



The London Resort Development Consent Order

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The London Resort Company Holdings Limited

The London Resort

Environmental Statement

Document Reference 6.2.14.8

Appendix 14.8
London Resort
Archaeological Evaluation Report



London Resort
Swanscombe, Kent
Land North of Springhead Nursery
Archaeological Evaluation Report



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**London Resort
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Land North of Springhead Nursery

Archaeological Evaluation Report

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London Resort Swanscombe Kent

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Summary

Wessex Archaeology was commissioned by London Resort Company Holdings Limited to undertake an archaeological evaluation and geoarchaeological test pits on land north of Springhead Nursery, Swanscombe, Kent centred on National Grid Reference (NGR) 561523, 172917.

The evaluation and test pitting was conducted to an agreed Written Scheme of Investigation (WSI) and consisted of the excavation of a total of fourteen evaluation trenches each measuring 50m x 1.8m, five Palaeolithic test pits and two geoarchaeological test pits were also undertaken during the course of the archaeological evaluation.

Two previous archaeological evaluations have been undertaken at the Kent Project Site, the first was undertaken as part of the wider Channel Tunnel Rail Link (CTRL)/High Speed 1(HS1) works in 1997 by Wessex Archaeology (URL 1997). This early work initially identified the significance of the archaeological deposits within the Kent Project Site, proposing the extent of the Roman Settlement of *Vagniacis* and identifying the Roman road R2 along with the discovery of a probable inhumation cemetery. A second evaluation was conducted by Wessex Archaeology in 2005 (WA 2005) to supplement this earlier work. Further attesting to the presence of roadside settlement activity, mapping the continuation of the Roman road and identifying a second cemetery site.

This latest phase of evaluation trenching, for the Proposed Development, has further attested to the significance, character, date and range of the archaeological evidence present at the Kent Project Site.

The Roman road R2 was identified in Trench 1 and further identified as roadside ditches or hollows in Trenches 3, 9 and 13. The roads alignment was mapped during the previous archaeological evaluation undertaken by Wessex Archaeology in 1997 (URL 1997) and this was confirmed in 2005 (WA 2005), its alignment has been further confirmed by this latest phase of evaluation.

A walled cemetery, previously identified in the 2005 Trench 6 was found to continue into the 2015 Trench 7 along with other masonry structures, evidence of up to 11 cremations along with one possible inhumation was recorded during this latest evaluation (Trench 7).

A second possible inhumation indicated by grave goods was identified in Trench 4 along with a probable enclosure ditch which may also be associated with the mixed cemetery identified to the west.



Occupation evidence continues predominantly along/adjacent to the east of R2 (particularly Trenches 1, 4 and 9) although limited evidence is also recorded to the west identified in Trench 6, in the form of a refuse pit and a large posthole.

A possible demolition/occupation layer was identified in Trench 9, excavations through this deposit recovered an abundance of dating material within the layer, placing this activity around the 3rd century AD, the layer also appeared to be sealing potential structural remains.

An abundance of artefactual evidence was recovered and noted to be of good condition. Material suitable for dating was retrieved from the majority of features across the Site, of the eight trenches that contained archaeology seven have been confidently dated as Romano-British 1st to 3rd century AD. The exception is Trench 14 from which no dating evidence was recovered during the evaluation. The previous evaluation conducted in 2005 (WA 2005) in the same location also dated features to the Romano-British period.

The only evidence of later activity from this evaluation came from a single fragment of Saxon pottery identified in a buried soil deposit located sealed beneath the subsoil in Trench 1.

Only one of the geoarchaeological test pits revealed an undisturbed stratigraphic sequence sufficient to warrant recording.



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Acknowledgements

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The project was managed on behalf of Wessex Archaeology by David Britchfield (Project Manager). The fieldwork was directed by Lisa McCaig with assistance from Jo Lathan, Tom Piggott, Rachel Williams, George Walcroft-Morgan and Simon Flaherty. The geoarchaeological test pits were directed by Richard Payne with the assistance of Lisa McCaig and Frances Wenban-Smith. This report was written by Lisa McCaig and Jo Condliffe and edited by Mark Williams. The report illustrations were prepared by Jo Condliffe, Andrew Souter and Jennie Anderson. The Finds were assessed by Lorraine Higbee (animal bone), Matt Leivers (flint) and Rachael Seager Smith (pottery and all other material). The environmental samples were processed by Tony Scothern and Orlagh Walsh. The flots were sorted by Nicki Mulhall and assessed by Inés López-Dóriga.



London Resort Swanscombe Kent

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Archaeological Evaluation Report

1 INTRODUCTION

1.1 Project background

- 1.1.1 Wessex Archaeology (WA) was commissioned by London Resort Company Holdings Limited (LRCH) to undertake an archaeological evaluation on land to the north of Springhead Nursery, Swanscombe, Kent in advance of the proposed construction of a new access corridor to the main development area on the Swanscombe Peninsula. The area evaluated is centred on National Grid Reference (NGR) 561523, 172917, within the Kent Project Site and is hereafter referred to as 'the Site' (**Figure 1**).
- 1.1.2 The fieldwork programme of trial trench evaluation as well as Palaeolithic and Geoarchaeological test pitting was proposed to assess the level of archaeological potential across the Site, which forms part of a larger scheme of development. It was intended that the results of the current programme would inform the Development Consent Order (DCO) for the London Resort development.
- 1.1.3 A Written Scheme of Investigation (WSI) for the evaluation, Palaeolithic and Geoarchaeological test pitting (WA 2015) was submitted, and approved, prior to the start of fieldwork. The evaluation was undertaken in accordance with the Chartered Institute for Archaeologist's *Standard Guidance for Archaeological Evaluation* (CIFA 2014) and the Kent County Council *Manual of Specifications Part B* (KCC).
- 1.1.4 The fieldwork consisted of the excavation of fourteen evaluation trenches along with five Palaeolithic test pits dispersed across the Site. Two geoarchaeological test pits were also excavated adjacent to the Neolithic Scheduled Ancient Monument List Entry 1004206 (**Figure 2**). The results of the Palaeolithic test pits will be assessed in a separate report (Wenban-Smith forthcoming).
- 1.1.5 All aspects of the fieldwork were undertaken between the 10th and 30th June 2015, the geoarchaeological test pits were undertaken on the 26th June 2015.

1.2 The Site

- 1.2.1 The Site lies directly north of the junction of the A2 (to Ebbsfleet International Station) on land to the north of Springhead Nursery. It is situated 1.5km southeast of Swanscombe and 3.5km southeast of Gravesham. It covers an area of 5.54 hectares within an area of scrubland with woodland along the eastern boundary. It is bounded to the south by the A2 Ebbsfleet International link roads and the Springhead Nursery buildings, to the north by scrubland and to the east by the Ebbsfleet River and the High Speed 1 Railway (**Figure 1**).



- 1.2.2 The Site slopes from approximately 17m above Ordnance Datum (aOD) at the western side to 5m at the eastern.
- 1.2.3 The underlying geology of the Site is mapped as Seaford and Newhaven Chalk Formations with overlying superficial head deposits of clays, sands, silts and gravel. Along the eastern edge of the Site are overlying Alluvial deposits of clay, sands, silts and gravels while on the higher ground to the west the Thanet Sand Formation is recorded as the bedrock.

2 ARCHAEOLOGICAL BACKGROUND AND POTENTIAL

2.1 Introduction

- 2.1.1 An Archaeological Desk-Based Assessment (document reference 6.2.14.1) has been completed Project Site, information from this is summarised below.

Prehistoric

- 2.1.2 Several Palaeolithic artefacts have been recorded in the vicinity of the Kent Project Site, these include a number of handaxes and a possible lithic working site identified during the CTRL investigations to the southeast of the survey site.
- 2.1.3 Within the northeast corner of the Kent Project Site is located the southernmost part (Site 2) of two areas forming Scheduled Monument 1004206. Together they are listed as Mesolithic and Neolithic flint scatter near Ebbsfleet, the other being located to northeast (Site 1). The flint scatter within the survey site has been categorised as being a Mesolithic working floor which included microliths, waste flakes as well as later coarse pottery and arrowheads thought to be related to the Neolithic industry identified at Site 1.

2.2 HS1 Investigations

- 2.2.1 Extensive archaeological investigations were undertaken as part of the HS1 works located immediately to the south and east of the survey site. Here excavations revealed that a mid Roman period Sanctuary Complex was established at Springhead. The concentration of shrines and temples at what was a relatively small settlement suggests that it was an important religious centre during this period. The temple complex spanned the 1st to late 3rd centuries, with its abandonment in the mid-4th century. The investigations found very little prehistoric activity to the west of the Ebbsfleet River with the majority of the earlier archaeological features located on the eastern slopes (Andrews 2011).
- 2.2.2 Investigations adjacent to the southern boundary of the survey site in 2004 revealed extensive Roman features which dated almost exclusively to the 1st – 2nd centuries (WA 2005). They comprised part of a road running along the west side of the Ebbsfleet Valley, a branch road or trackway providing access to the waterfront, at least one building and approximately 18 pits. These features lay on the periphery of Springhead Roman town and, coupled with the evidence from the adjacent HS1 excavations, indicate an area of the town, close to the waterfront, given over largely to various craft and 'industrial' activities.

2.3 Geoarchaeological Background

- 2.3.1 A Scheduled Monument of Palaeolithic date lies within the Kent Project Site Order Limits consisting of two areas (**WA81**). Also covering this area, as well as the area in between the Scheduled Sites, is a Site of Special Scientific Interest (SSSI) designated by Natural England for its geological significance (**Figure 2**). The sequence of important geological layers is considered to be archaeologically significant as a continuation of the deposits

identified within the scheduled areas. Sensitive Palaeolithic sediments are recorded across the Study Area and also within the Site. The locations of which are illustrated on **Figure 1**.

- 2.3.2 In the late 19th century FCJ Spurrell discovered the first prehistoric remains within the Ebbsfleet Valley during a tramway cutting to the south of Ebbsfleet Station (**WA19**). He recorded finding 'many thousands' of lithic artefacts including Levalloisian cores, flakes and hammerstones. Following these a quarry named Southfleet Pit was opened in the early 20th century and discoveries by local collectors and the quarry workers followed but no formal excavation was undertaken (**WA20** and **WA17**).
- 2.3.3 JPT Burchell undertook fieldwork within the area of Bakers Hole during the 1930s (Burchell 1938) however his recording was incomplete and the areas he investigated are difficult to pinpoint. His main discoveries were the identification of a 'temperate bed' and the recovery of a large number of Levalloisian lithic remains from what he called 'floors' (**WA01**). Carreck expanded upon Burchell's work and investigated an area directly to the north of Burchell's 'temperate beds'. Following this British Museum (Sieveking) undertook an open area excavation within the two scheduled areas. He recovered a large collection of mammal fossils and faunal material. It was after Sieveking's work that the areas became Scheduled. The KHER records the discovery of probable human remains of upper Palaeolithic date found within Bakers Hole (**WA02**).
- 2.3.4 Francis Wenban-Smith carried out fieldwork and archival research at Baker's Hole as part of his doctoral research between 1989 and 1995. Surviving islands of Pleistocene deposits were identified at six locations within the quarried areas (Wenban-Smith et al forthcoming).
- 2.3.5 The initial work for HS1 involved borehole investigations and an evaluation of the area to the immediate east of the Kent Project Site Order Limits. This work confirmed the presence of unquarried Pleistocene deposits. The stage 2 evaluation comprised 47 trenches, a complex sequence of deposits was identified 'dominated by coarse basal soliflucated facies overlain by fluvial and subsequent finer colluvial sediments' (Wenban-Smith 2013). Within the larger scheduled area investigations for the erection of two electricity pylons was undertaken within the Kent Project Site. This involved evaluation followed by excavation and watching brief. These works revealed a deep sequence of nationally important Pleistocene deposits within the area excavated for ZR4 (Wenban-Smith 2020). To the west of the scheduled area was another quarry known as Rickson's Pit/Barracks Pit which revealed clactonian, handaxe and Levalloisian remains.
- 2.3.6 The KHER records findspots recovered from within the Kent Project Site of Palaeolithic date including two handaxes found in 1914 at **WA04**, and additional handaxes at **WA05** and **WA07**. 145 Palaeolithic handaxes, two cores and 115 pieces of debitage were recorded at **WA09**, three handaxes and one piece of debitage was recorded at **WA10**, eight handaxes and 11 pieces of debitage were recorded at **WA11** and two handaxes and nine pieces of debitage were recorded at **WA12**. At treadwells farm (**WA13**) and Botany Bay Pit (**WA14**) two handaxes and two pieces of debitage were recovered. At Galley Hill two cores were recovered (**WA15**) and another handaxe (**WA16**). At **WA26** four handaxes and an Acheulian chopper were found. Part of a bovine tibia was recovered from Pleistocene deposits within the Site (**WA06**).
- 2.3.7 A possible lithic working site was recorded within the Kent Project Site Order Limits to the north of the A2 in the eastern part of the Site (**WA08**). This conclusion was based upon a number of struck flints recorded at the head of the Ebbsfleet during the HS1 investigations.



- 2.3.8 During the watching brief and subsequent excavation for the access road to Ebbsfleet Station the Ebbsfleet Elephant Butchery Site was discovered (**WA23-25**). The elephant (*palaeoloxodon antiquus*) was dated to approximately 400,000 years ago and bore signs of butchery. Due to the significant age of the remains and insight that it gives into hominin life the remains have been considered to be of national to international importance. A lithic scatter was found in association with the remains of the elephant and is thought to represent *in-situ* knapping. A wider palaeo-landsurface was also identified which contained lithic and faunal remains (Wenban-Smith 2013). Gravel deposits overlying the butchery site contained 50 handaxes (**WA22**).
- 2.3.9 Geoarchaeological investigations were undertaken within the Swanscombe Peninsula in advance of the construction of HS1. This comprised watching brief, boreholes, geophysical survey and an evaluation trench. These investigations revealed the presence of peat deposits upon the peninsula, perhaps of prehistoric date. Finds were also recovered from these works including an assemblage of Palaeolithic flints as well as Neolithic flint and a small amount of pottery of this date (Bates et al 2013).
- 2.3.10 Other important Palaeolithic sites are known from outside the Kent Project Site boundary. Barnfield Pit was a quarry site in use from the late 19th century to the 1960s. Within this quarry three parts of a skull of *Homo Heidelbergensis* dating to approximately 400,000 years old were found in 1935, 1936 and 1955. In addition to this, 7613 handaxes, 333 cores and 16300 pieces of debitage were found as well as animal and mollusc remains (**WA45**).
- 2.3.11 A site at Globe Pit, 750m to the west of the Kent Project Site Order Limits revealed a large assemblage of handaxes in good condition in 1913 (**WA48**). Dierden's pit located to the north of Barnfield Pit revealed over 100 handaxes collected by H. Stopes as well as 500 flakes. Most of the artefacts were considered to be Acheulian (**WA47**).
- 2.3.12 Craylands Lane Pit was located to the immediate south of the western peninsula boundary. In 1914 Smith and Dewey encountered a deep Pleistocene sequence thought to have been related to the Barnfield Pit sequence. The east side of Craylands Lane Pit exhibited seven handaxes, and 111 pieces of debitage (**WA28**). Further to the south another 16 handaxes were found as well as a core and debitage (**WA33**).
- 2.3.13 Excavations at the Swan Valley Community School excavations revealed a series of worked flints and handaxes similar to those found at Barnfield Pit (**WA39**). Over 800 lithic artefacts were found including 16 handaxes, five cores, seven flake tools and a large amount of debitage. In a similar area Pleistocene gravels containing Palaeolithic artefacts were recorded comprising 52 artefacts made up of handaxes, cores and debitage (**WA73** and **WA74**). Evaluation undertaken within the School grounds in 2011 revealed a series of deposits associated with the Barnfield sequence (Wessex Archaeology 2011).
- 2.3.14 Work at Eastern Quarry has been ongoing since the first test pits were excavated in 2002 (**WA67**). Due to Palaeolithic finds recovered from sieving, further investigation was undertaken in the surrounding areas in the form of evaluation and watching brief. Work at Eastern Quarry Area B was undertaken in 2005 and the Site was located close to Southfleet Road (Wessex Archaeology 2006). A deep suite of Pleistocene deposits were identified as being of national importance. The deposits included faunal remains and abundant artefacts. Investigations at Alkerden Farm were undertaken in 2008 which comprised trial trenches and test pitting a similar series of lithic artefacts and Pleistocene deposits were recorded (Wessex Archaeology 2008d and 2008e). The KHER records that Wenban-Smith has recorded 54 handaxes, 15 cores, and 2045 pieces of debitage from the investigations at Eastern Quarry (**WA71**).



- 2.3.15 Bevans Washpit lies to the south of Eastern Quarry and was first investigated by Spurrell in 1890. Francis Wenban-Smith recorded 22 handaxes and four pieces of debitage from this site (**WA62**).
- 2.3.16 Test pits were carried out at the Northfleet cement works which identified gravel deposits containing flint flakes (**WA76**). Evaluation work for HS1 towards the eastern boundary of the Site revealed a number of Palaeolithic implements including cores, waste flakes, and a long blade (**WA40**). An evaluation and test pitting at Ingress Abbey revealed flint artefacts. Due to the presence of these finds a 100m trench was excavated between the locations of the finds; further artefacts were recovered from this investigation. Analysis of the finds revealed that only six of the recovered artefacts were of human origin (**WA42**).
- 2.3.17 Other finds from within the Study Area including handaxes and other flint implements are recorded at **WA27, WA30, WA31, WA32, WA34-36, WA38, WA41, WA43, WA44, WA46, WA49, WA50-55, WA57-61, WA63-70, WA72, WA75, WA77, WA78** and **WA81**.
- 2.3.18 Test-pitting undertaken at Thurrock, Essex revealed Palaeolithic artefacts and environmental remains (**WA79**). At the river beach at Northfleet large quantities of flakes and other signs of Palaeolithic occupation have been identified perhaps representing a flint knapping floor (**WA29**).
- 2.3.19 Recent excavations adjacent to the west of the Kent Project Site at the Northfleet West Sub-Station consisted of 112 evaluation trenches and eight Palaeolithic/geoarchaeological test pits and an excavation area within the location for the proposed access road. Lower Palaeolithic flints were recovered from the excavation area thought to be contemporary with the elephant butchery site to the east. Late Upper Palaeolithic long blades, cores and debitage were recovered from one of the evaluation trenches perhaps representing a significant tool manufacturing site. Later features indicated the presence of Bronze Age, Iron Age, Romano-British and medieval activity.

2.4 Recent Investigations

- 2.4.1 Excavation and evaluation has been previously undertaken within the Scheduled Monument Site prior to the installation of the two electricity pylons currently located within the Kent Project Site. The excavations encountered significant Palaeolithic horizons.

2.5 Previous Works

- 2.5.1 A number of archaeological evaluations have been undertaken by Wessex Archaeology within the Site. The main result from the works in 1997 (URL 1997) and 2005 (WA 2005) was the identification of a Romano-British inhumation cemetery and a further Romano-British cremation or mixed cemetery with associated masonry structures. Both cemeteries are located immediately north of the Roman spur road R2 which was confirmed to continue into the area with low-level roadside settlement activity extending from the Roman settlement.
- 2.5.2 A series of Palaeolithic test pits were undertaken within the survey site in 2006. These determined the Palaeolithic potential of the Site to be low due to the very low concentrations of lithics recovered although some uncertainty remains. One test pit identified a possible roadside ditch and a pit both of Romano-British date; these were mapped but not excavated.
- 2.5.3 Monitoring of the installation of a water main in 2007 along the western edge of the Site identified only two linear features both of which were undated (WA 2007).



3 AIMS AND METHODS

3.1 General aims and objectives of the archaeological works

- 3.1.1 Prior to the commencement of works, a WSI (WA 2015) was produced which set out the aims and objectives of the archaeological evaluation, and the methods by which these aims would be achieved.
- 3.1.2 The general aim of the evaluation was to provide further information concerning the presence/absence, date, nature and extent of any buried archaeological remains and to investigate and record these within the constraints of the proposed works.
- 3.1.3 A total of five Palaeolithic test pits and two geoarchaeological test pits were excavated during the course of the archaeological evaluation and undertaken with the assistance of Wessex Archaeology. The excavation, recording and reporting of these investigations was undertaken by a pre-approved specialist in Palaeolithic archaeology and Pleistocene geology. The results of the Palaeolithic work are discussed in a separate report (Wenban-Smith forthcoming).

3.2 Specific Aims

- 3.2.1 The specific aim of the archaeological evaluation was to record the location, extent, date, nature, character and significance of archaeological remains as may exist on the Kent Project Site and to report on the results of the evaluation so that an informed decision on their subsequent treatment can be made, in light of the impact of the Proposed Development.
- 3.2.2 The general objectives of the evaluation were therefore to:
- *provide further information concerning the presence/absence, date, nature and extent of any buried archaeological remains and to investigate and record all archaeological features revealed during the evaluation;*
 - *establish a broad phased plan of the archaeology revealed during the evaluation;*
 - *investigate the function of any structural remains and the activities taking place within and close to the Site; and*
 - *in the event that archaeological remains are found, to provide information to inform any future proposed mitigation for the Site that may be appropriate as part of a DCO application.*
- 3.2.3 The specific objectives of the evaluation were therefore to:
- ascertain the level of preservation of the features identified during the previous evaluations.

3.1 General aims of the Geoarchaeological works

- 3.1.1 The general aims (or purpose) of the investigation, in compliance with the ClfA *Standard and guidance for archaeological field evaluation* (ClfA 2014a) and Kent County Council's (KCC) *Manual of Specification Part B: Specification for Preliminary Evaluation of Quaternary Deposits and Palaeolithic Potential*, were:
- to establish the broad presence/absence, nature and distribution of Quaternary deposits in the investigation areas and, where necessary, to correlate these as a deposit model if appropriate;



- to develop a preliminary assessment of the possible geoarchaeological potential of the any deposits preserved, and
- to establish a broad preliminary model for the investigation areas Quaternary geoarchaeological potential.

3.2 General objectives

3.2.1 To achieve the above aims, the general objectives of the investigations were:

- to determine the presence or absence of deposits with geoarchaeological potential, within the specified areas;
- to establish, within the constraints of the investigations, the extent, character and date of any such deposits;
- to establish the extent to which previous development and/or other processes have affected such deposits at the site;
- to establish the likely impact on any surviving Quaternary deposits of the Proposed Development;
- to determine the presence and potential for lithic artefact evidence in the sediments encountered;
- to determine the presence and potential of palaeoenvironmental evidence in the sediments encountered;
- to interpret the depositional and post-depositional history of any artefactual or biological evidence found;
- to establish correlations of any Quaternary deposits found with reference to adjacent and regional sequences and to national frameworks;
- to assess in local, regional and national terms, the archaeological and geological significance of any Quaternary deposits encountered, and their potential to fulfil current research objectives, and
- to establish whether further field evaluation to clarify the Palaeolithic potential is required, and if so to make recommendations on the methods and location of further intrusive or non-intrusive works.

3.3 Specific Aims

3.3.1 The principal aim of the test pit evaluation is to assess the level of archaeological survival and potential across the Site.

3.3.2 The objectives of the test pit evaluation are therefore to:

- *provide further information concerning the presence/absence, date, nature and extent of any buried archaeological remains and to investigate and record all archaeological features revealed during the evaluation;*
- *establish a broad phased plan of the archaeology revealed during the evaluation;*
- *investigate the function of any structural remains and the activities taking place within and close to the Site;*
- *to establish the presence/absence of quarrying activity and the effects of this on the earlier archaeological resource;*

- *in the event that archaeological remains are found, to inform and provide information for any future mitigation for the Site in compliance with the planning condition; and*
- *specifically to investigate the potential for artefacts and ecofacts within the gravels of Palaeolithic date.*
- *in the event that archaeological remains are found, to provide information to inform any future proposed mitigation for the Site that may be appropriate as part of a DCO application.*

3.4 Fieldwork methodology

- 3.4.1 The agreed WSI (WA 2015) stated that the evaluation would consist of the excavation of fourteen trenches each measuring 50m x 1.8m located across a single field. Due to on-site constraints, including ecological issues, all the trenches had to be shortened and the majority of them relocated. In the cases of Trenches 10 and 11, the trenches were split into sections to achieve a greater coverage.
- 3.4.2 Two of the trenches (Trenches 3 & 14) were targeted over previous archaeological evaluation trenches (WA 2005, Trench 8 and URL 1997, Trench 1329TT) in order to ascertain the state of preservation of the known archaeological horizon. The remaining trenches were located to ascertain if further archaeological remains are present.
- 3.4.3 Palaeolithic test pits (numbered 15, 16, 17, 18 and 24) as seen in **Figure 2** were dispersed across the area of the archaeological evaluation. Mechanical excavation of the test pits was undertaken following the excavation of the evaluation trenches, under the direction of an archaeologist until the archaeological or natural horizon was encountered so that any archaeological finds or features could be suitably recorded. The Palaeolithic specialist then proceeded with the excavation of the test pits to fulfil the aims and objectives as set out in the relevant project design.

3.5 Trial Trench Evaluation

- 3.5.1 Prior to machine excavation, investigation locations were scanned by Wessex Archaeology using a cable avoidance tool (CAT). The position of all detected services were marked on the ground.
- 3.5.2 The trenches were excavated under constant archaeological supervision using a tracked 360° excavator employing a toothless ditching bucket.
- 3.5.3 All overburden (topsoil and subsoil) was carefully removed by a 360 degree tracked mechanical excavator fitted with a toothless ditching bucket to the top of the first significant archaeological horizon or natural geology, whichever was encountered first.
- 3.5.4 A sample of potential features and deposits of possible archaeological origin were hand excavated to ascertain their nature and function, and were fully recorded using WA's *pro forma* record sheets.
- 3.5.5 The trenches were excavated to a maximum depth of 1m below current ground levels (BGL), with trial pits excavated to an average depth of 3.5m BGL.
- 3.5.6 Excavated material was visually examined for archaeological material and a metal detector was used to enhance artefact recovery.



- 3.5.7 Each trench was cleaned by hand, where appropriate, and planned prior to any hand-excavation. A representative section, not less than 1m in length, of deposits through each trench from ground surface to the top of the natural geology was recorded.
- 3.5.8 A sufficient sample of each feature type/deposit was examined in order to establish the date, nature, extent and condition of the archaeological remains.
- 3.5.9 In the event unexpectedly complex and widespread archaeological remains were revealed, LRCH, the archaeological advisor to Kent County Council (KCC) were informed in order that the provisions of the method statement could be reviewed and any amendments discussed and agreed.
- 3.5.10 A digital photographic record was kept. Particular attention was taken to record all access routes and trench locations to provide a full record of both the original and final condition of the fieldwork locations. Special attention was placed on the recording of the mechanical excavation, spoil handling and storage prior to, during and following the completion of the trial trench evaluation.
- 3.5.11 A full graphic record was kept. The site drawings were drawn at an appropriate scale, typically 1:10 for sections and 1:20 for plans.
- 3.5.12 Site survey was carried out using a Leica Viva series GNSS unit using the OS National GPS Network through an RTK network with a 3D accuracy of 30mm or below. All survey data was recorded using the OSGB36 British National Grid coordinate system.
- 3.5.13 Recording, reporting and post excavation work is in accordance with the KCC Site Manual Part B –Evaluation – Trial Trench Requirements.

3.6 Geoarchaeological Investigations

- 3.6.1 All works were undertaken in accordance with the detailed methods set out within the WSI (Wessex Archaeology 2015a) and in general compliance with the standards outlined in relevant ClfA and Historic England guidance (ClfA 2014a, Historic England 2015) and in accordance with the KCC Site Manual Part B –Evaluation – Trial Trench Requirements. The methods employed are summarised below.
- 3.6.2 The evaluation comprised the excavation of a total of two (no. 2) Geoarchaeological test pits (**Figure 1**).
- 3.6.3 Prior to machine excavation, investigation locations were scanned by Wessex Archaeology using a cable avoidance tool (CAT).
- 3.6.4 All overburden (topsoil and subsoil) was carefully removed by a 360 degree tracked mechanical excavator, or similar, fitted with a toothless ditching bucket to the top of the first significant archaeological horizon or natural geology, whichever was encountered first.
- 3.6.5 Excavated material was visually examined for archaeological material.
- 3.6.6 Each test pit was be cleaned by hand, where appropriate and where safe access could be permitted, and planned prior to any hand-excavation. All pre-modern stratified deposits will be excavated by hand. A representative section, not less than 1m in length, of deposits through each trench from ground surface to the top of the natural geology was recorded.

- 3.6.7 A sufficient sample of each feature type/deposit was to be examined in order to establish the date, nature, extent and condition of the archaeological remains.
- 3.6.8 In the event unexpectedly complex and widespread archaeological remains were revealed, the Client and Historic England were informed in order that the provisions of the method statement may be reviewed.
- 3.6.9 Areas under archaeological observation were surveyed using GPS and tied in to the Ordnance Survey.
- 3.6.10 The deposits exposed in each section were investigated by a recognised Palaeolithic specialist with experience of recording and interpreting Pleistocene sediments, who recorded and numbered the sequence of sedimentary units following standard descriptive practices. The textural characteristics (grain-size, consolidation, colour, material and sedimentary structures) of sedimentary units will be recorded, and the shape and nature of their lithostratigraphic contacts (dip, conformity and overall geometry)

Sampling

- 3.6.11 The potential for deposits to preserve paleoenvironmental evidence was assessed for each sediment unit by the monitoring Pleistocene geoarchaeological specialist. When deposits suitable for palaeoenvironmental sampling were encountered, appropriate samples for paleoenvironmental assessment were taken.
- 3.6.12 Paleoenvironmental sampling strategies were in line with those detailed in the WSI (Wessex Archaeology 2018a). The treatment of environmental remains was in general accordance with Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's guidance (English Heritage 2011 and Historic England 2015). *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).
- 3.6.13 Consideration was given to the suitability of any sediment unit for optically stimulated luminescence dating (OSL) and other dating methods. Samples for OSL dating were taken following Wessex Archaeology's in-house guidance, which adheres to the principles outlined in Historic England's Luminescence Dating: Guidelines on using luminescence dating in archaeology (English Heritage 2008).

4 ARCHAEOLOGICAL RESULTS

4.1 Introduction

- 4.1.1 This section presents the results of the archaeological evaluation. Detailed descriptions of the trenches and features are included in **Appendix 1. Figure 1** shows the overall location of each trench within the Site as a whole (including the location of previous evaluation trenches), while **Figure 2** shows the locations of the archaeological features within these trenches. **Figures 3-7** provide illustrations (photographs and sections) of selected evaluation trenches and archaeological remains.

4.2 Natural deposits and soil sequences

- 4.2.1 The stratigraphic sequence identified within the trenches varied little across the Site. In the majority of trenches, dark brown topsoil covered light brown clay silt subsoil. Silty clay brickearth formed the natural geology. The archaeological horizon was observed in most trenches at depths varying between 0.45m and 0.77m below ground level (BGL). Colluvial

material was observed in Trench 10 at c. 1m BGL, while a greyish brown alluvium was found in Trench 14 sealing the archaeological features. Trench 5, located to the west of the Site, was the only trench in which natural chalk was exposed, lying directly below the topsoil at 0.28m BGL. The chalk contained natural lenses of clay and flints.

- 4.2.2 The southern extent of the quarry to the north of the Site was exposed in the northern end of Trench 7, matching what was seen in Trench 6 of the 2005 evaluation. The upper horizon of the natural geology was found to be truncated and deliberately backfilled with modern deposits in Trenches 8, 11 and the southwestern half of Trench 12. Here test pits were excavated to establish the depth of the truncation. In Trenches 8 and 11.1 natural Thanet Sands occurred at 1.8m and 3.8m BGL, while in Trenches 12, 11.2 and 11.3 brickearth was exposed at depth between 1.53m and 4.1m BGL. These extensive deposits of made ground are partially associated with the build-up of material associated with the modern road network to the south, as well as the dumping of waste material.

4.3 Results and Interpretation

Trench 1 (Figure 3)

- 4.3.1 Trench 1 targeted the projected route of the Roman spur road R2, as identified in the previous evaluations. The entirety of the north eastern half of the trench contained archaeological features. A deposit interpreted as a buried soil horizon **103** lay on the southern extent of the features and pottery dated as early Saxon alongside residual Romano-British pottery was recovered. This was found to overlies the metalled surface of the Roman road **Group 125**. Further deposits were observed overlying the northern extent of the road, where an excavated slot revealed numerous silting deposits interspersed with dark, charcoal-rich occupation layers (**Plate 1**) dated through pottery assigned to the early 1st – late 2nd century AD. It was assumed that these sat within cut **105** similar to **117** (see below) although the limits and depth of these deposits was not established due to on Site excavation restrictions. Deposit **106 (Figure 3: Section 1)** is potentially the upper horizon of a secondary silting fill of the northern roadside ditch. A later cut feature **124** truncated the upper deposits at the northern end of the trench and was filled with a single dark grey deposit which could not be more closely dated than Roman.
- 4.3.2 The compacted gravel of the road was approximately 7m wide and lay on a northwest to southeast alignment. It was found to consist of three distinct makeup layers **119, 120** and **121**, each with differing sizes of gravels, stones and quantities of sand and clay. A slot excavated to the south of the road indicated that the road sat within a large cut **117** which formed the southern edge of the roadside ditch while the raised road surface constructed with a camber which also formed the northern side of the ditch (**Figure 3: Section 2**). The ditch was filled with a secondary silting fill **122** while further silting **118** had covered some of the road and filled the remainder of cut **117**, finds from this deposit provided a middle Roman date. A possible later drainage gully **126** ran centrally along the length of the road, where visible within the confines of the trench.

Trench 2

- 4.3.3 Trench 2 was situated to the west of the Site. No archaeological features were observed in this trench. A number of areas of modern disturbance were recorded, including service trenches and the edge of an area of possible quarrying to the north of the Site.

Trench 3 (Figure 4)

- 4.3.4 Trench 3 was intended to re-examine the entire length of Trench 1329TT which was excavated as part of the 1997 HS1 evaluation. However, due to on site constraints, the former alignment was only partially re-excavated. A buried soil **303** of mid grey silt

containing Romano-British pottery sherds lay across the southern half of the trench. This correlates with deposit **132910** recorded in 1997. When this layer was removed, it was found to seal four archaeological features (two northwest to southeast aligned linear features and two possible pits although both extended beyond the limits of the trench).

- 4.3.5 A rectangular pit **305** with rounded corners and steep/near vertical sides and a flat base (**Plate 3**) was also recorded in this trench. It contained a single dark grey/black silty clay backfill with inclusions of pottery of Romano-British date and was 1.24m wide and over 1.6m long. A smaller rounded pit or ditch terminus **314** lay to the north although this was not investigated.
- 4.3.6 The southern end of the trench exposed a spread of dark material c. 2.4m wide **308** (**Plate 4**) which was dated as Romano-British. This was interpreted as sitting within cut **307**, although it is likely that this deposit corresponds with spread **132904** identified as sitting within a hollow along the northern side of the Roman road (URL 1997). Although no evidence for the metallated surface of the road was observed.
- 4.3.7 Roman ditch **309** was excavated north of the centre of the trench (**Figure 4: Section 3, Plate 5**). This was 1.66m wide and 0.58m deep with a concaved profile and four fills. Deliberate backfill **312** consisted of a sandy clay rich in charcoal and charred plant remains from which sample 301 was taken (see 6.3 below) the fill also contained quantities of pottery and a discarded fragment of quern stone.
- 4.3.8 Palaeolithic test pit 15 was located adjacent the western edge at the northern end of trench 3, while test pit 16 was located a further 65m to the southwest (**Figure 2**). No finds or features of archaeological significance were encountered during the excavation of the test pits.

Trench 4 (Figure 5)

- 4.3.9 Trench 4 was excavated across the central northern part of the Site on a broadly east to west alignment. At the eastern end of the trench two ditches were observed. Ditch **404** which lay on a north northeast to south southwest alignment had a relatively shallow, rounded profile (**Plate 6**). Ditch **411** lay on a northwest to southeast alignment and is thought possibly to form part of an enclosure in conjunction with ditch **404**.
- 4.3.10 Located centrally, an unclarified feature **407** projected north from the southern edge of the trench. A placed pottery vessel **410** (ON 1) a probable early Roman Verulamium-region whiteware flagon (**Plate 7**), was observed within the fill of this feature and was retrieved with the consent of the County Archaeologist due to concerns regarding its survival if it were not removed. The full extent of the feature could not be investigated at this time, as the potential nature of the feature is thought to be an inhumation, only partially exposed along the edge of the trench.

Trench 5

- 4.3.11 Trench 5 was located at the far western edge of the Site. Excavation revealed a made ground deposit overlaying the natural chalk, which contained lenses of clay and flints. No archaeological features were observed in this trench.

Trench 6 (Figure 6)

- 4.3.12 Trench 6 lay in the centre of the Site on a northeast to southwest alignment. Here two features were excavated. Middle Roman pit **611** contained a deliberate back fill **605** containing demolition material including CBM and large irregular shaped stones (**Figure 6: Section 4, Plate 11**). This was truncated by a second large pit of Romano-British date;

604, which contained two further deliberately backfilled deposits containing CBM and fired clay.

- 4.3.13 Situated to the southwest of the pits, Romano-British posthole **608** was excavated (**Plate 12**). Here clear evidence of a post-pipe **609** was recorded within the centre of the feature.

Trench 7 (Figure 5)

- 4.3.14 Trench 7 was located to the east of preceding evaluation Trench 6 of the 2005 evaluation of the Site, which previously identified a Romano-British cremation cemetery. As had been observed before, the northern end of the trench exposed the southern extent of the quarry cut to the north of the Site. To the south of this wall **707** was partially exposed within foundation cut **706 (Plate 8)**. This is believed to delineate the northern extent of the cremation or mixed burial cemetery. The wall is potentially a continuation of wall **622** seen to the west in Trench 6 although that was located c. 4m further south suggesting the wall lies on a more northeast to southwest alignment than was initially recorded in the current trench.

- 4.3.15 To the south of the wall a further eleven potential cremation graves; **708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718** and a possible inhumation burial **719** were surveyed in addition to the twenty-three identified in the previous evaluation (**Plate 9**). The southern end of the trench revealed ditch **720**, which possibly formed the southern boundary of the cemetery. Beyond the ditch five discrete features, probably pits; **721, 722, 723, 724** and **725**, were identified (**Plate 10**). Due to the nature and significance of the features identified in this trench and in line with the agreed WSI, no burials were excavated.

Trench 8

- 4.3.16 The excavation of Trench 8 revealed a thick layer of modern made ground which is likely to have been associated with the construction of the link roads to the south. A test pit showed that the deposit consisted of silts and chalk dumps with building demolition material and rubble. This extended to a depth of at least 1.8m BGL where the natural Thanet Sands were observed.

Trench 9 (Figure 6)

- 4.3.17 Trench 9 was positioned on a northwest to southeast alignment. Across the centre of the trench a large deposit was observed **903** which was interpreted as a demolition layer containing large quantities of Romano-British pottery. An intervention was excavated in the middle of this deposit, which was found to be sat within cut **905** and truncated the upper fill of an earlier (Middle Roman) feature **906 (Figure 6: Section 5, Plate 13)**. The interpretation of this feature was suggested as being a large posthole as the upper fill contained large stones thought to be packing material. However, as the extent of the feature were not further investigated at this stage, as agreed with KCC, the potential significance of features in this area, investigations undertaken within the limited confines of the trench could significantly hamper any future excavations. As such a definitive conclusion cannot be made at this time. To the southwest of demolition layer **903** was a north-south aligned ditch **909** that is potentially one of the roadside ditches of spur road R2.

- 4.3.18 Palaeolithic Test Pit 18 (**Figure 2 and 6**) was located at the southeast end of the trench, its proposed location as set out in the WSI (WA 2015) was altered marginally to prevent further disturbance of archaeological remains. Test Pit 24 was also located approximately 40m to the southwest. No finds or features of archaeological significance were observed during the excavation of either Test Pit.

Trench 10



4.3.19 Trench 10 could not be excavated to the depth of natural geology in two areas southeast of centre due to the presence of two modern services, aligned northeast-southwest traversing the trench. No archaeological features were observed but, at the southeastern end, the scar of a 2005 evaluation trench (Trench 7) was identified.

4.3.20 Palaeolithic Test Pit 17 was located at the northwest end of the evaluation trench, no finds or features of archaeological significance were encountered.

Trench 11

4.3.21 Trench 11 was situated at the southwestern corner of the Site near the existing link roads. This trench was excavated as three archaeological test pits (11.1, 11.2 and 11.3) due to the depth of the deposits encountered. Up to 3.8m of made ground was found overlying the truncated natural geology, but no archaeological features were observed.

Trench 12

4.3.22 Trench 12 was located immediately east of the segmented Trench 11. The northeastern end of the trench was excavated to the level of the natural geology, while the southwestern half of the trench exposed the northeastern extent of the truncation discussed in Trench 11 above. No archaeological features were observed within the trench.

Trench 13 (Figure 7)

4.3.23 Two features were recorded in Trench 13 which was located at the southern extent of the Site. A small sub-oval posthole **1304** was investigated in the centre of the trench (**Plate 14**). At the southeastern end of the trench, a shallow north-south aligned Romano-British ditch **1306** was exposed and investigated (**Plate 15**). Based on its dimensions, it is possible that this feature aligns with ditch **134715** excavated in the 1997 HS1 evaluation Trench **1347TT** where it was interpreted as the southern roadside ditch of spur road R2.

Trench 14 (Figure 7)

4.3.24 Trench 14 was located on an east to west alignment over the 2005 evaluation Trench 8. The scar and backfill of previous Trenches 7 and 8 were observed within the trench. An occupation layer **1405** over 4m wide was observed at the far eastern end of the trench. This probably represents the continuation of occupation layer **802** identified in 2005.

4.3.25 Four features were identified at the western end of the trench. A shallow circular pit **1406** contained two secondary silting fills (**Plate 16**). To the east, a shallow north-south aligned ditch **1409** containing a single fill was recorded (**Plate 17**).

4.3.26 A possible linear feature **1411** only partially exposed in the northwest corner of the trench and a large circular tree bowl was partially exposed projecting south from the northern edge of the trench. Neither could be fully investigated due to their location within the trench.

5 GEOARCHAEOLOGICAL RESULTS

5.1 Introduction

5.1.1 This section presents the results of the geoarchaeological test pits. Detailed descriptions of the stratigraphic sequence are included in **Appendix 2. Figure 1** shows the overall location of each test pit within the Kent Project Site as a whole. **Figure 8** provide illustrations (photographs and sections) of the stratigraphic sequence of deposits recorded in test pit 20.



5.2 Results

Test Pit 19

- 5.2.1 Test pit 19 was located to the south of the scheduled monument. The test pit measured 2m x 2m and excavation was stopped at 2.5m BGL. It was noted that modern disturbance (quarrying activity) had truncated the upper horizons of a peat layer. Due to the difficulties in gaining access to examine and sample the peat in situ and after consultation with Historic England and KCC, the decision was taken to leave these peat deposits undisturbed at this stage.

Trench 20 (Figure 8, plates 18 & 19)

- 5.2.2 Trench 20 was located to the north of the scheduled monument. The test pit was initially excavated to 2.2m BGL where a sequence of fluvial silt and gravel deposits were identified surviving beneath 1.62m of modern made ground deposits from quarry infilling (**Appendix 2**). The stratigraphic sequence of silts and gravels was recorded, and deposits were scanned for artefacts but none were identified.
- 5.2.3 Subsequently Test pit 20 was further excavated by machine, and context **2008** was recorded down to 3.5m but was not drawn due to the section now being inaccessible.

6 ARTEFACTUAL EVIDENCE

6.1 Finds Assessment

- 6.1.1 Approximately 6.3 kg of artefacts were recovered, derived from 24 contexts in 16 features and deposits in eight of the evaluation trenches. After cleaning, all the artefacts were quantified (number and weight of pieces) by material type within each context; this information is summarised in **Appendix 2: Table 2**. All material types were then scanned on a context by context basis, to assess their nature, date, range and condition. Although all the artefacts survive in good condition, few chronologically diagnostic items were recovered, so the pottery has provided the primary dating evidence for the site.

6.2 Flint and burnt flint

- 6.2.1 The earliest artefacts comprise 20 pieces of struck flint, all flakes or broken flakes derived from eight features (in **Appendix 2: Table 2**). None of the pieces are closely dateable. Technological indicators suggest a potential date range from the Early Neolithic to the Early Bronze Age (4000 – 1500 BC), but the material is unlikely to be contemporary with the features in which it occurred.
- 6.2.2 The burnt flint (in **Appendix 2: Table 2**) is likely to be a by-product of some form of industrial, agricultural or domestic burning process. It is intrinsically undatable, but it is most commonly interpreted as indicative of prehistoric activity. Although associated finds can often provide a useful indication of date, at this site the burnt flint was found (in ditch **309** and feature **407**) in conjunction with both prehistoric struck flints and Early Roman pottery, so its date remains uncertain.

6.3 Pottery

- 6.3.1 Pottery was the most commonly occurring material type and has provided the primary dating evidence for the site. With the exception of a single Saxon sherd, all the pieces are of Romano-British (1st – 4th century AD) date. The sherds have been subdivided into broad ware groups (e.g. greywares) or known fabric types (e.g. North Gaulish coarseware), and quantified by the number and weight of pieces within each context. This information is summarised in **Table 1**. Vessel forms were briefly described with reference, where appropriate, to standard type series (e.g. Monaghan 1987), and quantified by the

number of examples present. Spot-dates have also been recorded for each fabric and for contexts as a whole; all data is stored in a standard Wessex Archaeology ACCESS database which forms part of the project archive.

Table 1: Pottery totals by chronological period and ware type

Ware	No.	Wt.
<i>Romano-British:</i>		
Southern Gaulish samian	9	85
Central Gaulish samian	7	167
North Gaulish coarseware	2	6
Dressel 20 amphora	1	4
Briquettage	1	3
Greyware	108	980
N Kent/S Essex shell-tempered ware	100	1686
Fine greyware	36	208
Grog-tempered ware	13	196
Patchgrove ware	12	266
Verulamium-region whiteware	51	639
Oxidised ware	31	238
White-slipped red ware	10	126
subtotal:	381	4604
<i>Saxon:</i>		
Organic tempered ware	1	11
Overall total:	382	4615

6.3.2 The composition of the Romano-British assemblage (**Table 1**) is comparable with that recovered from the Springhead Roman Town (Seager Smith *et. al.* 2011) and Northfleet villa (Biddulph 2011) sites and is predominantly of 1st to later 2nd or 3rd century AD date. Imported and specialist wares together represent 5% of the assemblage by sherd count. The samian includes sherds from dish forms 18 and 18/31, form 27 cups and a form 29 decorated bowl. Several of the vessels exhibit internal abraded wear comparable with types present at Springhead (Seager Smith *et. al.* 2011, 118-20), while just one of the cups (feature **906**) is stamped. The North Gaulish flagon sherds, amphora carrying olive oil from southern Spain (both from demolition deposit 903), and the locally-made salt containers (briquettage; roadside feature 124), are represented by plain body sherds only. Mortaria are absent, but this is probably merely a reflection of the small size of this collection.

6.3.3 The remainder of the assemblage predominantly consists of a range of utilitarian 'kitchen' wares used in a variety of food preparation, serving and storage roles, although the Fine greywares and the various oxidised fabrics provided a range of medium-quality wares, particularly flagons. With the exception of the Verulamium-region whitewares, all these fabrics are likely to have been relatively local products, made in the north Kent or south Essex coastal zones, and the vessel forms present find ready parallels in Monaghan's "Thameside" type series (e.g. Monaghan 1987, 45-170, types 2Ds, 3D, 3E1, 3F11, 3G7, 3G7, 3G2, 3L2, 3L7, 3L9, 4J, 5B4, 5C1 and 5F). As the name suggests, the Verulamium-region whitewares were made in potteries around modern St Albans. This industry

supplied coarse, whiteware pottery widely across southeast England, particularly London, from the mid 1st to at least the middle of the 2nd century AD (Davies *et. al.* 1994, 40-41).

- 6.3.4 The more diagnostic sherds suggest Early Roman (mid/late 1st – early 2nd century AD) dates for road **307** and ditch **309** in Trench 3, while the sherds from demolition deposit **903** and the upper fill (**907**) of feature **906** in Trench 9 all belong within a similar period. However, the latest sherds (Monaghan 1987, 66 and 96, type 2D2 and 96, type 3H2) from the lower fill (**908**) of feature **906** are of 3rd century AD date (AD 190 – 230 and AD 150 - 250/300+ respectively), suggesting that all the material in the overlying layers is residual and probably redeposited from elsewhere. The small, globular bodied, Verulamium-region whiteware flagon (ON 1; 45 sherds, 317g), perhaps deliberately deposited in feature **407** also suggests a pre- AD 150 date for this feature, although more precise dating is prevented by the loss of the upper part of this vessel. Sherds from a 2nd century AD Central Gaulish samian form 18/31 dish (ON 2) were also recovered from the surface of natural (context **705**) in Trench 7.
- 6.3.5 Most of the sherds from roadside ditch **117** in Trench 1 were not particularly diagnostic but a single rim chip from a grooved rim greyware dish (Monaghan 1987, 150, type 5F, AD 130/140 – 300), may indicate that it was filling during the mid/late 2nd to 3rd century AD. A similar date is likely for the sherds from pit **605** in Trench 6, but none of the other features or deposits contained sufficient chronologically diagnostic sherds to be assigned more than a generalised 'Roman' date.
- 6.3.6 The single Saxon sherd (**Table 1**), was found in buried soil **103** in Trench 1, occurring alongside nine Roman sherds, all still in good condition. It is a plain body sherd, made in an organic-tempered fabric probably of local origin and comparable with vessels predominantly of 6th/7th century AD date from Springhead and Northfleet (Mephram 2011, 2, Table 1, fabrics V400 and V401).

6.4 Ceramic building material

- 6.4.1 The most diagnostic pieces consist of three flat fragments (12 – 17 mm thick; pit **604**, demolition deposit **903** and feature **906**), all the other pieces being scraps and flakes with no original pieces surviving. None of the pieces are closely datable, although the fabrics would not be out of place in a Roman assemblage.

6.5 Fired clay

- 6.5.1 This material was found in five features all containing Roman pottery (in **Appendix 2: Table 2**). The pieces mainly consist of small, amorphous fragments in fine, slightly sandy, predominantly oxidised fabrics, although one or two (from roadside feature **117** and pit **604**) have one flattish, scored surface. It is probable that all are of structural origin, from daub or oven/hearth linings for example.

6.6 Iron

- 6.6.1 With the exception of a single scrap of sheet metal (ON 13, roadside ditch **117**) and a short section from half an iron pipe (ON 11) probably of relatively recent date from the natural of Trench 5, all the iron objects consist of nails. Although many are damaged or fragmentary, most are of the standard, handmade type with flat, round heads and square-sectioned, tapering shanks and are probably of Roman date.



6.7 Stone

- 6.7.1 A single piece of Puddingstone with ferruginous cement was found in ditch **309**. This probably derives from a quern, a significant number of which, mostly of early-middle Roman date, are known from Springhead (Shaffrey 2007; 2011, 364). They are believed to be of local origin, perhaps from the Blackheath Beds or Swanscombe outlier of the Woolwich Beds, both of which occur within a few kilometres of the Roman town (*ibid.* 365).

6.8 Shell

- 6.8.1 Oyster shells, probably representing food remains, came from road **307**, demolition deposit **903** and feature **906**.

6.9 Animal bone

- 6.9.1 Animal bones came from Roman features and deposits located in Trenches 1, 3, 4 and 9 (in **Appendix 2: Table 2**). All of the identified bones belong to livestock species. Cattle bones are relatively common and include fragments of skull, mandible, rib and vertebra. Identified sheep/goat bones include fragments of mandible, radius and tibia, while pig is presented by fragments of molar and femur.

6.10 Conservation

- 6.10.1 No immediate conservation requirements were noted in the field, and subsequent examination has identified only the iron objects as being of an unstable material type potentially in need of further conservation treatment. All the iron objects are therefore stored with supportive packaging and a desiccant (silica gel) to ensure a dry environment below 35% relative humidity.

6.11 Potential

- 6.11.1 No individual artefacts of particular intrinsic interest were recovered, but the assessment results indicate that the preservation of artefacts is moderately good. Chronological evidence, primarily from the pottery, indicates that the activity is predominantly of Early to Middle Roman (1st – 3rd century AD) date, while the struck flint flakes indicate low-level prehistoric activity in the vicinity. The Romano-British material serves to highlight the potential for survival of well-preserved, well-stratified archaeological remains belonging within this period if larger areas of the Kent Project Site were to be examined.

6.12 Recommendations

- 6.12.1 All the finds have been recorded to a fairly detailed level as part of this assessment. In accordance with current standard practise, the iron objects will require x-radiography to provide a basic record of this inherently unstable material and as an aid to identification, although none of this material appears to warrant any further conservation treatment. The stamped samian cup from feature **906** should also be submitted for specialist identification of its stamp.
- 6.12.2 No additional analysis is recommended for any of the other material types at this stage, but the whole assemblage should be reconsidered in the light of any larger collections of material recovered if additional fieldwork is ever undertaken in the vicinity in the future.



7 ENVIRONMENTAL EVIDENCE

7.1 Introduction

7.1.1 Four bulk samples were taken from a range of features including a pit, a posthole, a ditch and a road cut, and were processed for the recovery and assessment of charred plant remains and charcoal. The size of the samples varied between 8 and 11 litres, and on average was around 9.5 litres.

7.2 Aims and Methods

Charred plant remains

7.2.1 The purpose of this assessment is the evaluation of the quality of plant remains preserved at the site and the potential for further analysis to address specific site archaeological issues and to provide archaeobotanical data valuable for wider research frameworks.

7.2.2 The bulk samples were processed by standard flotation methods; the flot retained on a 0.5 mm mesh, residues fractionated into 5.6 mm, 2 mm and 1 mm fractions and dried. The coarse fractions (>5.6 mm) were sorted, weighed and discarded. The flots were scanned using a stereo incident light microscopy at magnifications of up to x40 using a Leica MS5 microscope 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 which would not be preserved unless anoxic conditions were detected, such as earthworm eggs and insects. The preservation and nature of the charred plant and wood charcoal remains, as well as the presence/absence of other environmental remains such as molluscs, animal bone and insects (if anoxic conditions for their preservation are present), is recorded in **Appendix 3: Table 3**.

7.2.3 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.

7.3 Results

Charred plant remains

7.3.1 The flots were generally large. There were high numbers of roots and modern seeds that may be indicative of stratigraphic movement and the possibility of contamination by later intrusive elements. Charred material comprised varying degrees of preservation within the assemblages.

7.3.2 The assemblages were dominated by a diversity of plant remains from a series of crops, mostly cereals. These comprised remains from grains and chaff (glume bases, spikelet forks, grains, detached embryos and coleoptiles), from taxa such as wheat (mostly spelt, *Triticum spelta*, often germinated) and barley (*Hordeum vulgare*). Remains of a domestic oil/fibre plant, flax (*Linum ussitatissimum*), were present in some of the assemblages. Hazel (*Corylus avellana*) nutshell fragments and seeds of probably wild legumes (Viciae, Trifoliae) and other potential cropfield weeds (Cyperaceae, *Veronica hederifolia* and *Veronica* sp., Polygonaceae, *Rumex* sp., *Avena* sp., *Poa/Phleum*, *Lolium/Festuca*, Asteraceae, *Atriplex* sp., *Hyoscyamus niger*, *Sherardia arvensis*) were also abundant. No evidence of exotic plants was identified.

- 7.3.3 The assemblages are typical by-products of domestic crop-processing and plant exploitation activities carried out in rural Romano-British settlements (e.g. Helm and Carruthers 2011).

Wood charcoal

- 7.3.4 Wood charcoal was noted from the flots of the bulk samples and is recorded in in **Appendix 3: Table 3**. Charcoal fragments from mature and juvenile wood were recovered. One of the juvenile wood fragments has a chop mark.

7.4 Discussion and Further potential

Charred plant remains

- 7.4.1 The analysis of the charred plant assemblages recovered so far have little potential per se, as they can only provide general information about agriculture in the Romano-British period.
- 7.4.2 This assessment should be revised should more significant assemblages were to be recovered at further stages of work in this site. A further systematic sampling strategy and the analysis of representative samples could inform about differential functional uses of features and areas of the site, and could inform on specific processing activities, such as weeding, manuring, storage, fuel choices or malting. The results of this analysis could provide a comparison with the data from other sites in the region area (e.g. Giorgi 2006: Stevens 2006).
- 7.4.3 Although the assemblages recovered so far require no further analysis per se, the results of this assessment should be included in prospective reports and publications.

Wood charcoal

- 7.4.4 The analysis of the wood charcoal recovered so far would provide little information.

7.5 Recommendations for future sampling

- 7.5.1 Samples should be taken for the recovery of charred plant remains where permitting from phased features. Generally, samples should be taken covering as wide a range of feature types and phases as possible. Preference should be given to sampling features related to settlement activities, such as latrines, sewers, ovens, corn-dryers, hearths and pits. Those failing, structural features that are likely to contain residual material, such as ditches and postholes, should be sampled. Features that are specifically related to burning activities, such as cremations, should also be sampled.
- 7.5.2 Given the high density of charred plant remains present in the samples recovered in this evaluation, sample volumes should be of 10 litres from individual, secure contexts of Romano-British and medieval date. In the case of earlier deposits, sample volumes should be of 40 litres when feature size permits.

8 DISCUSSION

- 8.1.1 The evaluation has been successful in achieving the aims and objectives as set out in the WSI (WA 2015). Firstly, through negative evidence; confirming that the extent of disturbance from previous quarrying activity to the north of the Site does not extend significantly in to the current evaluation area. Trenches in the northwest of the Site contained no finds or features of archaeological significance, mirroring the results of the 1997 and 2005 evaluations.



- 8.1.2 Significant modern disturbance (occurring sometime after the 2005 evaluation) was identified in two trenches and can most likely be attributed to the construction of the A2260 junction and roundabouts immediately southwest of the Site.
- 8.1.3 Eight of the thirteen trenches contained features of archaeological significance. The evaluation has reaffirmed the presence of significant archaeological remains, predominantly dating from the 1st to 3rd century AD. Including the Roman road R2, identifying a higher level of survival than previously thought, at some distance from the *Vagniacae* settlement. Along with further evidence for continuation of the roadside settlement, as attested to in the results of the previous evaluations.
- 8.1.4 The evaluation has further mapped the extents of the Roman cemetery identified during the 2005 evaluation, while providing further evidence of associated masonry structures and the possible identification of inhumation burials within the vicinity.
- 8.1.5 Further evidence of the cemetery as defined during the 1997 evaluation was not identified during the evaluation as continuing to the west of the Roman road R2 and it is likely that the cemetery is confined to the east.
- 8.1.6 With the exception of recent disturbance limited to the southwest boundary of the Site, the level of preservation as identified during the previous evaluations at the Kent Project Site can still be confirmed as high.
- 8.1.7 Test pit 19 had approximately 1.5m of made ground overlying peat. Peat comprises partially decayed organic matter preserved within waterlogged anaerobic (oxygen-free) conditions.

Geoarchaeological test pits

- 8.1.8 The deposits are of high geoarchaeological significance, with the potential to contain a range of palaeoenvironmental remains (e.g. pollen and plant macrofossils) and waterlogged archaeological remains informing on past physical vegetation and environmental change and the impact of humans on the landscape. Consequently, the peat deposits recorded in Test pit 19 could represent an important palaeoenvironmental archive.
- 8.1.9 Test pit 20 was recorded as having up to 1.65m of made ground overlying fluvial silts, sands and gravels. The gravels were predominantly flint, sub-rounded to rounded and moderately well sorted in a light brown silty matrix. The gravels were interbedded with thin layers of silt and all contexts recorded within the section of Test pit 20 had fragments of mollusc shell recorded within them.
- 8.1.10 These fluvial silts, sands and gravels were interpreted as a Late Devensian / Early Holocene deposits formed by very active fluvial deposition, before sea level rise turned the Ebbsfleet River into a tidal creek.
- 8.1.11 Regarding the geoarchaeological potential of alluvial deposits, finer grained alluvium (clay, silt and sand) has the potential to contain waterlogged archaeology, however the deposits have a low geoarchaeological potential. Palaeoenvironmental remains are likely to be preserved in the alluvium, but these will invariably be fluvially transported from within the catchment and therefore representative of a potentially large and uncertain source area. Alluvium also lacks material suitable for radiocarbon dating. However, microfauna such as diatoms, foraminifer and ostracods may be preserved in the alluvium and useful for investigating the relationship between freshwater and estuarine influence.



- 8.1.12 Coarse grained alluvial deposits (sands and gravels) do have the potential to contain Palaeolithic artefacts and faunal remains, but this potential can vary greatly depending on the environment in which they were deposited i.e. cold stage or warm stage. As such any investigation of the gravels will need a specifically designed programme of works.

9 STORAGE AND CURATION

9.1 Museum

- 9.1.1 Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner. Until a suitable depository is found the archive will be stored at Wessex Archaeology's Salisbury Office.

9.2 The archive

- 9.2.1 The complete Site archive, which will include paper records, photographic records, graphics, artefacts, ecofacts and digital data, will be prepared following nationally recommended guidelines (SMA 1995; IfA 2009; Brown 2011; ADS 2013).

- 9.2.2 All archive elements will be marked with the site/accession code, and a full index will be prepared. The physical archive comprises the following:

- *2 file/document case of paper records & A4, A3 graphics*
- *3 boxes of finds*

- 9.2.3 Until final deposition with a suitable museum the archive will be stored at the offices of Wessex Archaeology in Rochester, Kent.

9.3 Discard policy

- 9.3.1 Wessex Archaeology follows the guidelines set out in *Selection, Retention and Dispersal* (Society of Museum Archaeologists 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis.

- 9.3.2 The discard of environmental remains and samples follows nationally recommended guidelines (SMA 1993; 1995; English Heritage 2002).

9.4 Security copy

- 9.4.1 In line with current best practice (e.g. 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.

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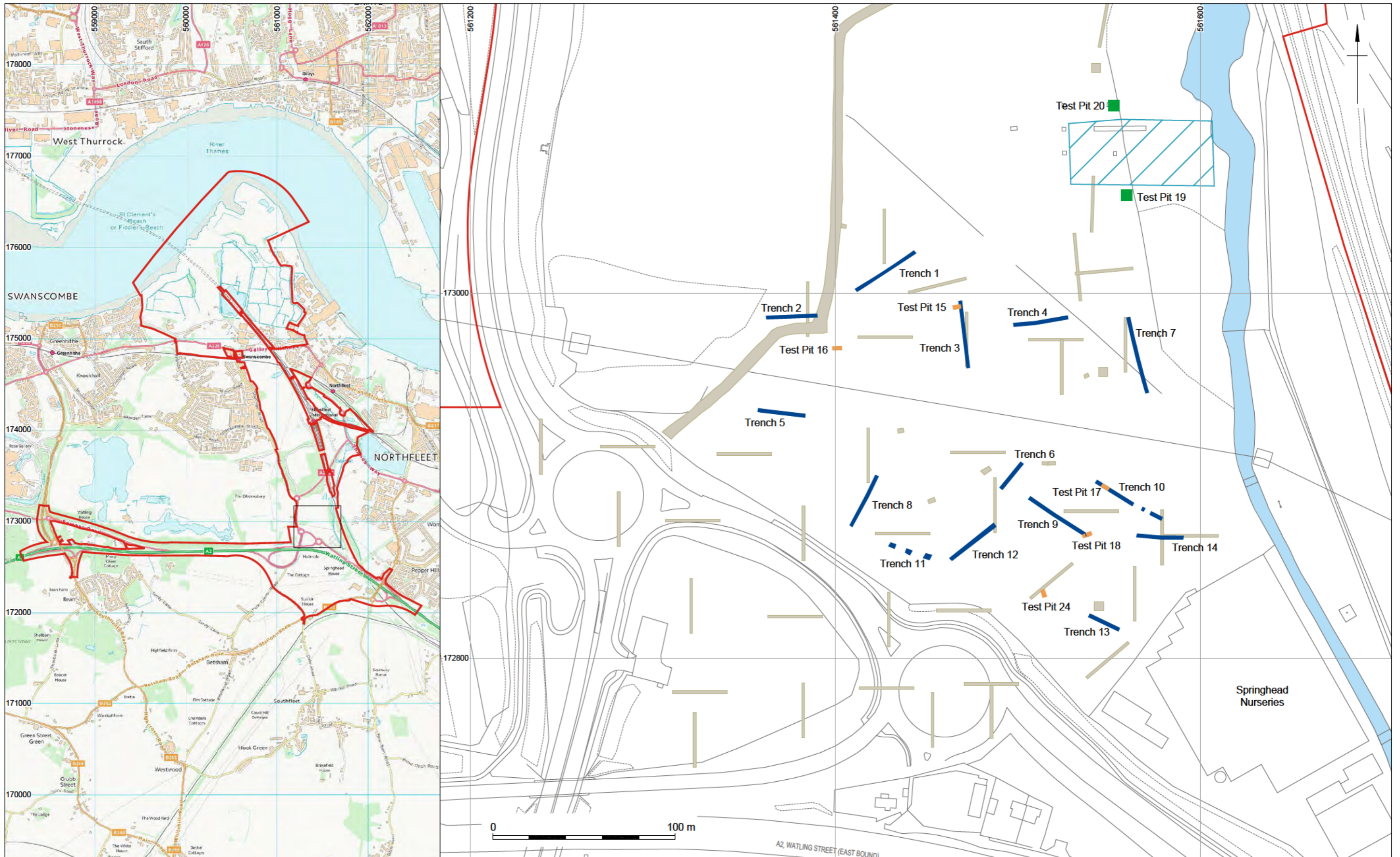


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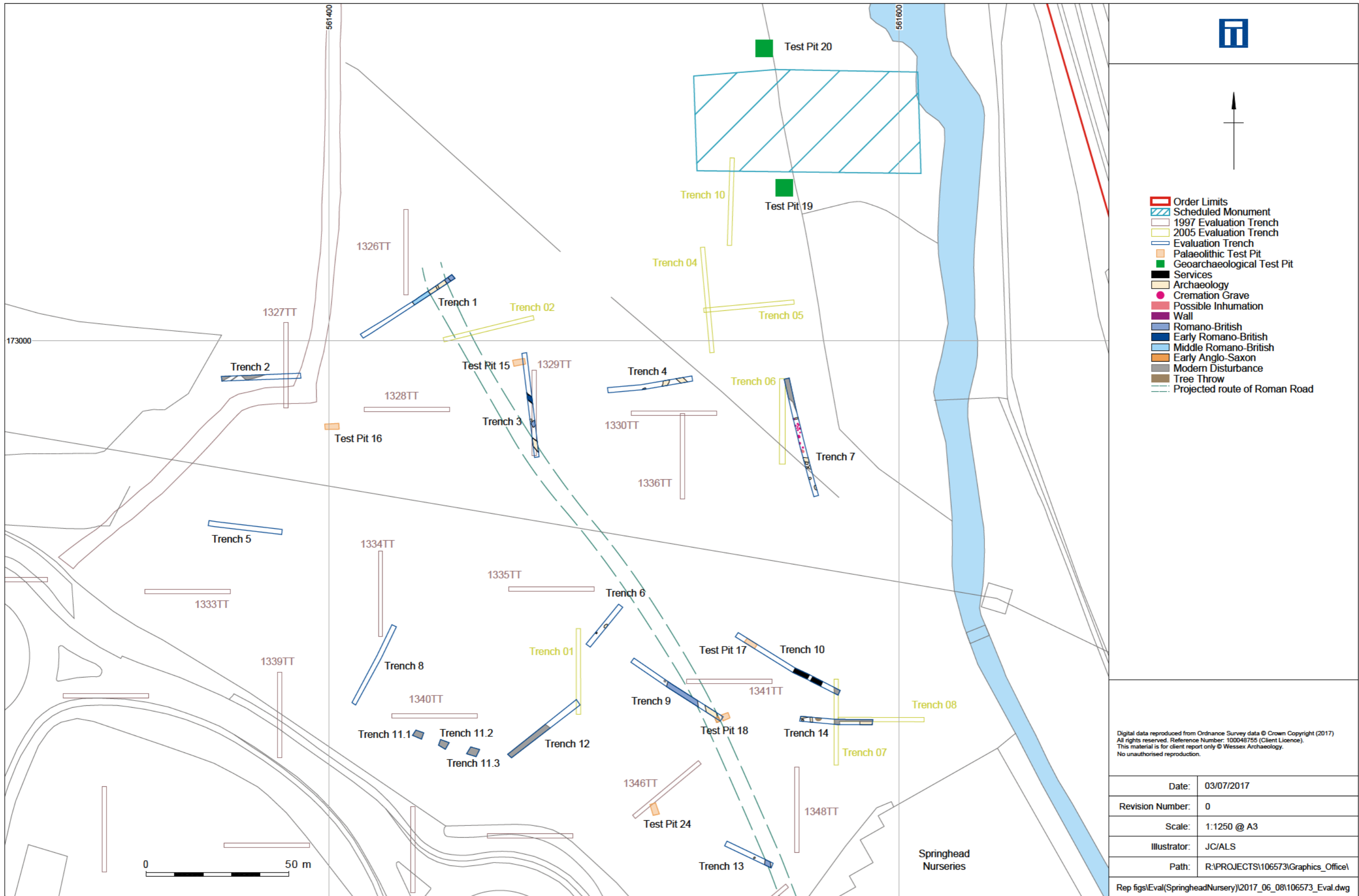
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	Scheduled Monument		Palaeolithic Test Pit
	Previous Archaeological Works		Geoaerchaeological Test Pit

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Site location with trench and test pit plan

Figure 1



Trench and test pit plan

Figure 2

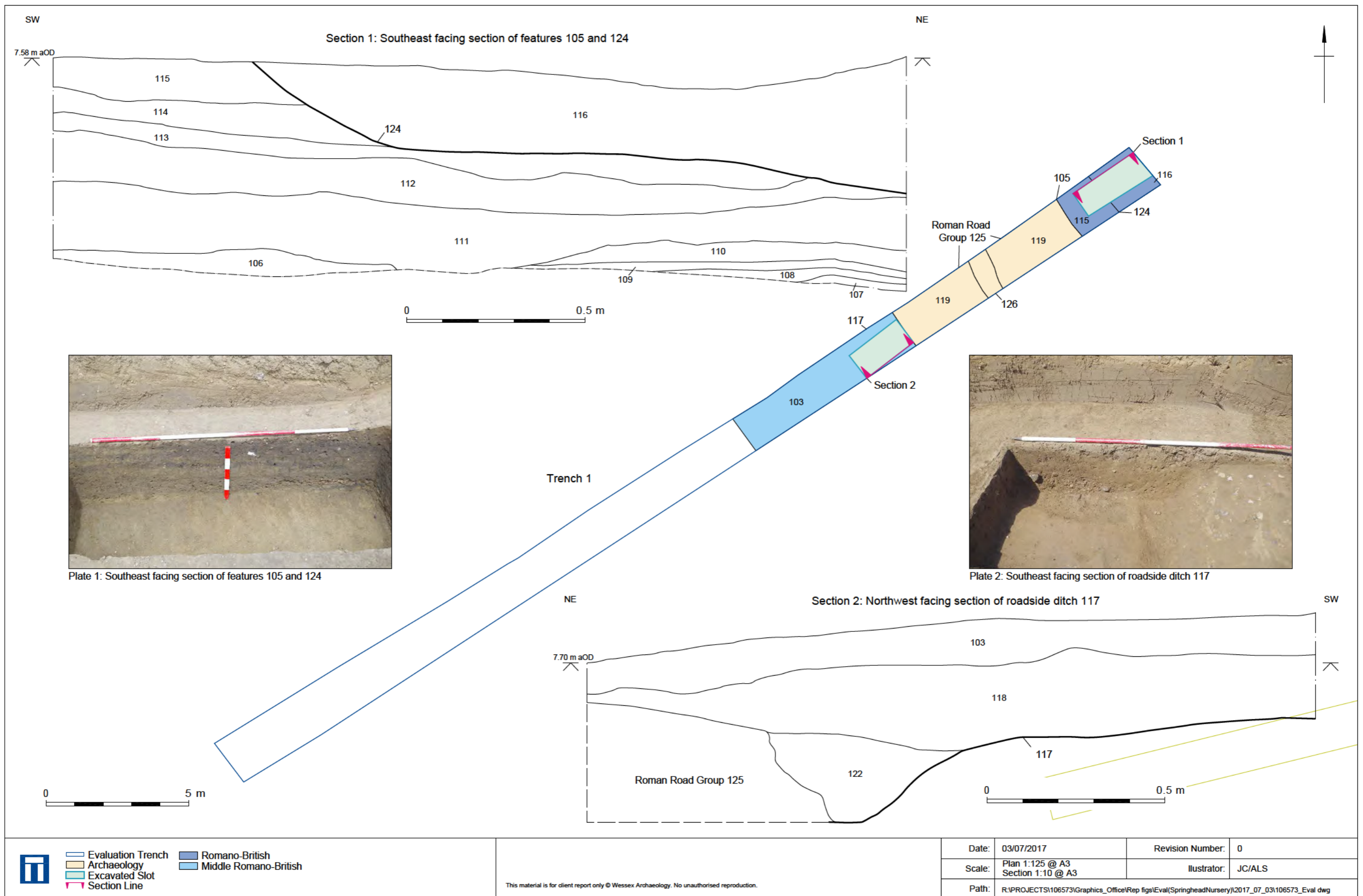




Plate 3: Southwest facing view of rectangular pit 305



Plate 4: Northwest facing section of possible hollow 307 to the north of the projected route of the Roman road

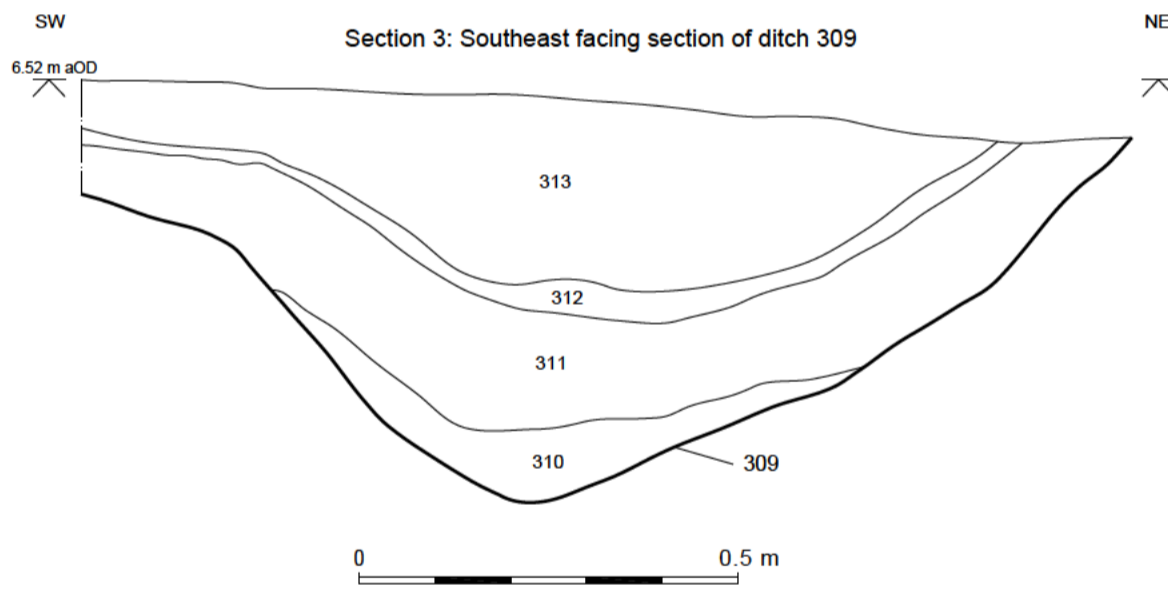
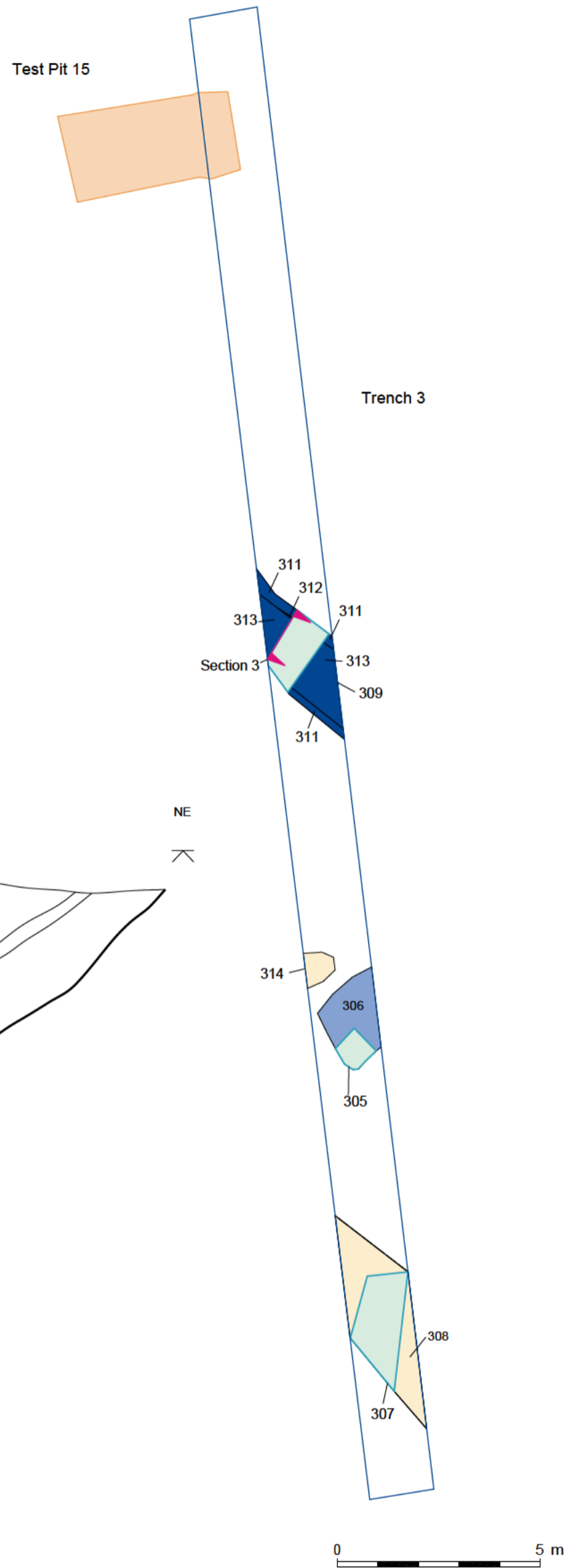


Plate 5: Southeast facing section of ditch 309



- Evaluation Trench
- Palaeolithic Test Pit
- Archaeology
- Excavated Slot
- Section Line
- Romano-British
- Early Romano-British



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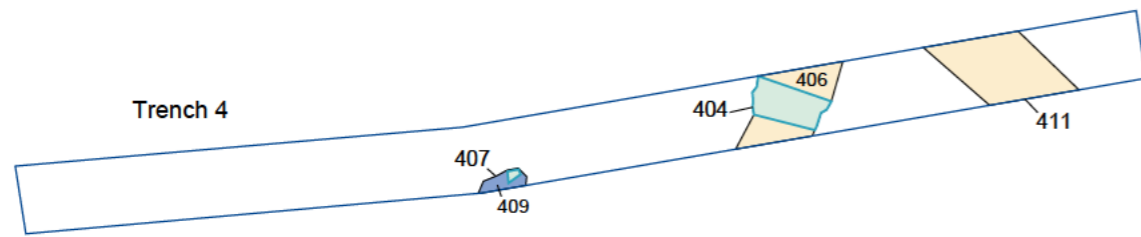


Plate 6: Northeast facing section of ditch 405



Plate 7: Placed pot 410 in feature 407



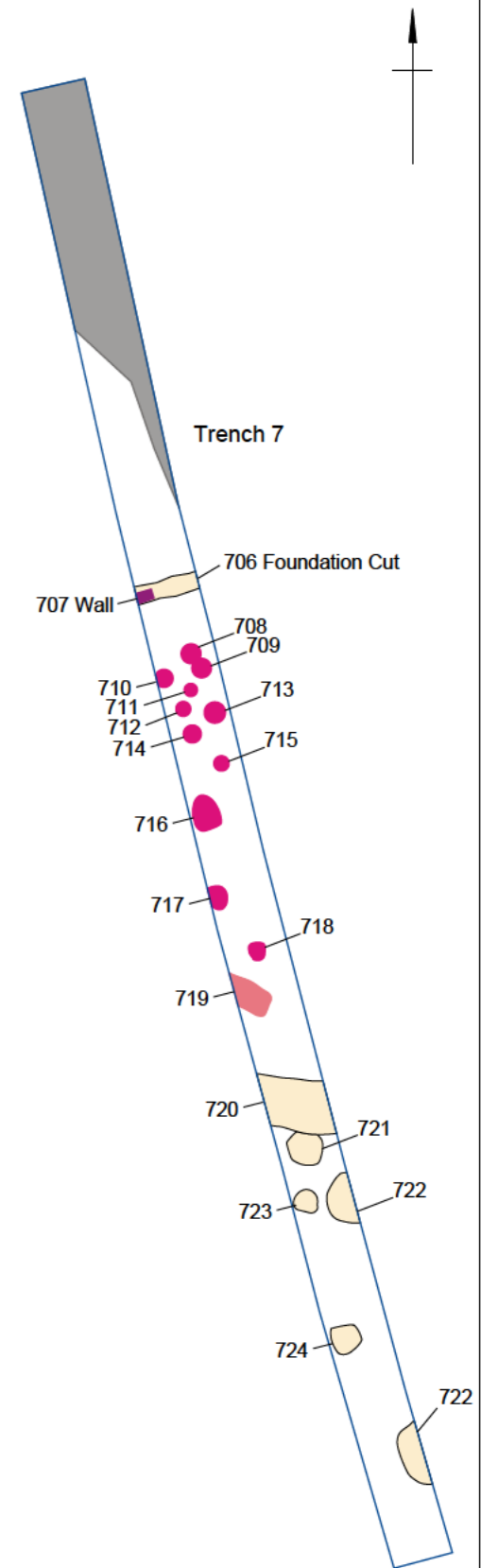
Plate 8: South facing view of Trench 7 with wall 707 and probable cremation graves



Plate 9: North facing view of Trench 7 with probable cremation graves



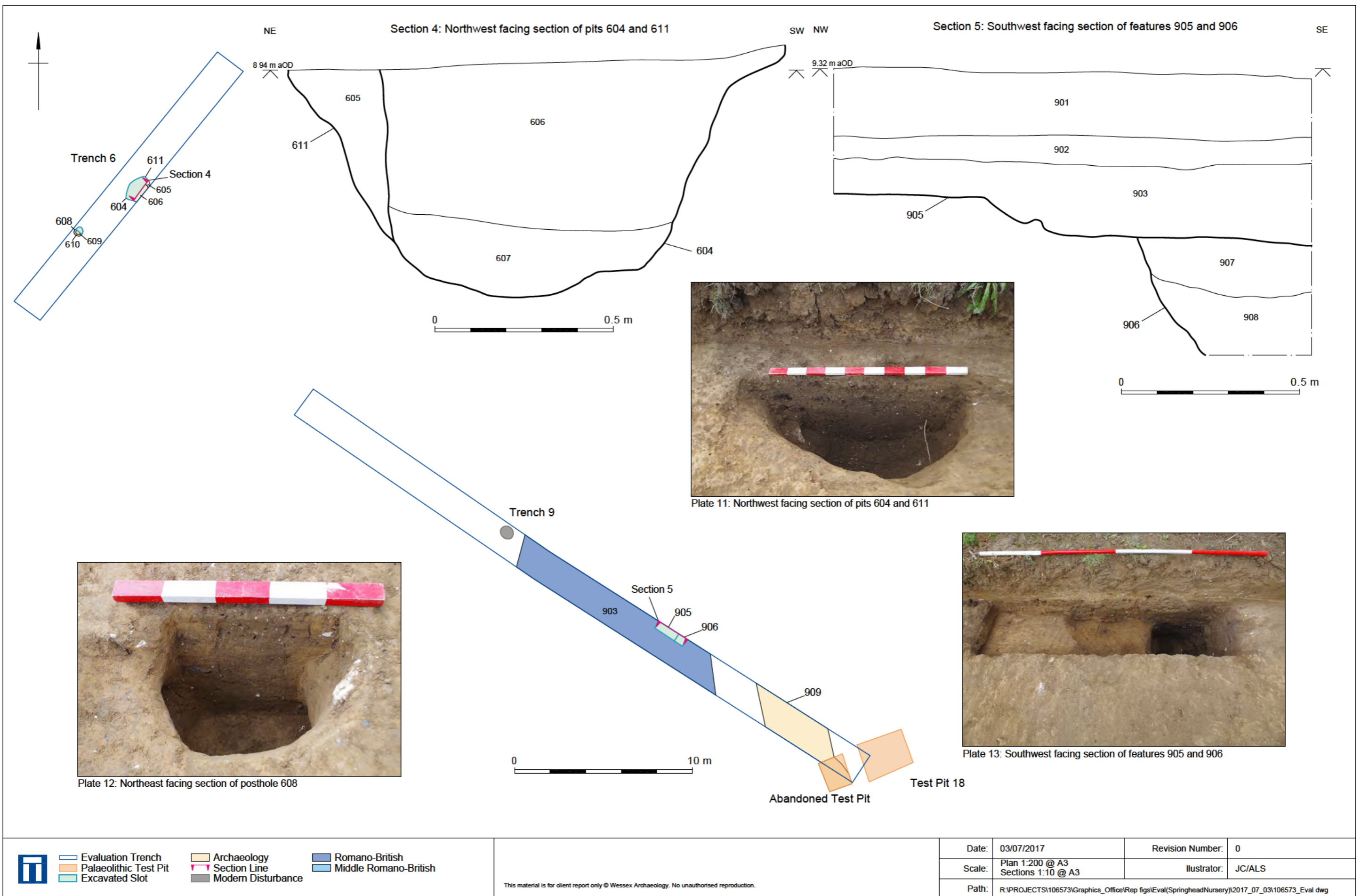
Plate 10: North facing view of Trench 7 with pits



- Evaluation Trench
- Excavated Slot
- Modern Disturbance
- Archaeology
- Romano-British
- Wall
- Cremation Grave
- Possible Inhumation

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Trenches 6 and 9 and Palaeolithic test pit 18

Figure 6

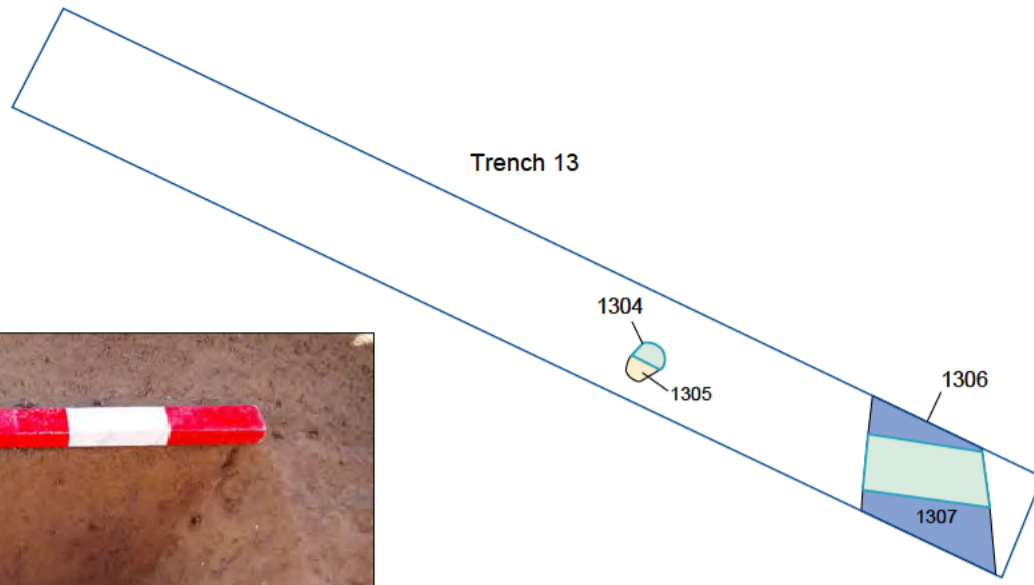


Plate 14: Northeast facing section of posthole 1304



Plate 15: North facing section of shallow ditch 1306

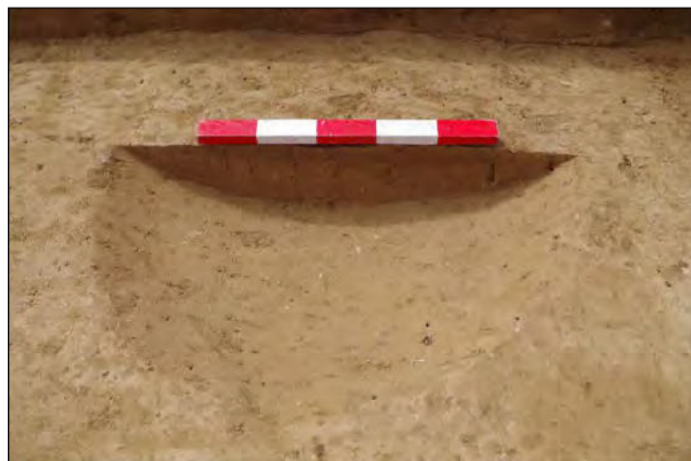
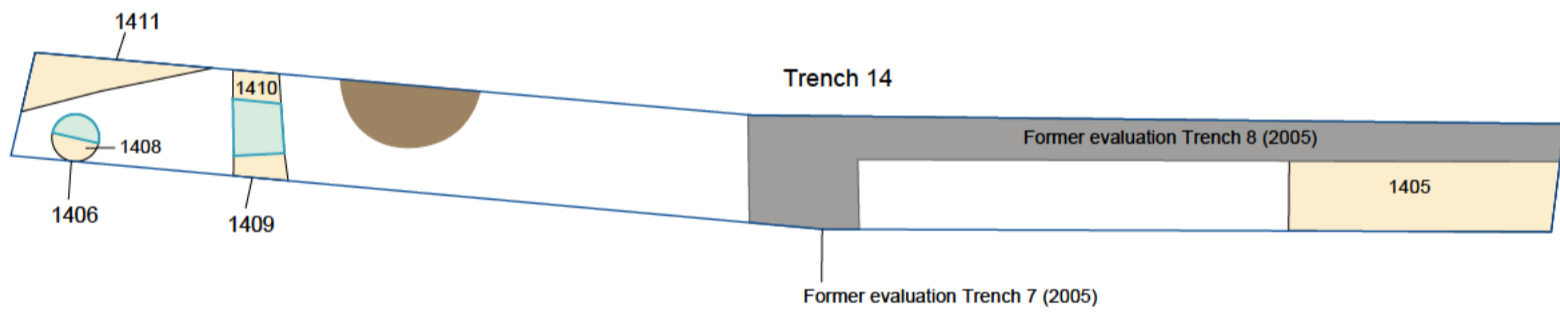


Plate 16: North facing section of pit 1406



Plate 17: South facing section of shallow ditch 1409

- Evaluation Trench
- Archaeology
- Excavated Slot
- Tree Throw
- Modern Disturbance
- Romano-British

0 5 m



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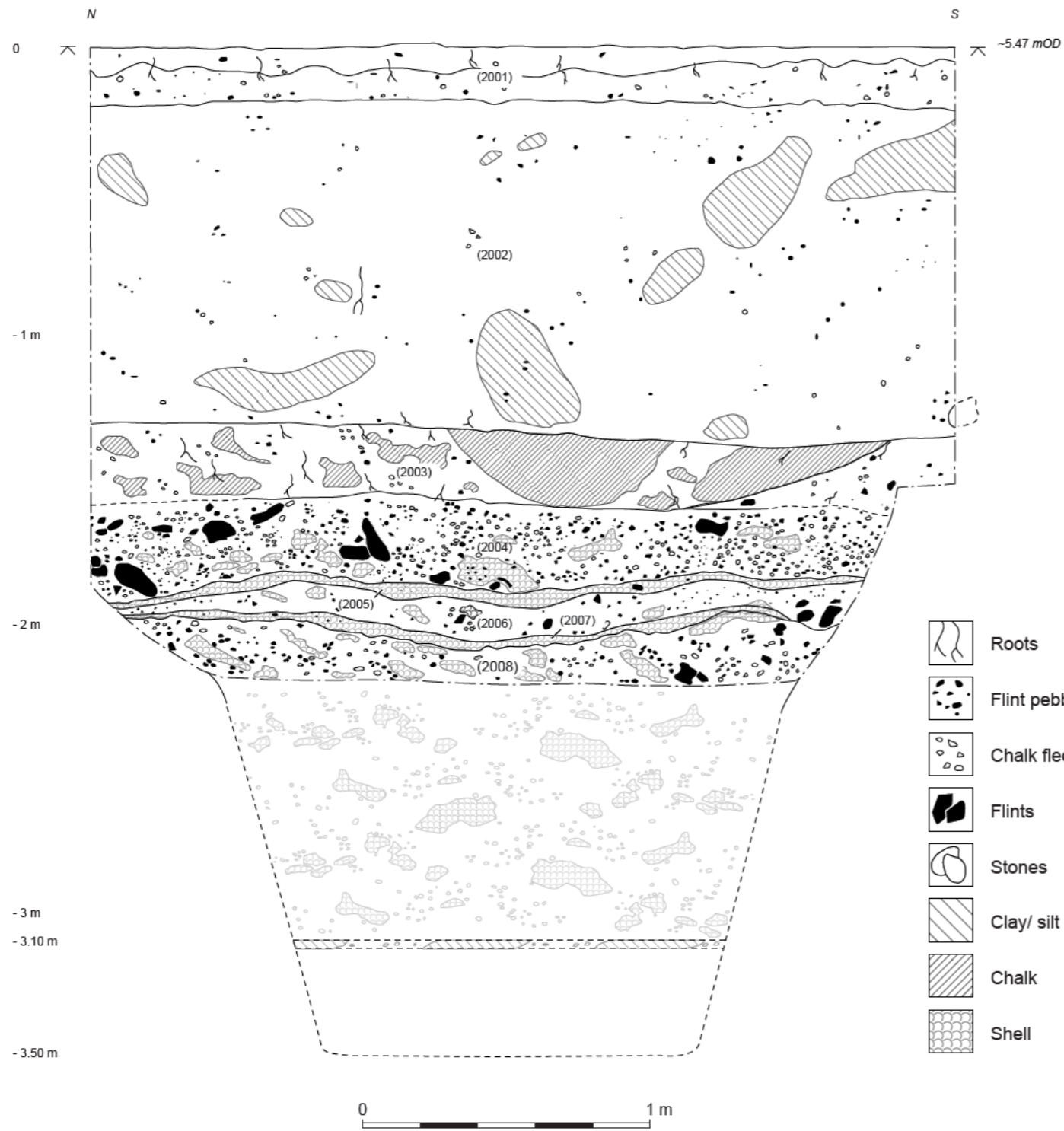


Plate 18: West facing section of test pit 20, 2 m scale.



Plate 19: Test pit 20, viewed from the north-east, 2 m scale.



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11 APPENDICES

APPENDIX 1: TRENCH TABLES

All archaeological deposits/features shown in **bold**
All (+) indicate deposits/features not fully excavated
'Depth' equals depth from present ground surface

Trench 1	Dimensions :	33m x 1.8m x 0.63m		
	Land use:	Scrubland		
	Coordinates:	561443, 17302, 8.051m aOD		
Context	Category	Description	Depth	
101	Layer - Topsoil	Light grey brown silty clay with common rounded stone and flint inclusions and rare chalk, with rooting.	0.00-0.23m	
102	Layer - Subsoil	Light brown grey silty clay with some rounded flint inclusions.	0.23-0.53m	
103	Layer - Colluvium/Buried Soil	Mid-dark grey silty clay cut by Roman road.	0.53m+	
104	Layer - Natural	Only located at SW end of trench. Light brown grey silty clay with common flint gravels.	0.48m+	
105	Cut – Roadside Feature	Possible cut feature to the northeast of Roman Road containing multiple occupation related deposits and fills. Extents and function of feature not known.	0.53m+	
106	Fill of 105 – Secondary Fill	Mid yellow with a hue of grey sandy loam with medium gravel and abundant sub rounded fine gravel inclusions.	1.05-1.09m	
107	Fill of 105 – Occupation Layer	Black silty loam with abundant chalk inclusions and well sorted fine gravel.	1.07-1.09m	
108	Fill of 105 – Secondary Fill	Mid yellow sand with large gravel and poorly sorted gravel inclusions of various shaped 30mm+.	1.04-1.07m	
109	Fill of 105 – Occupation Layer	Black charcoal with silty loam and well sorted fine gravel	1-1.04m	
110	Fill of 105 – Secondary Fill	Light Yellow sand with large gravel and abundant poorly sorted well rounded gravel inclusions.	0.97-1.01m	
111	Fill of 105 – Secondary Fill	Dark grey sandy silty loam with poorly sorted fine gravel and common stone inclusions.	0.90-1.06m	
112	Fill of 105 – Secondary Fill	Light grey with a yellow hue loamy sand with poorly sorted fine gravel and small stone inclusions.	0.80-0.90m	
113	Fill of 105 – Secondary Fill	Dark grey with a yellow hue loamy sand with poorly sorted fine gravel and some stone inclusions.	0.73-0.80m	
114	Fill of 105 – Secondary Fill	Mid grey with a yellow hue sandy silty loam with medium grained poorly sorted small stone inclusions.	0.65-0.73m	
115	Fill of 105 – Secondary Fill	Dark yellow with a hue of mid grey loamy sand with medium grained, poorly sorted occasional stone inclusions.	0.53-0.65m	
116	Fill of 124 – Secondary Fill	Mid light grey with a yellow hue silty loam with fine grained, poorly sorted gravel inclusions and rare chalk inclusions	0.53-0.95m	
117	Cut – Roadside Ditch	ditch running parallel with Roman Road; moderately steep sides and flat base.	0.53-1.1m	
118	Fill of 117 – Secondary Fill	Dark-mid brown silty clay with common small gravel and uncommon flint pebbles.	0.63-1m	
119	Layer – Roman Road	Initial layer of Roman road, Light-mid brownish grey silty clay and abundant well sorted sub angular-angular cobbles and medium gravel heavily compacted.	0.63-0.79m	
120	Layer – Roman Road	Middle section of Roman Road- Darkish brown silty clay with patches of sand and abundant well sorted sub-angular and angular stone and small gravel, heavily compacted.	0.79-0.96m	



121	Layer – Roman Road	Occupation Layer- Bottom of the Roman road. Light brownish orange sandy clay with abundant well sorted gravel and rounded pebbles, heavily compacted.	0.96-1.11m
122	Fill of 117 – Secondary Fill	Deliberate backfill- Mid-light brownish grey with chalk flecking silty clay.	1-1.21m
123	Fill of 117 – Secondary Fill	Demolition layer- Mid brownish grey sandy clay with abundant poorly sorted sub angular and sub rounded medium gravel and cobbles.	0.88-1.11m
124	Cut – Roadside Feature	Unknown feature possible pit. Moderately steep concaved sides and flat base.	0.58-0.95m
125	Constituent Layer Group – Roman Road	Three distinct layers forming sequences of Roman Road: 119, 120 & 121. Not excavated.	0.63-1.11m
126	Cut - Channel	NW-SE aligned channel down middle of Roman Road. Not excavated.	0.53m+

Trench 2	Dimensions :	28m x 1.8m x 0.49m	
	Land use:	Scrubland	
	Coordinates:	561391, 172988, 11.896m aOD	
Context	Category	Description	Depth
201	Layer - Topsoil	Light grey brown silty clay with common rooting and small subrounded flints and stone inclusions.	0-0.24m
202	Layer - Subsoil	Light brown grey silty clay with common subrounded small stone and flint inclusions.	0.24-0.45m
203	Layer - Natural	Light brown grey silty clay with abundant surrounded flint and stone gravel inclusions, and common chalk	0.45m+

Trench 3	Dimensions :	37m x 1.8m x 0.71m	
	Land use:	Scrubland	
	Coordinates:	561467, 172997, 7.071m aOD	
Context	Category	Description	Depth
301	Layer - Topsoil	Dark-mid greyish black soil with abundant rooting and small rounded pebbles.	0-0.24m
302	Layer - Subsoil	Mid-light greyish orange with silty clay with chalk flecks and small subrounded and rounded pebbles.	0.24-0.42m
303	Layer - Buried Soil	Dark-mid grey silt with heavy rooting	0.42-0.63m
304	Layer - Natural	Mid orangey brown silty clay with some rooting.	0.63m+
305	Cut – Pit	SW-NE sub-rectangular cut 1.6m+ long, 1.24m wide and 0.25m deep with an undulating base and concave/vertical steep side.	0.63-0.88m
306	Fill of 305 – Deliberate Backfill	Dark greyish black silty clay with very sparse small pebbles.	0.63-0.88m
307	Cut – Truncated Road	NE-SW section of truncated road 1m+ long, 3.20m wide and 0.09m wide, with a flat base and gently sloped sides.	0.63-0.72m
308	Fill of 307 – Secondary Fill	Secondary fill- Mid grey sandy clay, with chalk and fine grained poorly sorted gravel inclusions.	0.63-0.72m
309	Cut - Ditch	NW-SE ditch 1.8m+ long, 1.66m wide and 0.58m deep with a u-shaped base and straight steep sides.	0.63-1.21m
310	Fill of 309 – Primary Fill	Mid brown clay.	1.13-1.21m
311	Fill of 309 – Secondary Fill	Secondary fill- Dark grey clay with sparse rounded and sub angular flint pebbles.	0.95-1.13m
312	Fill of 309 – Deliberate backfill	Deliberate backfill- Very dark grey black sandy clay with rare subrounded flint inclusions.	0.93-0.95m
313	Fill of 309 – Tertiary Fill	Tertiary fill- mid brown sandy clay with rare flint pebbles.	0.63-0.93m
314	Cut – Pit or Ditch Terminus	NE-SW aligned feature with rounded NE end. Either a pit or a ditch terminus. Not excavated.	0.63m+



Trench 4	Dimensions :	30m x 2m x 0.5m	
	Land use:	Scrubland	
	Coordinates:	561496, 172981, 6.624m aOD	
Context	Category	Description	Depth
401	Layer	Topsoil- Dark brown grey silty clay with grass and common pebbles and chalk inclusions.	0.0-0.2m
402	Layer	Subsoil- mid brownish orange silty clay with common small rounded flints and common chalk flecks.	0.2-0.5m
403	Layer	Natural- mid reddish orange silty clay with rare small sub rounded flints.	0.5m +
404	Cut - Ditch	NE-SW ditch 2.3m+ long, 1.64m wide 0.46m deep with a flat-concave base and straight-concave steep sides.	0.5-0.96m
405	Fill of 404 – Primary Fill	Primary fill- Pale yellow grey silty clay with common chalk flecks.	0.83-0.96m
406	Fill of 404 – Secondary Fill	Secondary fill- Mid reddish brown silty clay with occasional small sub rounded flints.	0.5-0.86m
407	Cut - Unknown Feature	Feature only partially exposed. A pot thought to be a possible grave good associated with an inhumation located adjacent the trench limits. Excavated at the request of the county to retrieve grave goods only.	-
408	Intervention- same as 407	Number assigned to an arbitrary intervention excavated to retrieve placed pot 410 at the request of the county archaeologist.	-
409	Fill of 407	Light greyish yellow silty clay with rare small sub rounded flints. Contained Objects 1 & 3.	-
410	Vessel from 407 – Placed Pot	Object Number 1	-
411	Cut - Ditch	NW-SE aligned ditch possibly forming an enclosure with ditch 404. Not excavated.	0.5m+

Trench 5	Dimensions :	20m x 1.8m x 0.4m	
	Land use:	Scrubland	
	Coordinates:	5613, 172935, 15.531m aOD	
Context	Category	Description	Depth
501	Layer - Topsoil	Light grey brown silty clay with abundant chalk and flint and gravel inclusions, and moderate rooting.	0-0.28m
502	Layer - Natural	Light grey brown patchy silty clay with common gravel. Numerous dumps of gravel and mid brown clay and flint dumps. Re-deposited chalk at west end. Machined to 3.8m with no change in geology.	0.28m-3.8m

Trench 6	Dimensions :	18m x 1.8m x 0.52m	
	Land use:	Scrubland	
	Coordinates:	561501, 172908, 9.094m aOD	
Context	Category	Description	Depth
601	Layer - Topsoil	Dark greyish soil with abundant rooting.	0-0.32m
602	Layer - Subsoil	Subsoil- Mid-light orangey brown silty clay with uncommon chalk flecking.	0.32-0.47m
603	Layer - Natural	Natural- Light orangish yellow silty clay with very sparse poorly sorted small gravel.	0.47m+
604	Cut - Pit	Re-cut E-W aligned sub-circular pit 1.4m long, 0.69m+ wide and 0.66m deep with a concave base and concaved steep/undercut sides.	0.54-1.2m
605	Fill of 611 – Deliberate Backfill	Dark blackish grey silty clay with burnt charcoal and common small gravel and large stones at base of fill.	0.54-1.2m
606	Fill of 604 – Deliberate Backfill	Mid-light greyish black silty clay with chalk flecking and sparse small gravel inclusions.	0.54-1m



607	Fill of 604 – Deliberate Backfill	Mid-dark blackish grey silty clay with some chalk flecking and uncommon small gravel.	1.00-1.2m
608	Cut - Posthole	SE-NW aligned sub-circular posthole 0.30m long, 0.49m wide and 0.52m deep with concaved base and straight/undercut steep side.	0.54-1.06m
609	Fill of 608 – Post Pipe	Mid-dark grey silty clay with chalk flecking.	0.52-0.95m
610	Fill of 608 – Deliberate Backfill	Mid-dark brownish orange silty clay with very rare small stones at base of fill.	0.54-1.06m
611	Cut - Pit	Unknown shape of pit with steep stepped sides.	0.54-1.02m

Trench 7	Dimensions :	50m x 2m x 0.80m	
	Land use:	Scrubland	
	Coordinates:	561559, 172988, 5.635m aOD	
Context	Category	Description	Depth
701	Layer - Topsoil	Modern topsoil	0-0.12m
702	Layer - Made ground	Modern fill of chalk and debris	0.12-0.31m
703	Layer – Buried Topsoil	Dark grey brown silty clay with common small and medium subrounded flints and charcoal/ chalk flecks.	0.31-0.46m
704	Layer - Subsoil	Light brownish orange silty clay with occasional subrounded flints and rare chalk and charcoal flecks.	0.46-0.77m
705	Layer - Natural	Mid reddish yellow silty clay.	0.77m+
706	Cut – Foundation Trench	NE-SW aligned foundation trench. Not excavated.	0.77m+
707	Fill of 706 - Wall	Segment of NE-SW aligned wall. Not excavated.	0.77m+
708	Cut – Probable Cremation	Not excavated.	0.77m+
709	Cut – Probable Cremation	Not excavated.	0.77m+
710	Cut – Probable Cremation	Not excavated.	0.77m+
711	Cut – Probable Cremation	Not excavated.	0.77m+
712	Cut – Probable Cremation	Not excavated.	0.77m+
713	Cut – Probable Cremation	Not excavated.	0.77m+
714	Cut – Probable Cremation	Not excavated.	0.77m+
715	Cut – Probable Cremation	Not excavated.	0.77m+
716	Cut – Probable Cremation	Not excavated.	0.77m+
717	Cut – Probable Cremation	Not excavated.	0.77m+
718	Cut – Probable Cremation	Not excavated.	0.77m+
719	Cut – Probable Cremation or Inhumation	NW to SE aligned feature. Not excavated.	0.77m+
720	Cut - Ditch	E-W aligned ditch. Not excavated.	0.77m+
721	Cut - Pit	Sub-circular pit. Not excavated.	0.77m+
722	Cut – Pit	Sub-circular pit. Not excavated.	0.77m+
723	Cut – Pit	Sub-circular pit. Not excavated.	0.77m+
724	Cut – Pit	Sub-circular pit. Not excavated.	0.77m+
725	Cut - Pit	Sub-circular pit. Not excavated.	0.77m+

Trench 8	Dimensions :	45m x 1.8m x 1.2m	
	Land use:	Scrubland	
	Coordinates:	561442, 172901, 11.062m aOD	
Context	Category	Description	Depth
801	Layer - Topsoil	Dark greyish brown silty clay with small subrounded stones.	0-0.28m
802	Layer - Made ground	Mid-light brown soil with building debris and chalk patches. Large rubble and small sub angular- sub rounded stones.	0.28m+
803	Layer - Natural	Possibly Greensand.	1.8m+



Trench 9	Dimensions :	50m x 1.8m x 0.70m	
	Land use:	Scrubland	
	Coordinates:	561504, 172887, 9.635m aOD	
Context	Category	Description	Depth
901	Layer - Topsoil	Dark brownish grey soil with heavy rooting	0-0.23m
902	Layer - Subsoil	Light brownish orange silt clay with chalk patches.	0.23-0.52m
903	Layer – Demolition Layer	Layer of mixed debris with large quantities of Roman pottery found in SE section of trench	0.30-0.40m
904	Layer - Natural	Light-mid brown silty clay with moderate rooting.	0.52m+
905	Cut - Feature	Cut containing demolition layer 903. Unknown dimensions.	0.35-0.62m
906	Cut - Feature	NE-SW aligned feature 0.65m+ long, 0.50m wide and 0.51m deep with a concave base and concave steep sides. Stopped at maximum working depth of 1.2m.	0.62-1.2m+
907	Fill of 906 –Deliberate Backfill	Dark grey-black soil with common large packing stones.	0.62-0.83m
908	Fill of 906 –Deliberate Backfill	Dark-mid grey soil with common small stones and evidence of bioturbation.	0.62-1.2m+
909	Cut - Ditch	N-S aligned ditch. Not excavated.	0.52m+

Trench 10	Dimensions :	31m x 1.8m x 1.3m	
	Land use:	Scrubland	
	Coordinates:	561540, 172897, 8.206m aOD	
Context	Category	Description	Depth
1001	Layer - Topsoil	Dark-mid soil with abundant rooting.	0-0.25m
1002	Layer - Subsoil	Mid brown-orange silty clay	0.25-1m
1003	Layer - Natural	Light brown silty clay with chalk flecking	1m+

Trench 11	Dimensions :	9.5m x 2m x 3.4-4.1m	
	Land use:		
	Coordinates:	561429, 172861, 14.401m aOD	
Context	Category	Description	Depth
1101	Layer - Topsoil	Modern grass/soil	0-0.15m
1102	Layer - Made ground	Made ground- mixed quarry backfill	0.15-3.4m
1103	Layer - Natural	Greensand. Located in test pit 11.1 only	3.8m+
1104	Layer - Natural	Brick earth/ orange sandy clay. Located in test pit 11.2 + 11.3.	11.2- 4.1m+ 11.3- 3.7m+

Trench 12	Dimensions :	25m x 1.8m x 1.53m	
	Land use:	Scrubland	
	Coordinates:	561486, 172873, 10.347m aOD	
Context	Category	Description	Depth
1201	Layer - Topsoil	Dark greyish black soil with abundant rooting and common small pebbles.	0-0.36m
1202	Layer - Subsoil	Mid-dark orangish brown silty clay with some rooting and sparse small gravel.	0.36-0.66m
1203	Layer - Natural	Light yellowish brown silty clay with some chalk flecking.	0.66m+
1204	Layer - Made ground	Mid-light brown soil with building debris and chalk patches. Large rubble and small sub angular- sub rounded stones.	0.21-1.53m



Trench 13	Dimensions :	18m x 1.8m x 0.67m		
	Land use:	Scrubland		
	Coordinates:	561537, 172823, 10.144m aOD		
Context	Category	Description	Depth	
1301	Layer - Topsoil	Dark-mid brownish grey soil with rare subrounded flints and some chalk flecking, heavy rooting.	0-0.32m	
1302	Layer - Subsoil	Mid-light orangish brown silty clay with chalk flecking and very rare small pebbles.	0.32-0.58m	
1303	Layer - Natural	Light orangish brown silty clay with heavy rooting.	0.58m+	
1304	Cut - Posthole	Sub-oval posthole measuring 0.72m long 0.40m wide and 0.20m deep.	0.58m-0.78m	
1305	Fill of 1304 – Secondary Fill	Mid brown sandy clay with fine well sorted gravel	0.58-0.78m	
1306	Cut - Ditch	N-S aligned ditch 2.1m wide and 0.34m deep with undulating/ concave base and concaved moderately slopes sides.	0.58-0.92m	
1307	Fill of 1306 – Secondary Fill	Dark-mid silty clay with abundant rooting and common gravel in top of fill.	0.58-0.77m	
1308	Fill of 1306 – Secondary Fill	Dark grey silty clay with chalk flecking and some rooting and sparse small gravel.	0.77-0.92m	

Trench 14	Dimensions :	50m x 1.8m x 1.11m		
	Land use:	Scrubland		
	Coordinates:	561564, 172866, 7.516m aOD		
Context	Category	Description	Depth	
1401	Layer - Topsoil	Dark brown soil with heavy rooting.	0-0.23m	
1402	Layer - Subsoil	Orangey brown silty clay with chalk inclusions and rare rounded small pebbles.	0.23-0.43m	
1403	Layer - Alluvium	Greyish brown silt with rooting and very rare small rounded pebbles.	0.43-0.68m	
1404	Layer - Natural	Mid-dark brown silty sand.	0.68m+	
1405	Layer – Occupation Layer	Darker grey brown silt clay in East end of the trench only.	0.90-1.11m	
1406	Cut -Pit	Circular pit 0.78m diameter and 0.14m deep with a flat base and concaved shallow sides.	0.68-0.82m	
1407	Fill of 1406 – Secondary Fill	Light brown grey silty clay with common chalk inclusions.	0.68-0.78m	
1408	Fill of 1406 – Secondary Fill	Mid brown grey silty clay.	0.78-0.82m	
1409	Cut - Ditch	N-S aligned ditch 1.8m+ long, 0.91m wide and 0.18m deep with a concave/undulating base and concave-irregular moderately steeped sides.	0.68-0.86m	
1410	Fill of 1409 – Secondary Fill	Dark-mid greyish brown clay with chalk inclusions.	0.68-0.86m	
1411	Cut - Ditch	Possible ditch; aligned NE-SW. Not excavated.	0.68m+	

Test pit 20	Dimensions :	4m x 2m x3.5m		
	Land use:	Scrubland		
	Coordinates:			
Context	Category	Description	Depth	
2001	Layer	Topsoil- Mid yellow brown silty clay with frequent rooting and common small subrounded flints and stones.	0-0.20m	
2002	Layer	Made ground- Quarry backfill, Light yellow silty clay with common lumps of alluvial clay and poorly mixed chalk flecks and small subrounded common flints.	0.2-1.37m	
2003	Layer	Made ground- Quarry pit lining, mixed chalk and silt well sorted.	1.37-1.61m	



2004	Layer	Gravels- light brown silty alluvial deposit with common large subrounded flints, frequent medium sized rounded flints, abundant small sub angular and rounded flints and common small rounded chalk flecks.	1.61-1.87m
2005	Layer	Pale yellowish silty with abundant crushed shell, common small rounded chalk flecks and occasional small rounded and sub rounded flints.	1.87-1.93m
2006	Layer	Pale yellow silt with common crushed marine shell, occasional chalk flecks and small rounded flints.	1.93-2.06m
2007	Layer	Pale greyish yellow silt with abundant crushed marine shell and common small rounded chalk flecks, and occasional small crushed rounded flints.	2.06-2.1m
2008	Layer	Light grey brown silty clay with abundant small crushed rounded flints and shell with rare larger sub rounded flints and occasional small rounded chalk flecks.	2.1-2.22m+

APPENDIX 2: GEOARCHAEOLOGICAL TEST PIT TABLE

Trench No 20		Length 4 m		Width 2 m		Depth 2.20 m	
Easting			Northing			m OD	
Context Number	Fill Of/Filled With	Interpretative Category	Description			Depth BGL	
2001		Topsoil	Mid yellowish brown. Silty clay. Frequent rooting, common small sub rounded flints stones and other debris.			0.00-0.2	
2002		Made ground	Quarry backfill light yellow grey. Silty clay. Common lumps of alluvial Clay's, poorly mixed, chalk flecks and sub rounded flints.			0.2-1.37	
2003		Made Ground.	Made ground, quarry pit lining. Pale yellowish grey. Chalk and silt mix. Well sorted with well defined edges.			1.37-1.61	
2004		Natural	Natural gravels. Mixed colours. Flint. Common large sub rounded flint nodules, frequent medium sized rounded flints, abundant small sub rounded and sub-angular flint, rare small marine shells, common small rounded chalk flecks. Well defined base layer all within a very silty light brown alluvium.			1.61-1.87	
2005		Natural silt and fine gravels	Pale greyish yellow. Silt. Marine shell and fine gravel Rapidly deposited and related to (2006) & (2007)			1.87-1.93	
2006		Natural silt and fine gravels	Pale greyish yellow. Silt with common crushed marine shell and rounded flints and chalk flecks.			1.93-2.06	



2007		Natural silt & fine gravels	Pale greyish yellow. Silt with abundant crushed marine shell common rounded small chalk flecks and occasional small crushed and rounded flints.	2.06-2.1
2008		Natural	Light grey brown. Silty clay. Abundant small crushed and rounded flints and shell, rare large sub rounded flints, occasional small sub rounded chalk flecks.	2.1-2.22
Context 2008 further investigated by testpit but due to depth was not drawn. The deposit was interpreted by FWS as a Late Devensian / Early Holocene deposit formed by very active fluvial deposition.				



APPENDIX 3: FINDS

Table 2: Finds totals by material type, trench and feature (number of pieces/weight in grammes)

			Animal bone	Burnt flint	CBM	Fired clay	Flint	Iron	Pottery	Shell	Stone	Total	
Trench	Feature	Layer	No/Wt	No/Wt	No/Wt	No/Wt	No/Wt	No/Wt	No/Wt	No/Wt	No/Wt	No/Wt	
1	buried soil	103						4/26	10/92			14/118	
	roadside feature 105	113	7/6			1/19		1/6	30/45			39/76	
		114	1/6						14/70			15/76	
	roadside feature 124	116	5/47						12/107			17/154	
	roadside ditch 117	118	3/23		2/10			3/48	26/228			34/309	
3	buried soil	303					1/6		17/105			18/111	
	pit 305	306	2/5				1/6	1/5	1/6			5/22	
	road 307	308	3/8						9/228	1/16		13/252	
	ditch 309	310	3/75										3/75
		311		1/38			4/23			23/557			28/618
		312	17/5										17/5
313						2/43			6/8		1/219	9/270	
4	feature 407	407	1/4	7/118		1/60	8/100		1/11			18/293	
		408						1/9				1/9	
		410							48/449			48/449	
5	natural	502					1/29				1/29		
6	pit 611	605			3/130	1/33	1/52	1/23	30/500			36/738	
	pit 604	606						2/21				2/21	
		607	14/4				7/16			6/11		27/31	
	posthole 608	609							5/25			5/25	



7	natural	705							1/131			1/131
9	demolition deposit	903	6/19		4/87	2/28	1/7		91/883	1/7		105/1031
	feature 906	907				6/32			27/488	3/65		36/585
		908	7/1	2/43	2/113	10/75				17/590		
13	ditch 1306	1307					2/37	3/18	5/27			10/82
		1308							3/54			3/54
Total			69/203	10/199	11/340	28/263	20/274	17/185	382/4615	5/88	1/219	543/6386



APPENDIX 4: ENVIRONMENTAL

Table 3: Assessment of the charred plant remains and charcoal

Feature	Context	Sample	Vol (L)	Flot (ml)	Bioturbation proxies	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Charcoal	Other
105	113	101	11	125	75%, B, E	A**	A**	<i>Triticum</i> sp. (mostly <i>spelta</i>) grains (some sprouted) and chaff (glume bases and sp kelet forks), <i>Hordeum vulgare</i> grains, Triticeae coleoptiles.	A*	<i>Veronica</i> sp., Polygonaceae, <i>Corylus avellana</i> , Poaceae (<i>Poa/Phleum</i> , <i>Avena</i> , <i>Avena</i> awn) <i>Rumex</i> sp., Viciae, Trifoliae, indet.	5ml/10ml	Mature	Sab/f, Moll-t
309	312	301	8	50	5%, B, E	A**	A***	<i>Triticum</i> sp. (mostly <i>spelta</i>) grains (some sprouted) and chaff (glume bases and sp kelet forks), <i>Hordeum vulgare</i> grains, Triticeae coleoptiles.	A*	Asteraceae, <i>Linum ussitatissimum</i> capsule, Poaceae (cf. <i>Avena</i> sp. awns and grains, <i>Avena/Bromus</i> , <i>Lolium/Festuca</i>), Viciae, <i>Atriplex</i> sp., Polygonaceae, Indet seed and fruit endocarp	10ml/5ml	Mature + roundwood	Moll-t, frags of burnt bone
604	607	601	10	80	50%, A, I	A*	A**	<i>Triticum</i> sp. (mostly <i>spelta</i>) grains (one sprouted), glume basess and spikelets	A*	Viciae, Poaceae (<i>Avena</i> sp., <i>Avena/Bromus</i> , <i>Lolium/Festuca</i>), <i>Rumex</i> sp., cf. <i>Prunus</i> sp., Cyperaceae, <i>Hyoscyamus niger</i>	5ml/5ml	Mature	Sab/f, Moll-t
905	908	901	9	70	70%, A*, I, E	A*	A**	<i>Triticum</i> sp. (mostly <i>spelta</i>) grains (some sprouted) and chaff (glume bases and sp kelet forks), <i>Hordeum vulgare</i> grains, Triticeae coleoptiles.	A*	Viciae, Poaceae (<i>Avena/Bromus</i> , <i>Avena</i> awns, <i>Lolium/Festuca</i>), <i>Rumex</i> sp., Cyperaceae, Asteraceae, <i>Linum ussitatissimum</i> capsule, Trifoliae, <i>Sherardia arvensis</i> , Chenopodiaceae, <i>Veronica</i> sp., indet seeds and tubers	1ml/5ml	Mature	Sab/f, Moll-t, Moll-f

Key: A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5; Bioturbation proxies: Roots (%), Uncharred seeds (scale of abundance), F = mycorrhizal fungi sclerotia, E = earthworm eggs, I = insects; Sab/f = small animal/fish bones/charred faecal pellets, Moll-t = terrestrial molluscs, Moll-f = aquatic molluscs; Analysis: C = charcoal, P = plant, M = molluscs, C14 = radiocarbon



APPENDIX 5: KENT COUNTY COUNCIL HER SUMMARY FORM

Site Name: London Resort	
Site Address: Land North of Springhead Nursery, London Resort, Watling Street, Swanscombe, Kent	
Summary: An archaeological evaluation consisting the excavation of fourteen trenches was undertaken by Wessex archaeology on land north of Springhead Nursery. The purpose of the evaluation was to augment previous evaluations undertaken at the Site in 1997 and 2005. The evaluation confirmed the presence of significant archaeological features dating to the Romano-British period. This included further identification of the known Roman road R2, a mixed use walled cemetery and roadside settlement/ activity.	
District/Unitary: Dartford	Parish: Swanscombe and Greenhithe
Period(s): Romano-British and Saxon	
NGR (centre of site : 8 figures): 561523, 172917	
Type of archaeological work: Evaluation	
Date of Recording: 10 th - 30 th June 2015	
Unit undertaking recording: Wessex Archaeology	
Geology: Seaford and Newhaven Chalk Formations	
Title and author of accompanying report: London Resort, Swanscombe, Kent: Land North of Springhead Nursery: Archaeological Evaluation Report Author: L. McCaig & J. Condliffe	
Summary of fieldwork results (begin with earliest period first, add NGRs where appropriate) The features identified included numerous pits, postholes, ditches, occupation and possible demolition layers, a section of the Roman road R2 and associated ditches, a walled cemetery containing cremations and a possible inhumation. The excavated features produced a wealth of material from a mixed date range, although all within the Romano-British period. The only artefact which fell outside of this date range was a single fragment of Saxon pottery retrieved from a buried soil horizon which overlay several archaeological features.	
Location of archive/finds: Wessex Archaeology London and South East Office	
Contact at Unit: M. Williams	Date: 04/07/2017



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