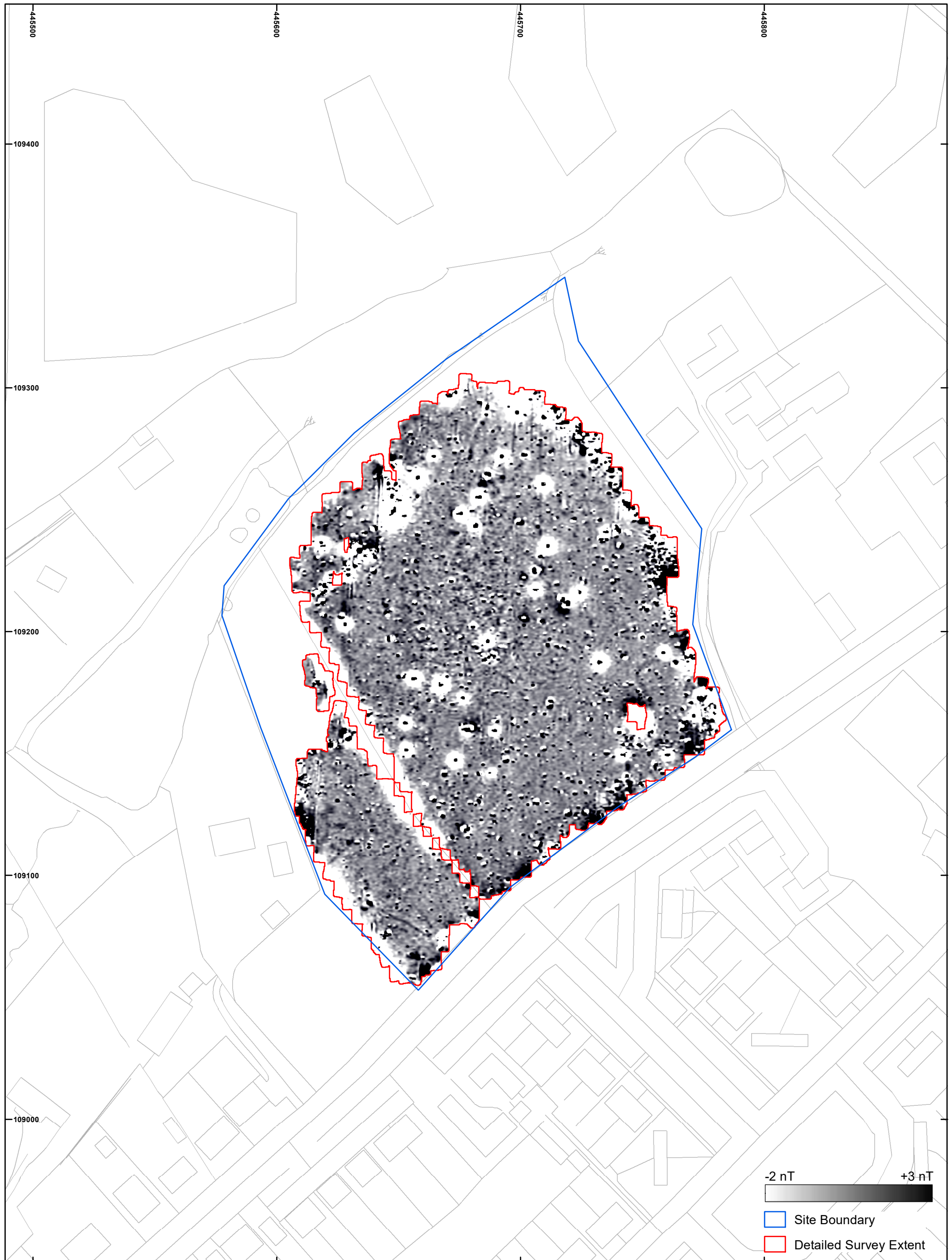
Old Maps (accessed March 2019) <https://www.old-maps.co.uk>



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Site location

Figure 1



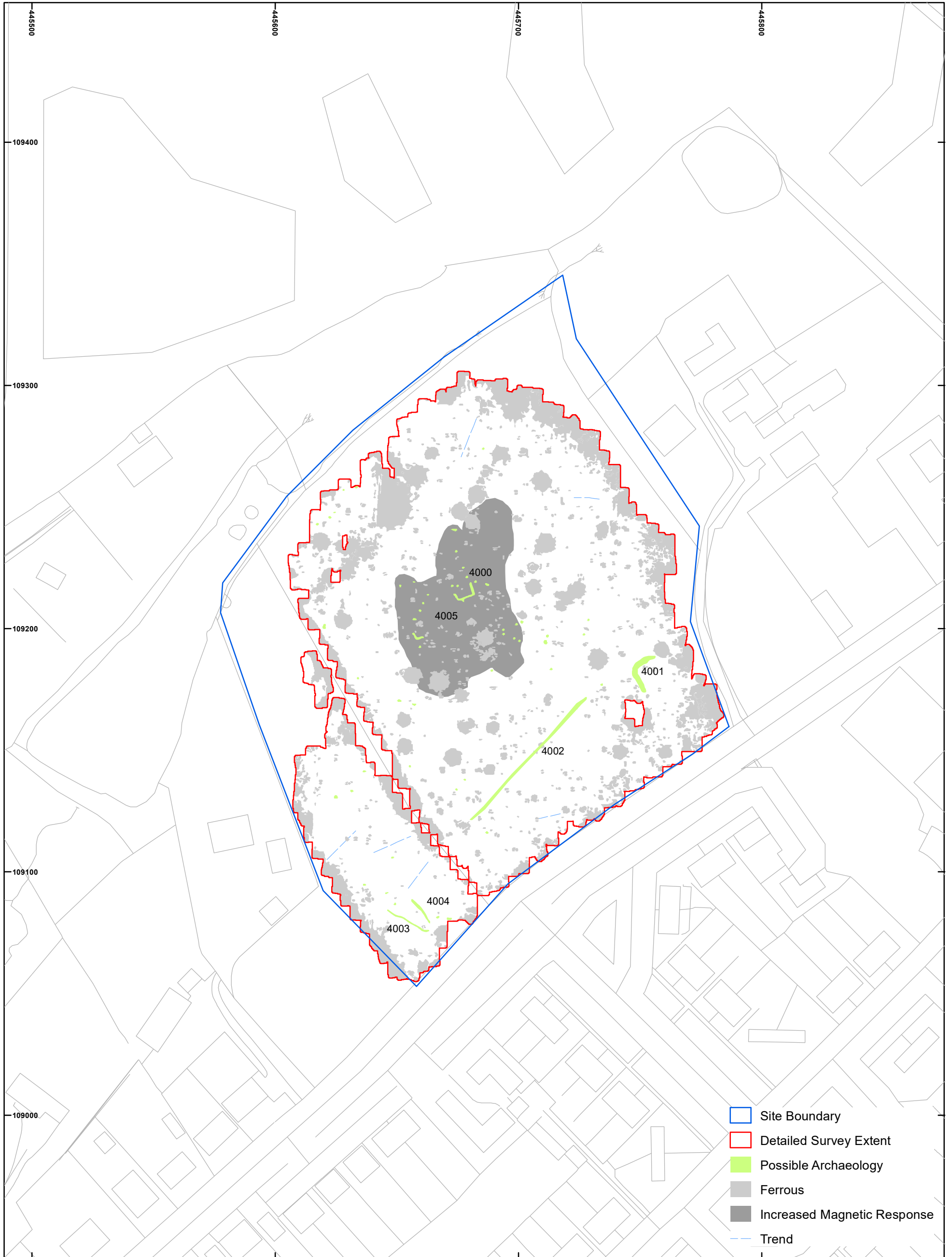
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Detailed gradiometer survey results: Greyscale plot

Figure 2



- Site Boundary
- Detailed Survey Extent
- Possible Archaeology
- Ferrous
- Increased Magnetic Response
- - - Trend

Coordinate system:
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Detailed gradiometer survey results: Interpretation

Figure 3



APPENDICES

Appendix 1: Survey Equipment and Data Processing

Survey methods and equipment

The magnetic data for this project were acquired using a non-magnetic cart fitted with 4x Bartington Grad-01-1000L magnetic gradiometers. The instrument has four sensor assemblies fixed horizontally 1 m apart allowing four traverses to be recorded simultaneously. Each sensor contains two fluxgate magnetometers arranged vertically with a 1m separation and measures the difference between the vertical components of the total magnetic field within each sensor array. This arrangement of magnetometers suppresses any diurnal or low frequency effects.

The gradiometers have an effective resolution of 0.03 nT over a ± 100 nT range, and measurements from each sensor are logged at intervals of 0.25 m. All of the data are then relayed to a Leica Viva CS35 tablet, running the MLgrad601 program, which is used to record the survey data from the array of Grad601 probes at a rate of 10 Hz. The program also receives measurements from a GPS system, which is fixed to the cart at a measured distance from the sensors, providing real time locational data for each data point.

The cart-based system relies upon accurate GPS location data which is collected using a Leica Viva system with rover and base station. This receives corrections from a network of reference stations operated by the Ordnance Survey and Leica Geosystems, allowing positions to be determined with a precision of 0.02m in real-time and therefore exceed the level of accuracy recommended by European Archaeologiae Consilium recommendations (Schmidt *et al.* 2015) for geophysical surveys.

Data may be collected with a higher sample density where complex archaeological anomalies are encountered, to aid the detection and characterisation of small and ephemeral features. Data may be collected at up to 0.125 m intervals along traverses spaced up to 0.25m apart.

Post-processing

The magnetic data collected during the detail survey are downloaded from the Bartington cart system for processing and analysis using both commercial and in-house software. This software allows for both the data and the images to be processed in order to enhance the results for analysis; however, it should be noted that minimal data processing is conducted so as not to distort the anomalies.

The cart-based system generally requires a lesser amount of post-processing than the handheld Bartington Grad 601-2 fluxgate gradiometer instrument. This is largely because mounting the gradiometers on the cart reduces the occurrence of operator error; caused by inconsistent walking speeds and deviation in traverse position due to varying ground cover and topography.

Typical data and image processing steps may include:

- GPS Destripe – Determines the median of each transect and then subtracts that value from each datapoint in the transect. May be used to remove the striping effect seen within a survey caused by directional effects, drift, etc.
- GPS Base Interpolation – Sets the X & Y interval of the interpolated data and the track radius (area around each datapoint that is included in the interpolated result).
- Discard Overlaps - Intended to eliminate a track(s) that have been collected too close to one another. Without this, the results of the interpolation process can be distorted as it tries to accommodate very close points with potentially differing values.



Typical displays of the data used during processing and analysis:

- XY Plot – Presents the data as a trace or graph line for each traverse. Each traverse is displaced down the image to produce a stacked profile effect. This type of image is useful as it shows the full range of individual anomalies.
- Greyscale – Presents the data in plan view using a greyscale to indicate the relative strength of the signal at each measurement point. These plots can be produced in colour to highlight certain features but generally greyscale plots are used during analysis of the data.



Appendix 2: Geophysical Interpretation

The interpretation methodology used by Wessex Archaeology separates the anomalies into four main categories: archaeological, modern, agricultural and uncertain origin/geological.

The archaeological category is used for features when the form, nature and pattern of the anomaly are indicative of archaeological material. Further sources of information such as aerial photographs may also have been incorporated in providing the final interpretation. This category is further sub-divided into three groups, implying a decreasing level of confidence:

- Archaeology – used when there is a clear geophysical response and anthropogenic pattern.
- Possible archaeology – used for features which give a response, but which form no discernible pattern or trend.

The modern category is used for anomalies that are presumed to be relatively modern in date:

- Ferrous – used for responses caused by ferrous material. These anomalies are likely to be of modern origin.
- Modern service – used for responses considered relating to cables and pipes; most are composed of ferrous/ceramic material although services made from non-magnetic material can sometimes be observed.

The agricultural category is used for the following:

- Former field boundaries – used for ditch sections that correspond to the position of boundaries marked on earlier mapping.
- Ridge and furrow – used for broad and diffuse linear anomalies that are considered to indicate areas of former ridge and furrow.
- Ploughing – used for well-defined narrow linear responses, usually aligned parallel to existing field boundaries.
- Drainage – used to define the course of ceramic field drains that are visible in the data as a series of repeating bipolar (black and white) responses.

The uncertain origin/geological category is used for features when the form, nature and pattern of the anomaly are not sufficient to warrant a classification as an archaeological feature. This category is further sub-divided into:

- Increased magnetic response – used for areas dominated by indistinct anomalies which may have some archaeological potential.
- Trend – used for low amplitude or indistinct linear anomalies.
- Superficial geology – used for diffuse edged spreads considered to relate to shallow geological deposits. They can be distinguished as areas of positive, negative or broad bipolar (positive and negative) anomalies.



Appendix 3: OASIS form

Project Details:

Project name	Grange Road, Netley, Hampshire				
Type of project	Detailed gradiometer survey (Field evaluation)				
Project description	<p>The site comprises two arable fields located north of Grange Road, Netley, covering an area of 3.5 ha. The geophysical survey was undertaken on 13 and 19 March 2019 and has demonstrated the presence of a number of anomalies across the site.</p> <p>The detailed gradiometer survey has not identified any anomalies that can confidently interpreted as archaeology. However, several possible archaeological anomalies have been identified. These are evident as rectilinear and linear anomalies in the dataset that could indicate former ditched enclosures and undocumented field boundaries. While an exact date cannot be ascribed, it is likely such features would pertain to the medieval period and be further evidence of the agricultural activity noted in the surrounding medieval landscape during this period.</p> <p>The remaining anomalies can be attributed to natural geological variation, agricultural activity or modern debris littered across the site.</p>				
Project dates	Start: 13-03-2019		End: 19-03-2019		
Previous work	Yes				
Future work	Not Known				
Project Code:	111681	HER event no.	N/A	OASIS form ID:	wessexar1-346363
		NMR no.	N/A		
		SM no.	N/A		
Planning Application Ref.	O/16/78014				
Site Status	None.				
Land use	Cultivated Lane 2 – Operations to a depth of less than 0.25 m				
Monument type	N/A	Period	N/A		

Project Location:

Site Address	Grange Road, Netley, Hampshire			Postcode	SO31 5FE
County	Hampshire	District	Southampton	Parish	Southampton
Study Area	3.5 ha	Height OD	18 – 23 m aOD	NGR	445679 109193

Project Creators:

Name of Organisation	Wessex Archaeology				
Project brief originator	Stratland Estates Ltd.		Project design originator	Wessex Archaeology	
Project Manager	Simon Woodiwiss		Project Supervisor	Patricia Voke	
Sponsor or funding body	Stratland Estates Ltd.		Type of Sponsor	Client	

Project Archive and Bibliography:

Physical archive	N/A	Digital Archive	Geophysical survey and report	Paper Archive	N/A
Report title	Grange Road, Netley, Hampshire: Detailed Gradiometer Survey Report			Date	2019
Author	Wessex Archaeology	Description	Unpublished report	Report ref.	111681.03



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FS 606559



Appendix 2 Geoarchaeological test pit summaries

The stratigraphic succession encountered in each test pit are outlined below. Heights are given in metres above OD.

NGR coordinates and OD heights taken at centre of each trench; depth bgl = below ground level

Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:		
Site code:		111682		Test Pit ID:	30				
Level (top):		21.34 m aOD		Length:	3.10 m				
				Width:	1.80 m				
				Depth:	2.80 m				
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains	
Mbg	mOD								
0.00– 0.50	21.34– 20.84	Greyish-brown silty loam; occasional fine to coarse angular and sub-angular flint clasts; rooted; structureless; loose ABRUPT; SUB-HORIZONTAL		TOP SOIL / SUB SOIL	3001	-	-	-	
0.50– 0.88	20.84– 20.46	Very fine to coarse angular (70%) to sub-angular (30%) flint gravel; medium yellow fine to medium clayey sand matrix; matrix supported; poorly sorted; structureless; moderately consolidated DIFFUSE; SUB-HORIZONTAL		SOLIFLUCT. GRAVEL	3002	-	-	-	
0.88– 1.20	20.46– 20.14	Very fine to coarse angular (70%) to sub-angular (30%) flint gravel; reddish-brown fine to medium clayey sand matrix; clast supported; poorly sorted; structureless; moderately consolidated ABRUPT; SUB-HORIZONTAL		SOLIFLUCT. GRAVEL	3003	-	-	-	
1.20– 1.55	20.14– 19.79	Bluish-grey to brownish-red clay; very occasional medium angular flint clasts; becoming gravel (fine to medium angular) towards based; structureless; well consolidated SHARP; SUB-HORIZONTAL		COLLUVIAL CLAY	3004	-	-	-	



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:	
Site code:		111682		Test Pit ID:	30			
Level (top):		21.34 m aOD		Length:	3.10 m			
				Width:	1.80 m			
				Depth:	2.80 m			
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD							
1.55– 2.60	19.79– 18.74	Fine to coarse sub-angular (60%) and angular (40%) flint gravel; dark reddish-brown slightly clayey medium to coarse sand matrix; clast supported; moderately sorted; cross bedded; poorly consolidated SHARP; SUB-HORIZONTAL		FLUVIAL SANDS & GRAVELS	3005	1 2 3 4	- - - -	- - - -
2.60– +2.80m	18.74– +18.54	Dark reddish-brown to light bluish-grey slightly sandy (very fine) clay; clast free; laminated and fissured; well consolidated		SELSEY SAND FORMATION	3006	-	-	-



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:		
Site code:		111682		Test Pit ID:	31				
Level (top):		22.78 m aOD	Length:	3.90 m					
			Width:	1.80 m					
			Depth:	3.40 m					
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains	
Mbg	mOD								
0.00–0.40	22.78–22.38	Light greyish-brown slightly sandy (very fine) silty loam; very occasional fine to coarse angular and sub-angular flint clasts; rooted; structureless; loose ABRUPT; SUB-HORIZONTAL		TOP SOIL	3101	-	-	-	
0.40–0.60	22.38–22.18	Fine to medium angular (70%) to sub-angular (30%) flint gravel; light grey clayey fine to medium sand matrix; matrix supported; poorly sorted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		SUB SOIL	3102	-	-	-	
0.60–1.00	22.18–21.78	Fine to coarse angular (70%) to sub-angular (30%) flint gravel; medium reddish-brown clayey medium sand matrix; matrix supported; poorly sorted; structureless; moderately consolidated ABRUPT; SUB-HORIZONTAL		SOLIFLUCT. GRAVEL	3103	5	-	-	
1.00–1.30	21.78–21.48	Light grey and medium reddish-brown mottled clay; fine angular flint gravel parting at 1.45m; structureless; well consolidated ABRUPT; SUB-HORIZONTAL		COLLUVIAL CLAY	3104	-	-	-	
1.30–3.10	21.48–19.68	Fine to very coarse sub-angular (65%) and angular (35%) flint gravel; light greyish yellow and dark reddish-brown Fe enriched medium sand matrix; occasional slightly clayey horizons; varies from matrix to clast supported with some clast free horizons; moderately sorted; sub-horizontally bedded; poorly consolidated SHARP; SUB-HORIZONTAL		FLUVIAL SANDS & GRAVELS	3105	6 7 8 9	- - - -	- - - -	



Site:	Grange Road, Netley, Hampshire		Area:	-		Comments:	
Site code:	111682		Test Pit ID:	31			
Level (top):	22.78 m aOD	Length:	3.90 m				
		Width:	1.80 m				
		Depth:	3.40 m				
Depth		Sediment description	Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD						
3.10- +3.40m	19.68- +19.38	Light reddish-yellow fine sand; clast free; structureless; poorly consolidated	? SELSEY SAND FORMATION	3106	-	-	-



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:		
Site code:		111682		Test Pit ID:	32				
Level (top):		22.79 m aOD	Length:	3.10 m					
			Width:	1.80 m					
			Depth:	3.40 m					
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains	
Mbg	mOD								
0.00–0.55	22.79–22.24	Light greyish-brown sandy (very fine) silty loam; very occasional fine to coarse angular and sub-angular flint clasts; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		TOP SOIL / SUB SOIL	3201	-	-	-	
0.55–1.15	22.24–21.64	0.55-0.65: angular (90%) and sub-angular (10%) flint gravel; brownish grey sandy (fine to medium) clay matrix; poorly sorted; moderately consolidated 0.65-0.90: light yellowish-brown to medium reddish brown mottled sandy (fine-medium) clay matrix; very occasional fine to medium angular and sub-angular flint clasts; structureless; moderately consolidated 0.90-1.15: angular (90%) and sub-angular (10%) flint gravel; brownish grey sandy (fine to medium) clay matrix; poorly sorted; moderately consolidated ABRUPT; SUB-HORIZONTAL		SOLIFLUCT. GRAVEL	3202	-	-	-	
1.15–1.75	21.64–21.04	Light bluish grey and medium reddish-brown mottled slightly sandy (fine) clay; frequent reddish brown fine-medium sand lenses; occasional very fine to medium angular flint gravel partings ABRUPT; SUB-HORIZONTAL		COLLUVIAL CLAY	3203	-	-	-	



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:	
Site code:		111682		Test Pit ID:	32			
Level (top):		22.79 m aOD	Length:	3.10 m				
			Width:	1.80 m				
			Depth:	3.40 m				
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD							
1.75– 2.70	21.04– 20.09	Fine to very coarse sub-angular (60%) and angular (40%) flint gravel; light greyish yellow and dark reddish-brown Fe enriched medium sand matrix; varies from matrix to clast supported with some clast free horizons; moderately sorted; sub-horizontally bedded; poorly consolidated SHARP; SUB-HORIZONTAL		FLUVIAL SANDS & GRAVELS	3204	10 11 12	1 possible flake - - Handaxe from ~2.40-2.60	- - -
2.70– +3.40m	20.09– +19.39	Light reddish-yellow to dark brownish-red mottled very fine to fine sand; clast free; structureless; poorly consolidated		SELSEY SAND FORMATION	3205	-	-	-



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:		
Site code:		111682		Test Pit ID:	33				
Level (top):		21.87 m aOD		Length:	3.80 m				
				Width:	1.80 m				
				Depth:	3.40 m				
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains	
Mbg	mOD								
0.00– 0.60	21.87– 21.27	Light greyish-brown slightly sandy (fine) silty loam; very occasional fine to coarse angular flint clasts; from 0.40m becomes very gravelly with frequent fine to very coarse angular and sub-angular flint clasts; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		TOP SOIL / SUB SOIL	3301	-	-	-	
0.60– 0.75	21.27– 21.12	Fine to coarse angular (90%) and sub-angular (10%) flint gravel; dark greyish-brown medium sand matrix; clast supported; structureless; loose; moderately sorted; moderately consolidated ABRUPT; SUB-HORIZONTAL		SOLIFLUCT. GRAVEL	3302	13	-	-	
0.75– 1.30	21.12– 20.57	0.75-0.90: dark yellowish-brown gravelly, slightly clayey fine to medium sand matrix; moderately frequent fine angular flint clasts; structureless; moderately consolidated 0.90-1.10: light bluish grey to medium reddish-brown mottled clay; occasional medium to coarse angular flint clasts; structureless; well consolidated 1.10-1.30: Light bluish grey to medium reddish-brown fine to medium sand; clast free; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		COLLUVIAL SANDS & CLAYS	3303	-	-	-	



Site:		Grange Road, Netley, Hampshire		Area:	-			Comments:
Site code:		111682		Test Pit ID:	33			
Level (top):		21.87 m aOD	Length:	3.80 m				
			Width:	1.80 m				
			Depth:	3.40 m				
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD							
1.30- +3.40	20.57- +18.47	<p>1.30-2.40m: Fine to coarse sub-angular (60%) and angular (40%) flint gravel; light greyish yellow to medium reddish-brown sand matrix; varies from matrix to clast supported horizons which occur in sub-horizontal beds; moderately sorted; poorly consolidated</p> <p>2.40m-+3.40m Fine to very coarse sub-angular (60%) and angular (40%) flint gravel; medium brown and dark reddish-brown Fe enriched medium sand matrix; gravel and sand matrix both coarser with depth; varies from matrix to clast supported with some clast free horizons; moderately sorted; sub-horizontally bedded; poorly consolidated</p>		FLUVIAL SANDS & GRAVELS	3304	14 15 16 17 18 19 20	- - - 1 flake 1 flake - - - Levallois flake from c. 2.20-2.40m	- - - - - - -



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments: Collapsing sections prevented further excavation	
Site code:		111682		Test Pit ID:	34			
Level (top):		22.00 m aOD	Length:	4.00 m				
			Width:	1.80 m				
			Depth:	3.10 m				
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD							
0.00–0.40	22.00–21.60	Light greyish-brown clay silt loam; occasional fine to medium angular flint clasts and CBM; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		TOP SOIL / SUB SOIL	3401	-	-	-
0.40–0.85	21.60–21.15	Fine to very coarse angular flint gravel; brownish-grey sandy (fine) clay matrix; matrix supported; structureless; moderately consolidated ABRUPT; SUB-HORIZONTAL		SOLIFLUCT. GRAVEL	3402	-	-	-
0.85–1.40	21.15–20.60	Light bluish-grey to medium reddish-brown mottled medium sand; very occasional fine to medium angular and sub-angular flint clasts; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		? COLLUVIAL SANDS	3403	-	-	-
1.40–+3.10	20.60–+18.90	1.40-1.80: Fine to coarse angular (60%) and sub-angular (40%) flint gravel; light greyish-yellow to reddish-yellow fine to medium sand matrix; moderately sorted; sub-horizontally bedded; loose 1.80-+3.10: Fine to very coarse sub-angular (70%) and angular (30%) flint gravel; medium to coarse dark reddish-brown Fe enriched sand matrix; moderately sorted into coarser and finer beds; sub-horizontally bedded; loose		FLUVIAL SANDS & GRAVELS	3304	21 22 23 24 25 26 27	- 1 flake 1 flake; poss. Lev. - - - -	- - - - - -



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:	
Site code:		111682		Test Pit ID:	35			
Level (top):		20.69 m aOD	Length:	3.50 m				
			Width:	1.80 m				
			Depth:	1.50 m				
Depth		Sediment description	Interpretation	Context	Samples < >	Lithic finds	Enviro remains	
Mbg	mOD							
0.00– 0.40	20.69– 20.29	Light greyish-brown sandy (very fine) silty loam; very occasional fine to coarse angular and sub-angular flint clasts and CBM; rooted; structureless; poorly consolidated DIFFUSE; SUB-HORIZONTAL	TOP SOIL	3501	-	-	-	
0.40– 0.70	20.29– 19.99	Medium brown slightly clayey gravelly sandy (fine) loam; very frequent angular and sub-angular fine to coarse flint clasts; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL	SUB SOIL	3502	-	-	-	
0.70– 1.00	19.99– 19.69	Fine to very coarse angular (70%) and to sub-angular (30%) flint gravel; dark greyish-brown to greyish yellow clayey coarse sand; clay context decreases with depth; moderately sorted; sub-horizontal bedding structure increasing apparent with depth; clast supported; poorly consolidated SHARP; SUB-HORIZONTAL	FLUVIAL SANDS & GRAVELS; UPPER UNITS CRYOTURB.	3503	27 28	- 1 poss. flake	- -	
1.00– +1.40	19.69– +19.29	Medium reddish-brown to light bluish grey mottled clayey fine sand; clast free; structureless; moderately consolidated	SELSEY SAND FORMATION	3504	-	-	-	



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:	
Site code:		111682		Test Pit ID:	36			
Level (top):		21.43 m aOD		Length:	3.90 m			
				Width:	1.80 m			
				Depth:	1.40 m			
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD							
0.00– 0.40	21.43– 21.03	Light greyish-brown sandy (fine to coarse) silty loam; occasional fine to very coarse angular and sub-angular flint clasts; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		TOP SOIL	3601	-	-	-
0.40– 0.60	21.03– 20.83	Medium brown slightly clayey gravelly silty loam; very frequent angular (80%) and sub-angular (20%) fine to coarse flint clasts; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		SUB SOIL	3602	-	-	-
0.60– 1.00	20.83– 20.43	0.60-0.85: Fine to coarse angular (50%) and sub-angular (50%) flint ravel in medium reddish-brown coarse sand matrix; clast supported; poorly sorted; loose 0.85-1.00: Fine to medium angular (60%) to sub-angular (40%) flint gravel in light brownish-red slightly clayey coarse sand matrix; moderately sorted; sub-horizontally bedded, loose SHARP; SUB-HORIZONTAL		FLUVIAL SANDS & GRAVELS; UPPER UNITS CRYOTURB.	3603	29	-	-
1.00– +1.40	20.43– +20.03	Light bluish-grey to medium brownish-red mottled sandy (fine) clay clast free; structureless; moderately consolidated		SELSEY SAND FORMATION	3504	-	-	-



Site:		Grange Road, Netley, Hampshire		Area:	-		Comments:	
Site code:		111682		Test Pit ID:	37			
Level (top):		19.28 m aOD		Length:	3.20 m			
				Width:	1.80 m			
				Depth:	2.00 m			
Depth		Sediment description		Interpretation	Context	Samples < >	Lithic finds	Enviro remains
Mbg	mOD							
0.00– 0.35	19.28– 18.93	Light greyish-brown slightly sandy (very fine) silty loam; very occasional fine to medium angular and sub-angular flint clasts; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		TOP SOIL	3701	-	-	-
0.35– 0.65	18.93– 18.63	Light reddish-brown clayey sandy (fine) silt; moderately frequent angular and sub-angular fine to coarse flint clasts; rooted; structureless; poorly consolidated ABRUPT; SUB-HORIZONTAL		SUB SOIL	3702	-	-	-
0.65– 0.85	18.63– 18.43	Medium reddish-brown gravelly sandy clay; very frequent fine to coarse angular (80%) and sub-angular (20%) flint clasts; structureless; moderately consolidated SHARP; SUB-HORIZONTAL		COLLUVIUM.	3703	-	-	-
0.85– +2.00	18.43– +17.28	Light brownish-red to bluish-grey mottled fine sand; slightly clayey from 0.65-0.85; clast free; structureless; moderately consolidated		SELSEY SAND FORMATION	3704	-	-	-



Appendix 4 Trench summaries

NGR coordinates and OD heights taken at centre of each trench; depth bgl = below ground level

Trench 1	25.0 m x 1.9 m		NGR 445661 109082	23.26 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
101	Topsoil		Mid grey brown loamy sand. Moderate compaction, abundant bioturbation. 30% common sub-angular flint gravel	0.0-0.38
102	Natural		Flint gravel with reddish brown sand, moderate compaction	0.38+
103	Ditch		Possible drainage or boundary ditch. Date unknown. SE-NW orientated linear feature. Dimensions: 0.52 m wide, >1.8 m long, 0.18 m deep	0.38-0.56
104	Secondary fill	103	Mid reddish brown sand. 20% common sub-rounded flint gravel	0.38-0.56
105	Tree throw		No dimensions. See jpg 202	
106	Fill	105	Fill of tree throw	0.38+

Trench 2	25.1 m x 1.8 m		NGR 445636 109096	23.14 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
201	Topsoil		Dark greyish brown loose clayey silt. Occasional sub-rounded and sub-angular flint gravel <50 mm	0.0-0.3
202	Subsoil		Mid yellowish brown firm clayey sand with common sub-rounded flint gravel <80 mm	0.3-0.38
203	Natural		Light grey loose clayey silt with abundant sub-rounded flint gravel <100 mm	0.38+
204	Pit		Possible test pit. Modern. Rectangular in plan and visible in baulk below topsoil. No dimensions. Not dug - see jpg 193	0.3-0.42+
205	Tertiary deposit	204	Deliberate backfill of modern feature. Dark brownish grey firm clayey silt with common flint gravel <80 mm. Slate and CBM	0.3-0.42+



Trench 3		26.0 m x 1.9 m		NGR 445655 x 109107		23.30 m aOD	
Context No	Interpretation	Fill of	Description		Depth m (bgl)		
301	Topsoil		Greyish brown very fine silty sand loam. Occasional sub-rounded flint gravels and pebbles <75 mm		0.0-0.25		
302	Subsoil		Disturbed geology. Brick earth patches (pale yellowish brown sandy clay) overlying flint gravels in a mixed dark greyish brown and mid-dark yellowish brown sandy clay matrix. Heavily bioturbated		0.22-0.43		
303	Natural		Mixed flint gravels over tertiary sand		0.42+		
304	Ditch		NE-SW orientated linear ditch. Visible in section from below topsoil. Same as ditches 806 and 1010 Dimensions: 1.77 m wide, >1.9 m long, 0.64 m deep		0.25-0.87		
305	Tertiary deposit	304	Mixed mid -dark greyish brown and mid -dark yellowish brown sandy loam. Occasional-moderate sub-angular and sub-rounded flint gravels <70 mm		0.25-0.87		
306	Pit		Modern feature. Square feature cut from below ploughsoil. Enters baulk. Dimensions: 0.8 m wide, 1.4 m long		0.22+		
307	Fill	306	Dark greyish brown sandy loam with occasional flint gravels		0.22+		

Trench 4		25.0 m x 1.8 m		NGR 445628 109134		20.56 m aOD	
Context No	Interpretation	Fill of	Description		Depth m (bgl)		
401	Topsoil		Greyish brown loamy sand. Moderate 20% sub-angular and rounded flints < 70 mm. Loose, rooty ploughsoil		0.0-0.4		
402	Natural		Mixed loose fine-coarse gravels. Some patches of orange brown clayey sand		0.4+		
403	Posthole		Unexcavated posthole. Modern. In situ wooden post. Not dug. No dimensions. See jpg 136		0.4+		
404	Posthole		Unexcavated posthole. Modern. In situ wooden post. Not dug. No dimensions. See jpg 137		0.4+		
405	Fill	403	Unexcavated posthole. In situ wooden post		0.4+		
406	Fill	404	Unexcavated posthole. In situ wooden post		0.4+		

Trench 5		23.2 m x 1.8 m		NGR 445607 x 109177		19.95 m aOD	
Context No	Interpretation	Fill of	Description		Depth m (bgl)		
501	Topsoil		Greyish brown loamy sand, loose and heavily rooted ploughsoil. Moderate sub-rounded and sub-angular flints		0.0-0.28		
502	Natural		Mottled green and orange sand with some small patches of mixed flint gravels		0.28+		



Trench 8		25.2 m 1.8 m		NGR 445685 109120	23.57 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
801	Topsoil		Dark greyish brown loose clayey silt with common sub-rounded gravel <4 mm	0.0-0.3	
802	Subsoil		Mid yellowish brown firm sandy clay. Very common sub-rounded and sub-angular flint gravel <8 mm	0.3-0.52	
803	Natural		Mid orange brown firm sandy clay with areas of abundant sub-angular gravel <100 mm	0.52+	
804	Bioturbation		Rooting. Irregular in plan and section. See jpg 178	0.52-0.66	
805	Fill	804	Dark greyish brown sand with common charcoal rooting.	0.52-0.66	
806	Ditch		NE-SW orientated linear ditch. Same as ditches 304 and 1010. Not dug	0.52+	
807	Secondary fill	806	Secondary fill of ditch	0.52+	

Trench 9 / TP 34		25.2 m x 1.8 m		NGR 445706 109133	21.81 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
901	Topsoil		Mid greyish brown sandy loam with heavy root disturbance. Sparse 3% rounded and sub-angular flints <5 mm	0.0-0.3	
902	Subsoil		Brownish orange clayey sand. Occasional patches of flint gravel	0.3-0.48	
903	Natural		Mottled brown, orange and yellow clay sand with occasional patches of flint gravel	0.48+	



Trench 10	25.0 m x 1.8 m		NGR 445724 109160	24.02 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1001	Topsoil		Mid greyish brown loamy sand with occasional sub-angular and sub-rounded flints <50 mm	0.0-0.26
1002	Subsoil		Orange brown loamy sand. Moderate sub-angular and angular flints and rare <3% charcoal flecks. Variable thickness	0.26-0.58
1003	Natural		Mixed gravels and mottled dark orange brown and greenish grey sand	0.43+
1004	Tertiary deposit	1005	Dark orange brown clayey loam with sparse 5% sub-angular and sub-rounded flints. Rare 1% charcoal flecks	0.25-0.98
1005	Ditch		Trackway or boundary ditch cutting ditch 1010. Roughly N-S orientated. Parallel to existing road. Dimensions: 1.8 m wide, >1.8 m long, 0.63 m deep	0.25-0.98
1006	Tertiary deposit	1010	Brownish orange loamy sand. Sparse 3% sub-angular flints. Rare charcoal flecks and pottery	0.24-0.88
1007	Fill	1010	Dark orange brown loamy sand. Very common 30% sub-angular flints <80 mm	0.24-1.2
1008	Primary fill	1010	Pale grey sandy silt loam with sparse sub-rounded flints <20 mm. Rare 3% charcoal flecks	0.80-1.2
1009	Fill	1010	Very dark reddish brown fine sands and gravels. 50% gravel <20 mm	0.24-1.2
1010	Ditch		Trackway or boundary ditch. Possibly related to earlier trackway. Linear N-S orientated ditch. Dimensions: >1.9 m wide, >1.8 m long, 0.97 m deep	0.24-1.23
1011	Fill	1012	Unexcavated fill	0.43+
1012	Natural feature		Irregular NE-SW orientated root disturbance. Not dug. No dimensions	0.43+

Trench 11	25.0 m x 1.9 m		NGR 445754 109150	24.56 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1101	Topsoil		Mid greyish brown loamy sand. Moderate compaction. Abundant bioturbation. Common 30% sub-angular flint gravel poorly sorted	0.0-0.3
1102	Natural		Mid reddish brown sandy clay. Very compact with a 50-60% flint gravel	0.3+
1103	Drain		Approximately E-W orientated modern brick-lined drain. No dimensions	0.3+
1104	Fill	1103	Modern, brick-lined with rubble	0.3+



Trench 12/ TP32		25.0 m x 1.8 m		NGR 445746 109174	22.67 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
1201	Topsoil		Mid greyish brown loamy sand. Sparse 3% sub-rounded and sub-angular flints <100 mm	0.0-0.32	
1202	Subsoil		Brownish orange sandy loam. Sparse 3% sub-rounded and sub-angular flints <50 mm	0.32-0.48	
1203	Natural		Mixed sand and gravels	0.48+	
1204	Ditch		SE-NW orientated linear ditch. Dimensions: 2.55 m wide, >1.9 m long, 0.9 m deep	0.45-1.35	
1205	Tertiary deposit	1204	Mid yellowish brown sandy clay. Common flint gravels <75 mm. Possible ploughed-in bank material	0.45-0.75	
1206	Secondary fill	1204	Greyish brown and yellowish brown slightly loamy sandy clay. Sparse to occasional sub-angular and sub-rounded flints <55 mm. Burnt flint and pottery	0.45-1.07	
1207	Primary fill	1204	Yellowish brown sandy clay mottled with manganese. Occasional to moderate flint gravels <75 mm. Burnt flint	0.68-1.35	

Trench 13		25.0 m x 1.9 m		NGR 445663 109151	21.09 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
1301	Topsoil		Mid grey brown loamy sand. Moderate compaction, abundant bioturbation. Common 20% poorly sorted sub-angular flint gravel	0.0-0.41	
1302	Natural		Mottled mid reddish brown and grey sand. 60-70% sub-angular flint	0.41+	

Trench 14		24.2 m x 1.9 m		NGR 445682 109171	23.65 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
1401	Topsoil		Mid grey brown loamy sand. Moderate compaction. Common 20% sub-angular poorly sorted flint gravel	0.0-0.35	
1402	Natural		Mid reddish brown flint gravels with abundant patches of grey sand	0.35+	



Trench 15	24.9 m x 1.8 m		NGR 445708 109186	22.15 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1501	Topsoil		Orange brown loamy sand. Occasional sub-angular flints	0.0-0.4
1502	Natural		Dark orange brown and grey mixed gravels with patches of sand	0.4+
1503	Secondary fill	1504	Dark brown sandy loam with sparse rounded and sub-rounded flints <50mm. Sparse charcoal flecks and late prehistoric pottery	0.4-0.5
1504	Posthole		Posthole. Truncated? No post-pipe. Sample <1501>. Dimensions: 0.34 m diameter, 0.1 m deep	0.4-0.5
1505	Secondary fill	1506	Orange brown loamy sand with occasional sub-angular flint inclusions. Pottery, burnt flint and rare charcoal flecks	0.0-0.59
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1506	Posthole		Modern posthole. Cut into topsoil then ploughed over? Dimensions: diameter 0.4 m, 0.5 m+ deep	0.0-0.59

Trench 16	24.0 m x 1.8 m		NGR 445733 109197	22.54 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1601	Topsoil		Mid greyish brown sandy loam. Moderate 15% sub-angular flint gravel	0.0-0.3
1602	Subsoil		Orange brown loamy sand with flint gravel inclusions	0.3-0.42
1603	Natural		Yellowish orange brown sand and gravels	0.42+
1604	Natural feature	1605	Dark yellow orange brown loamy sand. Sparse 3% sub-rounded and sub-angular flints <50 mm	0.42-0.52
1605	Natural feature		N-S orientated linear, interpreted as a natural feature. Dimensions: 0.33 m long, 0.25 m wide, 0.1 m deep	0.42-0.52
1606	Tree throw	1607	Brownish orange loamy sand with sparse sub-angular flints <50 mm.	0.42-0.62
1607	Tree throw		Tree rooting. Dimensions: 1 m long, 0.5 m wide, 0.2 m deep	0.42-0.62
1608	Modern feature	1609	Dark brown sandy loam, compact with sparse sub-angular flints. Rare charcoal flecks, CBM and roof slate	0.42-0.72
1609	Pit		Modern feature. Square. Dimensions 1.5 m long, 1.09 m wide, 0.3 m deep	0.42-0.72



Trench 17	27.2 m x 1.8 m		NGR 445743 109216	24.76 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1701	Topsoil		Darkish grey brown loose clayey silt with common sub-rounded flint gravel <50 mm	0.0-0.3
1702	Subsoil		Mid yellowish brown firm clayey sand with common sub-rectangular flint gravel <40 mm	0.3-0.48
1703	Natural		Mid reddish brown fine sandy clay with common sub-angular flints <70 mm	0.48+
1704	Ditch		NE-SW to W-E orientated curvilinear ditch. Boundary ditch? Terminates to SW. Dimensions: 3 m+ long, 0.87 m wide, 0.14 m deep	0.48-0.62
1705	Secondary fill	1704	Mid greyish brown firm clayey sand with rare sub-angular flint gravel <30 mm. Rare charcoal flecks <10 mm	0.48-0.62
1706	Posthole		Modern posthole? Shallow with flat base. Possibly part of old fence line. Dimensions: 0.22 m long, 0.24 m wide, 0.05 m deep	0.48-0.53
1707	Fill	1706	Mid greyish brown firm sandy clay. Sparse angular flint gravel <10 mm	0.48-0.53
1708	Ditch		W-E orientated ditch terminus. Possible post-med boundary ditch. Dimensions: 2 m+ wide, 0.52 m long, 0.31 m deep	0.3-0.4
1709	Secondary fill	1708	Mid-dark greyish brown firm sandy clay. Very rare angular flint gravel <20 mm	0.3-0.61
1710	Pit		Pit possibly related to post-med agriculture. Cuts through subsoil. Dimensions: 0.6 m+ long, 0.72 m wide, 0.36 m deep	0.3-0.66
1711	Backfill	1710	Mid greyish brown firm sandy clay. Occasional sub-rectangular flint gravel <100 mm	0.3-0.66
1712	Ditch		SE-NW orientated linear ditch. Profile similar to Late Iron Age ditches but no dating evidence. Dimensions: 1.8 m+ long, 0.63 m wide, 0.3 m deep	0.48-0.78
1713	Secondary fill	1712	Mid greyish brown firm clayey sand with sparse sub-angular flint gravel <50 mm. Sparse charcoal flecks <10 mm, occasional burnt flints <30 mm	0.48-0.78
1714	Primary fill	1708	Reddish brown firm sandy clay with rare sub-angular flint gravel <50 mm. Occasional charcoal fragments <10 mm and rare CBM flecks	0.4-0.61
1715	Ditch		Possible post-med boundary ditch. NNW-SSE orientated linear. Dimensions: 1.8 m+ deep, 1.13 m wide, 0.43 m deep	0.3-0.72
1716	Primary fill	1715	Mid orange brown firm sandy clay. Common sub-rounded flints, iron panning and manganese	0.6-0.72
1717	Secondary fill	1715	Mid greyish brown firm clayey sand. Occasional sub-rounded flint gravel <100 mm, common iron panning and manganese	0.3-0.6



Trench 18	24.6 m x 1.8 m		NGR 445636 109176	20.69 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1801	Topsoil		Dark greyish brown loamy sand. Common 25% sub-angular and sub-rounded flints <30 mm	0.0-0.44
1802	Natural		Brownish orange yellow sand and gravels	0.44+
1803	Pit		Modern pit. No dimensions. No depth info - jpg 158	0.44+
1804	Fill	1803	Loose dark grey sand. Abundant 40-50% sub-rounded flint gravel and 10% poorly sorted sub-rounded flint nodules	0.44+

Trench 19	25.0 m x 1.9 m		NGR 445655 109195	21.24 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
1901	Topsoil		Mid greyish brown loamy sand. Moderate compaction, abundant 40% sub-angular flint gravel. 10% sub-angular flints 40-60 mm	0.0-0.35
1902	Natural		Mid reddish brown sand with multiple patches of grey sand. 40-50% sub-rounded flint <50 mm	0.35+
1903	Pit		Possible pit. No dating evidence. Dimensions: 0.42 m wide, 0.25 m deep	0.35-0.6
1904	Secondary fill	1903	Mid reddish brown sand. Common 20% sub-rounded flints	0.35-0.6

Trench 20	26.3 m x 1.8 m		NGR 445679 109214	21.63 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
2001	Topsoil		Mid greyish brown loamy sand. Moderate sub-rounded and sub-angular flints <50 mm	0.0-0.38
2002	Subsoil		Brownish orange loamy sand and mixed gravels. Not distinct from Natural	0.38+
2003	Natural		Brownish orange loamy sand and mixed gravels. Not distinct from Natural. 0.38 m+ deep	0.38+
2004	Ditch		Roughly NE-SW orientated slightly curvilinear terminus. Ditch terminus, possibly part of old field boundary. No dating evidence. Dimensions: 1.56 m long, 0.25 m wide, 0.12 m deep	0.38-0.5
2005	Secondary fill	2004	Mid orangey brown loose clayey silt. Occasional sub-rounded and sub-angular gravel 0.6 mm. Very rare charcoal	0.38-0.5
2006	Secondary fill	2007	Orangey brown loamy sand with sparse sub-rounded and sub-angular flints >70 mm	0.38-0.64
2007	Ditch		Roughly NE-SW orientated curvilinear ditch. Dimensions: 2 m+ long, 0.48 m wide, 0.26 m deep	0.38-0.64



Trench 21	24.5 m x 1.8 m		NGR 445703 109235	22.18 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
2101	Topsoil		Grey brown loamy sand. Moderate 15% sub-rounded and sub-angular flints	0.0-0.4
2102	Natural		Mottled greyish brown and orange loamy sand and mixed gravels	0.4+

Trench 22	25.0 m x 1.8 m		NGR 445729 109254	22.56 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
2201	Topsoil		Mid greyish brown loamy sand. Moderate 15% small angular and sub-angular flints <50 mm	0.0-0.3
2202	Natural		Mixed gravels and sand	0.3+
2203	Fill	2204	Yellowish brown loamy sand. Sparse <3% sub-rounded flint	0.3-0.58
2204	Bioturbation		Rooting. Dimensions: 1.6 m long, 0.8 m wide, 0.28 m deep	0.3-0.58
2205	Tertiary deposit	2207	Brownish orange loamy sand with 40-200 mm sized flints sub-angular and angular flints mainly in the upper part of the deposit	0.3-0.58
2206	Primary fill	2207	Brownish orange loamy sand with very common 30% sub-rounded and sub-angular flints <50 mm	0.3-0.4
2207	Pit		Possible small pit. Dimensions: 0.7 m long, 0.4 m wide, 0.28 m deep	0.3-0.58

Trench 23	25.0 m x 1.9 m		NGR 445620 109226	19.04 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
2301	Topsoil		Mid greyish brown loamy sand. Moderate compaction, common 30% sub-rounded flints 10-50 mm	0.0-0.48
2302	Natural		Yellow sand with occasional patches of grey and sub-angular flint gravel	0.48+
2303	Ditch		Possible ditch or line of hedge. Roughly N-S orientated. No dimensions. No depth info. See jpg 138	0.48+
2304	Secondary fill	2303	Mid grey sand, compact with 10% sub-rounded flint gravel	0.48+

Trench 24	25.0 m x 1.8 m		NGR 445638 109245	19.31 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)
2401	Topsoil		Orange brown loamy sand. Moderate 10% sub-rounded and sub angular flints 20-130 mm. Rare charcoal flecks	0.0-0.48
2402	Natural		Mottled blue, grey and orange silty clay	0.9+
2403	Natural		Orange brown sand and gravels	0.48+
2404	Layer		Relic ploughsoil, very similar to topsoil but with less flint inclusions. Rare <3% charcoal flecks throughout	0.48-0.9



Trench 25		23.9 m x 1.9 m		NGR 445664 109261	20.29 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
2501	Topsoil		Light greyish brown loamy sand. Abundant 40% poorly sorted sub-angular flint gravel	0.0-0.38	
2502	Natural		Flint gravel with reddish brown sand and occasional patches of grey sand	0.38+	

Trench 26		25.0 m x 1.8 m		NGR 445686 109276	20.95 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
2601	Topsoil		Mid greyish brown loamy sand with common 20% rounded and sub-angular flints <50 mm	0.0-0.28	
2602	Natural		Mixed gravels with patches of brownish orange sand	0.28+	
2603	Secondary fill	2605	Mid grey orange brown loamy sand. Moderate 10% rounded flint pebbles and sub-angular flints <50 mm.	0.17-0.83	
2604	Primary fill	2605	Mid orange brown loamy sand. 30% fine flint gravel	0.83-1.05	
2605	Pit		Possible pit in SW section of TP 30. Dimensions: 1.38 m wide, 0.89 m deep	0.17-1.05	
2606	Ditch		Possible line of hedge. E-W orientated. Dimensions 1.9 m+ long, 1.75 m wide, 0.35 m deep	0.5-0.85	
2607	Secondary fill	2606	Mid reddish brown silty sand. 20% common sub-angular flint gravel. Moderate compaction	0.5-0.85	

Trench 27		6.8 m x 1.9 m		NGR 445682 109299	20.19 m aOD
Context No	Interpretation	Fill of	Description	Depth m (bgl)	
2701	Topsoil		Mid light grey brown loamy sand. 30% common sub-angular flint gravel 10% sparse sub-rounded flint nodules	0.0-0.36	
2702	Natural		Mid reddish grey brown silty sand. Sparse bioturbation, very compact inclusions, 5% sub-rounded flint gravel	0.36+	



Appendix 3 Lithic artefacts from test pits

Artefact number	Test Pit	Sample number	Context	Stratigraphic unit	Length (mm)	Width (mm)	Thickness (mm)	Abrasion (mm)	Patination	Edge damage	Staining	Techno-typological description
3206	32	10	3204	Phase I: Fluvial sands and gravels	26.5	18.6	6.6	None	None	Light	Light	Possible hard hammer flake
3207	32	-	3204	Phase I: Fluvial sands and gravels	107.0	68.0	27.6	Heavy	Heavy	Heavy	Heavy	Handaxe
3305	33	17	3304	Phase I: Fluvial sands and gravels	86.0	39.3	15.1	Heavy	Moderate	Heavy	Moderate	Hard hammer flake; siret fracture
3306	33	18	3304	Phase I: Fluvial sands and gravels	32.0	41.1	6.3	Heavy	Moderate	Heavy	Heavy	Hard hammer flake
3307	33	-	3304	Phase I: Fluvial sands and gravels	65.6	70.7	12.2	Light	Light	Light	Moderate	Hard hammer flake; definite Levallois
3405	34	22	3404	Phase I: Fluvial sands and gravels	43.5	23.3	7.9	None	Light	Light	Light	Hard hammer flake; siret fracture
3406	34	23	3404	Phase I: Fluvial sands and gravels	80.5	33.0	9.8	None	Light	Light	Light	Hard hammer flake; possibly Levallois
3505	35	28	3503	Phase I: Fluvial sands and gravels	25.5	18.6	5.4	None	None	Light	None	Possible hard hammer flake



Appendix 5 Environmental data

Feature	Context	Sample	Vol (l)	Flot (ml)	Sub-sample	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Charred Other Notes	Charcoal > 2mm (ml)	Charcoal	Other	Comments (Preservation)
1504	1503	1501	0	35	-	60%, A, E, I, F	C	-	<i>Triticum</i> sp. (inc. cf. <i>dicoccum/spelta</i>), Triticeae	-	-	5	Mature	-	Poor



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